

14TH INTERNATIONAL RESEARCH CONFERENCE

“ Security, Stability and National Development in the New Normal ”

09TH - 10TH SEPTEMBER 2021

MANAGEMENT, SOCIAL SCIENCES AND
HUMANITIES

PROCEEDINGS





14TH INTERNATIONAL RESEARCH CONFERENCE
SECURITY, STABILITY AND NATIONAL DEVELOPMENT IN THE NEW NORMAL

Management, Social Sciences and Humanities

PROCEEDINGS



General Sir John Kotelawala Defence University
Ratmalana, Sri Lanka

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Welcome Address

Major General Milinda Peiris RWP RSP USP ndc psc

Vice Chancellor, General Sir John Kotelawala Defence University

Keynote Speaker, Mr. Lalith Weeratunga Principal Advisor to H.E. President Gotabaya Rajapaksa, Secretary to the Ministry of Defence, General (Retd.) Kamal Gunaratne, DVC Administration and Defense, Brigadier Wipula Chandrasiri, DVC Academic, Prof Sanath Dhammika, Deans of the respective faculties, Centre Directors, Academics, Senior Military Officers, Administrative Staff, Students and all distinguished guests who are connected with us in the cyber space.

Good Morning to you all!

It is indeed with a great sense of responsibility that I deliver the welcome address at this 14th consecutive international research conference of General Sir John Kotelawala Defence University held on the timely theme, ‘Security, Stability and National Development in the New Normal’, at one of the most crucial times of our history.

To begin with, let me very warmly welcome our chief guest and keynote speaker, Mr. Lalith Weeratunga, the principal advisor to HE the President Gotabhaya Rajapakse. Of course, Mr. Lalith Weeratunga is not at all a stranger to KDU. He is one of the great personalities who clearly understands the role played by KDU for the betterment of the nation and who has long been assisting us in numerous ways to develop this institution to what it is today. As I remember Mr. Lalith Weeratunga was the keynote speaker of our 6th research conference in 2013. Sir, your keynote on our theme, “Sri Lanka as a Hub in Asia: the Way Forward” still reverberate in our minds even after 8 long years.

And it is a remarkable coincidence that I welcome you once again to deliver the keynote address on our current theme, ‘Security,

Stability and National Development in the New Normal”, which highlights the importance of stability created by the development and security nexus in the context of emerging new threats to national, human, and global security. Sir, we are looking forward to listening to your words of wisdom today as well.

Mr Weeratunga, it is also remarkable that eight years ago, you were accompanied by the Secretary Defence during that time, who has been destined to be President of our country today, H.E. Gotabaya Rajapaksa, and today you are accompanied by the present Secretary Defence and the Chairman of our Board of Management, General (Retd.) Kamal Gunarathne, and I am indeed honoured to welcome General Kamal to this conference as the Guest of Honour because he has been a tower of strength for KDU at this crucial time of its history.

Let me also welcome all distinguished invitees including the Tri-Service Commanders and other BOM members including the Chairman of the UGC, distinguished members of the diplomatic corps, Vice Chancellors and academics from other universities, senior tri-service and police officers, and national and international participants joining this event on line.

Ladies and gentlemen, this year’s conference is significant to us at KDU on several accounts. First, 2021 is the year in which we mark the 40th year of KDU’s existence in the higher education landscape of Sri Lanka, and we are proud of the role we have been playing therein, whilst continuously growing in its stature as a national university doing its call of

duty towards the nation with fullest commitment and dedication.

Secondly, this year's conference is the one that we hold under the most trying circumstances in our history. Last year too, we conducted our research conference in a hybrid mode due to the first wave of the COVID 19 pandemic that took us all by surprise.

But we hoped that we would be able to conduct the 2021 conference freely and in the usual glamour. But this year, it turned out to be even a worse scenario with the third wave of the pandemic hitting us harder. So we consider that this is a more challenging test of our resilience as the nation's defence university.

Ladies and gentlemen, we always believe in the dictum that a quitter never wins and a winner never quits. So we were determined to challenge the challenges, how hard they may be. And we ensure the continuity of the conference adjusting and amending the circumstances, while taking the highest precautions against the pandemic scenario. We were able to slowly but steadily accept the prevailing danger, assess the situation realistically, and to see the best options for the best interest of our University. Therefore, we finally decided that this year's conference will be a hybrid one with a major virtual orientation.

Ladies and gentlemen, the reason why we conduct this conference somehow or the other is because of our belief that we need to set an example for the nation to stand on its feet at times of crises. We as a nation cannot afford to continue to play the waiting game for ever. As our theme highlights, we need to find ways to ensure security and national development in the new normal adjusting ourselves to the new normal conditions sooner than later.

And thirdly, we believe that this is the time in which a nation's intellectual community must come forward to engage in serious and meaningful research to help overcome

innumerable issues and problems that crop up in diverse fields such as defence and security, economics, science, technology and engineering, medicine and health services, management, social sciences and humanities, law and so on and so forth. It is the responsibility of a university to create the necessary environment and enabling grounds for important research outcomes, which the nation yearns for.

Ladies and gentlemen, we are glad that the intellectual community of the country has very positively responded to our initiative. Despite some adverse comments and criticisms of KDU and its role in higher education in Sri Lanka from certain quarters in recent times, the large majority of fair thinking academics, professionals and ordinary people are with us fully, and that is evident from the large number of research papers submitted by researchers from all over the country representing various higher educational institutions.

Despite the difficulties in adjusting to the online mode, the organizers of the KDU international research conference have done their best to maintain the quality of the conference in the highest level. They intend to set the tone to initiate more collaborative research to face new global challenges. As I always point out these types of research conferences are ideal platforms to make connections nationally and internationally for mutual benefit.

I hope that authors of KDU and various other local and international universities will take the opportunity to interact and develop friendly relationships, establish networks, and explore opportunities to embark on productive research collaborations.

While assuring our commitment to providing best opportunities for research collaborations, I wish all the very best for the presenters and hope you will enjoy every moment of this academic fusion. Thank you.

Keynote Address

Mr Lalith Weeratunga

Principal Advisor to His Excellency the President of Sri Lanka

Secretary, Ministry of Defence, Chief of Defence Staff and Commander of the Army, Commander of the Air Force, Vice Chancellor of the KDU, Distinguished academics, Honoured guests, Friends, *Ayubowan!*

Once again, I am delighted to be with you this morning at this research conference. It gives me much pleasure to be at the KDU because it is one of the best universities we have in Sri Lanka. Since of late, there have been much attack on and criticism of the KDU. That's because the KDU is doing well and has brooked no nonsense. With a village background, my mind goes back to a famous Sinhala saying, which means "only those mango trees that have sweet fruits are attacked."

The entire world is undergoing a massive reorganization with the COVID-19 pandemic, and the traditional themes and arguments in security seems rather irrelevant in the present context. "Security, Stability, National Development in the New Normal" is a timely theme, giving us much food for thought in terms of the advancement of a country like Sri Lanka. If you take the first component, security, the bottom line of security is survival. *Survival*, is based on a number of factors. Barry Buzan, the veteran in international security rejected the practice of restricting security to just one sector and defined it as "a particular type of politics applicable to a wide range of issues."

As eminent representatives of the security sector, you are aware that the concept of security can somewhat vary from one country to another. When Mexico's major national security threat has remained to be organized crime for quite some time, Afghanistan's has been religious extremism. For a country like Somalia, it is the inbuilt corruption into their governance. For some countries, it might change abruptly. A few days ago, we all saw corruption and mismanagement which was the major security

threat of the African nation Guinea, getting substituted by another – an armed unrest. In spite of these differences, almost all countries in the world have developed a commonality during the past year, where the health insecurity assumed a major role over and above all others.

The COVID-19 pandemic has caused the entire world to assume a 'new normal' to fight this common insecurity that is caused by a tiny, microscopic virus. Even during the new normal, however, certain fundamental features of the modern-day security have not changed. Security in the 21st Century was, to a great extent, focused on internal factors of a country, rather than external ones. The organization of the threat factor has changed from state militaries to terrorist organizations to even pirates. The underlying motivation for creating insecurities has shifted from being political to one that is economic.

Targets have shifted from soldiers to civilians. The distinction between 'high profiles' of national security and 'low profiles' of economic and social interactions have softened. This has given rise to new sources of global insecurity in the 21st Century which are essentially 'soft' in nature.

The 21st Century has continued to witness these new sources throughout its first two decades. Donald Rumsfeld, the onetime Defence Secretary of the United States said at a key decision-making point in the history of his country, "there are known knowns; the things we know we know, we also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know." Although stated in relation to a completely different scenario, when recalling this statement, I see that it resonates with the pandemic that we are facing now. In 'security

terms', COVID-19 is a 'wild card', an 'unknown unknown'. It is a security threat without a passport. It caused the 'health security' to assume the prime position in the security landscape of the modern day, surpassing the food security, water security and all other soft securities.

When we view the modern-day threats, we see that none of these is of a purely military nature, as those perhaps were, during the cold-war period. As a result, they also cannot be tackled by purely military means. There is another factor that contributes to the restriction of military means as a response to insecurities. In today's security landscape, States do not have the monopoly that they used to enjoy. Human beings have assumed that role. When the individual is considered as the central point in security rather than the 'State' as before, it gives a new insight into all our security related concerns. This helps us to understand the present-day global vulnerabilities with a new eye.

When the centre of focus in security becomes the individual, it changes the state-centric understanding of national, regional as well as global security. When a pandemic, which cannot be controlled by military means is plaguing the world, the human-centric understanding of security becomes vital to address it in order to ensure development of any country. This is why the 'soft component' of security, or the 'human security' gains more prominence over the 'hard component' of security during this new normal, created by the worst health pandemic in the recent history of the world.

The pandemic has given rise to a number of human security threats. To mention a few, the threat to economic security through unemployment, to health security through the deadly infectious virus and to environmental security through the mass accumulation of the waste generated in the health sector. It has also given a signal on food security as well, which is precisely when the Government declared essential services and appointed an authority to manage the situation in Sri Lanka. So you see, security in the new normal is connected with the

stability of a country, but in a different way from how it did with conventional security under the normal conditions.

National development, as we all know, is an all-encompassing term. It includes both the individual and the nation. Therefore, national development can be considered as the process of development and reconstruction of all dimensions of the nation, along with the development of the individual. This concept is essentially linked with both the growth and the change where *change* can be socio-cultural or economic, tangible or intangible. National development involves activities through a planned national economy, application of modern technology in agriculture to enhance production, application of science and technology in the production sector, improving the human resource and providing education for all among many others.

During a disaster such as the COVID pandemic, it also includes providing facilities and assistance to the poorest segments of the society. In theory, addressing the security needs, especially those of soft security and implementing broad array of the previously mentioned key activities in national development ensures the stability of the country during the new normal. This theory is in practice in Sri Lanka today, in different sectors to different degrees.

Let us consider the vaccination drive for example. Two months ago, Sri Lanka was struggling with the inadequate human resource in the civilian component of the health sector to conduct the vaccination programme at its full length. Health sector employees were getting exhausted with the enhancing demand for services. At this point, the Government employed its military health professionals to assist their civilian component. That accelerated our vaccination drive to such an extent that Sri Lanka became the first country in the world to have the fastest vaccination drive to its population.

H.E. the President had first-hand supervision of this process, at times acting as a 'vaccination planner', which contributed to the success of the

whole programme. This measure addresses our health security, and at the same time contributes to our national development by making the workforce resistant to the pandemic. Together, the two outcomes contribute to enhancing the stability of the country during this new normal.

Now let us consider a few of the numerous initiatives that the Government has introduced to ensure food security. The Government recently decided to take a transition from inorganic agriculture to organic agriculture, in keeping with pledge given to our people by the President, H.E Gotabaya Rajapaksa, in his policy document, 'Vistas of Prosperity and Splendour.' The primary aim was to safeguard the public, and especially the future generations from non-communicable diseases including renal diseases, again ensuring the health security. This also gave an added advantage where the imports of chemical fertilizers became minimal and that saved a considerable amount of money to our Treasury. This also resulted in enhancing organic and bio fertilizer production within the country, opening up new employment opportunities.

Linked with these two activities, the Government also launched 'Wari Saubhagya', a programme to rehabilitate 1000 small tanks across the country. This was to provide water for both irrigation and drinking purposes. These projects ensured irrigation water to a greater area of paddy and other field crop cultivations and also created additional employment opportunities within the country. Overall, those made a noteworthy contribution to the national development as well as to the soft security of the country during the new normal.

National development not only involves the infrastructure development, but also the human development. A developed human resource is a shield against certain soft threats. The programme 'connect Sri Lanka' was launched during the new normal, initially providing four remote areas with 4G connectivity. We are planning to expand it into all 9 provinces.

The pandemic period where schools had to be closed was also used to plan education reforms

aiming at producing future generations that are better equipped with battling their way through the ever-changing global order. These enhance opportunities for the public, especially the children to gain access to knowledge that is amply available to children and citizens of many developed countries, and also to equip themselves better to assist with development initiatives of the Government.

Fruits of this labour will be reaped only in the future, where our country will continue to have a learned, open minded younger generations, and through them, smarter work forces. The activities that the Government has started today contribute to national development in the future on the one hand, security on the other, and to stability of the country, overall.

The last example that I wish to draw has a direct connection with all institutions in the public as well as the private sector, electricity. The Government spent over US\$ 2.3 Bln for oil imports in 2020. We all know that a considerable amount of this is spent for generating electricity. This is an unbearable amount for a developing country like Sri Lanka, to be spent notwithstanding the prevailing health pandemic. It is also a waste of funds considering the vast and untapped potential that Sri Lanka has for renewable energy.

The Government gave due consideration to both these when establishing 'Thambapawani' the first wind power station owned by the Government of Sri Lanka. Another similar plant has been launched in Pooneryn. Use of solar power has been introduced to households. A waste-to-power plant was also declared open at Kerawalapitiya. It is not an easy task for a developing country like Sri Lanka to manage this shift while battling with a pandemic, but amidst all, the Government plans to increase the renewable energy component to 70% of the total consumption of the country by 2030. It is an ambitious target, but it helps the country to reach a higher status in self-sufficiency and also prepares the country to face worse calamities than the present one that might arise in the future. The 'failure to prepare' as the old saying

goes, is 'preparation for failure'. We intend to avoid it.

Moving back to the concept of security with these examples, with special emphasis on human security, it is evident that the national development and security are inter-linked. These cannot be achieved separately. This is probably what caused the formerly known definition of security, 'freedom from fear', to be redefined as 'freedom from want', indicating the link between security and development. Human security, as we all know, is an integral part of State security, which in turn, has an equally strong connection with national development. This is why if you have a closer look at Sustainable Development Goals, you will see that all 17 goals are connected to human security.

In this context, I believe there is something vital that we all need to understand about security, development and the stability that those bring about. The new normal caused by the COVID-19 pandemic is calling us to re-think our actions, plans and concepts on security and development both.

Is it not high time for us to re-think our national security and national development?

Is this not the best time for us to redefine our development-security nexus?

Let me conclude by bringing back to your memory, extracts from a famous speech delivered by Robert F. Kennedy during his run for the Democratic nomination for the Presidency of the United States. Over 50 years

later, his remarks about the measurements of development resonate with something that we need to re-discover with experience we had during this new normal. He said, and I quote,

"... the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile."

Distinguished scholars, ladies and gentlemen, let us try to fathom the lesson that this global pandemic and the new normal is trying to teach us. Let us acknowledge the all-encompassing nature of national development and pay attention to the vital fact that has evaded our comprehension thus far – the fact that the individual, the human has assumed the central focus in security as well as in national development. Let us use that understanding to re-define our development-security nexus and bring a lasting stability to our country during the new normal.

Stay safe and take care of yourselves.

Thank you.

Address by Secretary, Ministry of Defence, Sri Lanka

General Kamal Gunaratne (Retd) WWV RWP RSP USP ndc psc MPhil

Secretary, Ministry of Defence, Sri Lanka

Chief Guest and Keynote Speaker of the 14th International Research Conference of KDU, Principal Advisor to the President Mr. Lalith Weerathunga, Ambassadors and High Commissioners, Foreign Secretary Professor Jayanath Kolombage, Chancellor of KDU General Jerry De Silva (Retd), Chief of Defence Staff and Commander of Army General Shavendra Silva, Commander of the Navy Vice Admiral Nishantha Ulugetenne, Chairman of University Grants Commission Professor Sampath Amarathunga, Vice Chancellors of other Universities, Vice Chancellor of KDU, Chief of Staff of Air Force, Director General at Institute of National Security Studies Professor Rohan Gunarathna, Deputy Vice chancellors, All Deans and Directors, former Chancellors and Commanders at KDU, Eminent Scholars, Senior Officers of the Armed forces and Police, distinguished guests joining us virtually from Sri Lanka and Overseas, Ladies and Gentlemen;

I consider it as a great pleasure and a privilege to be present here today at the inauguration ceremony of General Sir John Kotelawala Defense University's International Research Conference which is taking place for the 14th consecutive year and I would like to thank the Vice Chancellor and the conference organizers for the invitation extended for me to be present here to participate in this event. The International Research Conference of KDU is providing the opportunity for academics, professional researchers and practitioners to share their research findings and expertise addressing the mutual challenges in their fields. Therefore, this event has gained tremendous recognition among all interested parties

around the world. Further, the provision of a wider interaction and networking with national and international scholars in respective fields would be absolutely beneficial for all the participants to broaden their horizons of knowledge through intellectual discussions. However, due to the global pandemic situation in effect, most participants may join the event through a virtual platform for this conference as same as the last year. Yet, I'm sure we will be able to achieve the desired objectives in a state amidst this pandemic situation.

Furthermore, I'm extremely pleased that the theme selected by the KDU for the conference this year security, stability, and the national development in the new normal is a timely theme capable of augmenting the significance and focus of the subject of strategic national importance. Further, I firmly believe that the endeavor towards warranting the national development and ensuring national security becomes further from achievement by undermining the routine activities due to the ill effects of the pandemic but becomes attainable by ensuring the adaptability to the new normal as widely accepted by all the countries in the world, today which is implied by the theme that you have selected. In fact, as comprehensively illustrated by the keynote speaker Mr. Lalith Weerathunga it is quite imperative that all of us understand and pursue the ways and means of adopting the circumstances embedded with the new normal. in order to coexist with the Covid 19 pandemic which has not shown any expiry date as of yet.

Ladies and Gentlemen in a context of globalization and further economic

integration, in recent decades the relationship between national development and national security of a country has become increasingly interlinked for Sri Lanka. These connections represent both opportunities and potential threats to the country's national security. The open and interconnected Sri Lankan economy creates vulnerabilities from potential international and external threats. Against this backdrop, national development has emerged as an important strategic priority for the Sri Lankan government with the connection between development and national security which will be orchestrated upon the vistas of prosperity and splendor, the national policy framework of our government headed by his excellency the president Gotabhaya Rajapaksha.

Ladies and gentlemen, the development generally depend on the stability of a country which should be achieved by ensuring national security. Sri Lanka being a country endangered by ruthless terrorism for almost three decades has experienced a lot of hardships during the past and was in the stage of eyeing its development in the last decade. Even though we were able to relieve the country from the menace of terrorism we have found another security threat in the form of a pandemic which has posed a greater threat to the entire world. The threat that we face today is progressing in its second continuous year without any indication of a possible termination we are yet to find a permanent solution for the same. However, we must always work towards reaching our development goals without letting our country at peril. In such a context our endeavor here as Sri Lankans should be to seek possibilities to find ways and means to steer the country towards development goals amidst said difficulties. Sri Lankan government is at the threshold of trying all possible methods to meet its economic growth and objectives yet with lots of

empidements while ensuring human security. When the domestic affairs of a country are affected it is extremely difficult for a country to reach its desired end state. Sri Lanka is no exception in this, regard being a developing country Sri Lanka cannot accept any economic standstills for a protracted time frame. However, any plans to expedite the economic gains should never be at the expense of human lives. Therefore, his excellency the president himself has expressed his keenness on this aspect to see and inspire all possibilities available to ensure the maintenance of momentum in the economic sphere.

On the contrary, we should also note the other contemporary security concerns such as violent extremism, terrorism, piracy, drug, and human trafficking, smuggling, cybercrimes, and other organized crimes and natural disasters pose a grave threat to the stability of a country. Sri Lanka's geostrategic location is susceptible to such threats as it is located in the main sea routes in the Indian ocean. The same geopolitical significance has given a greater recognition to the country, thus it has gained greater demand from the rest of the world. In such an instance, the possibility of Sri Lanka becoming susceptible to threats posed from violent extremism and organized crimes is very high and present the government has initiated several steps to curtail such illegal activities and such measures taken such as the demarcation of maximum security prisons concept and highly effective maritime domination programs launched by the Sri Lankan Navy which have become very effective in restricting such threats. However, the effects of such activities pose a moderate level threat to the stability of our country.

Ladies and gentlemen, a government alone cannot afford to force all these threats that are in concert ruining the stability of a country. Therefore, as responsible citizens, it

is our bounded duty to provide novel ideas, suggestions, and proposals to consider in regaining our country's stability and development. I hope the academic events of this nature will undoubtedly serve this national requirement. Such efforts are arranged to address emerging challenges. Promoting more research and development becomes a task of topmost priority for all of us.

Fortunately, as the Secretary of Defense, I feel tremendously proud and content to say that the Kotelawala Defence University is at the forefront of researching the development of security-related problems in the new normal. The approach adopted by the Kotelawala Defense University to understand the contemporary complex situations concerning the bigger picture rather than dwelling on the narrow passages will become far more effective in resolving the emerging complexity of future challenges. Therefore, I'm well certain that

the faculties of General Sir John Kotelawala Defence University with their interest, commitment, dedication, and knowledge in diverse academic disciplines and outside rich researches inputs would contribute immensely to this year's conference theme. The knowledge that you are going to unearth and share during this conference would be of immense benefit not only to the academic community but to the entire humankind to make their lives better.

In conclusion ladies and gentlemen, I should express my most sincere appreciation to the Vice Chancellor and the organizers of the General Sir John Kotelawala Defense University's 14th International Research Conference 2021 for organizing this timely important event amidst the covid 19 pandemic concerns and I wish this event be successful in all way imaginable. Ladies and Gentlemen thank you very much for your patience, thank you.

Vote of Thanks

Dr Harinda Vidanage

Conference Chair, 14th International Research Conference, General Sir John Kotelawala Defence University

the President of Sri Lanka, Secretary to the Ministry of Defence, General Kamal Gunaratne, Vice Chancellor – Maj Gen Milind Peiris, Deputy Vice Chancellor (Defence & Administration), Deputy Vice Chancellor (Academics), Rector – Southern Campus, Senior Professors, Deans and Directors, Senior officers representing Tri Forces and Police, Distinguished guests, colleagues, Ladies & Gentlemen, Good morning!

In its 40th Anniversary since its inception the flagship academic conference of the KDU, the international research conference progresses to 14 years of continuity. I stand here to reflect and provide my gratitude to a team of individuals who despite every challenge in the form of material and the forces of nature has confronted us with, have managed to successfully bring us to where we are today.

Since 2019, the country has witnessed unprecedented upheavals from violent extremism to microbial threats that have forced a drastic rethinking of every aspect of social life. These challenges have made all of us believe in a reality that long established norms, traditions, beliefs do have their limits and if we are to survive and thrive in the new normal, we must adapt, adopt and innovate. The core fundamentals driving this year's IRC is based on this conviction and that the KDU as a leading force of defiance and a beacon of hope amidst such calamities.

On behalf of KDU, I would first and foremost like to extend a heartfelt appreciation to our Chief Guest and Keynote Speaker, Mr Lalith Weeratunga the Principal advisor to H E President Gotabaya Rajapaksa. Your presence today is a blessing to us as an institution and to the IRC as a process and your observations made at the keynote enriched us with knowledge and perspective.

Your wise words of wisdom will have a bearing on the deliberations of all academic communities within and well beyond this conference. I also would like to thank Secretary to the Ministry of Defence, General Kamal Gunaratne for his presence, his insights and his towering leadership that has seen KDU through fair weather and through some rough storms.

I would like to highlight and appreciate the visionary leadership of the Vice Chancellor, Maj Gen Milinda Peiris and his belief in maintaining continuity of this apex academic event of the KDU. I must then appreciate the critical roles played by Deputy Vice Chancellor (Defence & Administration) Brigadier Wipula Chandrasiri in ensuring that the IRC will take place and in providing the administrative leadership towards the materializing of the conference. The support and blessing of the Deputy Vice Chancellor (Academic) Professor KAS Dhammika is highly appreciated, along with the support of all Deans of faculties who came together to make this event a success.

Even at a time when every institution is careful about its purse, our sponsors have stood by us, let me profoundly thank and appreciate the generosity of our Gold Sponsors, the Bank of Ceylon and the People's Bank and with Huawei Sri Lanka and National lotteries board being our silver partners. There are many more who have chipped in and do not want their names mentioned and a big thank you for all.

I must mention that this year it is the first time the faculty of Defense and Strategic Studies have been tasked with the overall IRC and holds the chair. I must with gratitude mention the hard work of my colleagues in both departments of Defense and Strategic Studies under the leadership of Col Enoj

Herath the Dean of the faculty. The FDSS represents the tip of the Spear of the KDU and bears testimony to the perfect convergence of civic-military relations.

Towards the buildup to the conference the shutdowns became lockdowns and lockdowns became enforced quarantined curfews, yet the main committee of the IRC 2021 managed to work tirelessly around the clock. We knew it was all for a greater cause and I must appreciate the gargantuan task that was handled by the secretary of the IRC committee Ms Lihini De Silva who virtually was my prime buffer and the tremendous work done by the three co secretaries, Maj Ranushka Ferdinandesz, Ms Isuri Uwanthika and Captain Abeetha Athukorala. We were all supported by the dynamic team of faculty coordinators who labored hard and were endowed with patience.

It is with sincere gratitude I appreciate the services of Mr Kithsiri Amaratunga the president of the Editorial committee and Dr Faiz Marikar the deputy editor. I also want to mention the prudent actions taken by

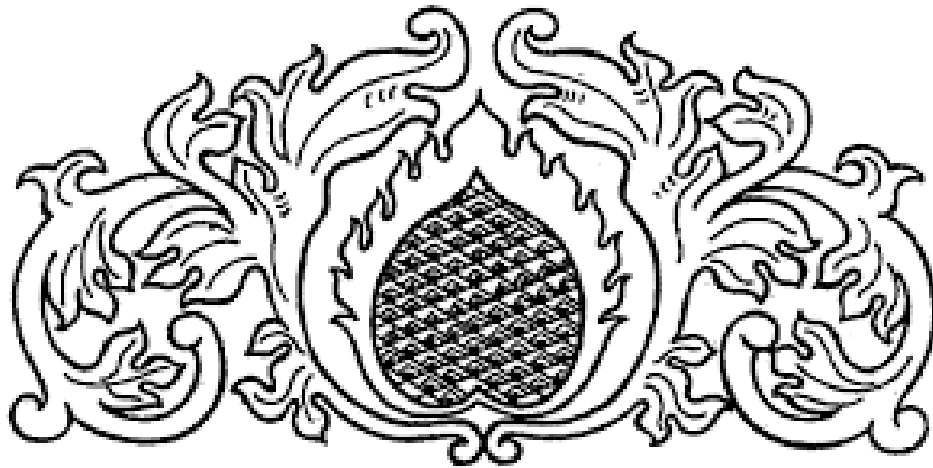
Commander Bogahawatte, the president of the publication committee. I would like to thank all committee presidents, committee members, faculty committees, the office of Bursar, Registrar, Adjutant and C/O Admin and the staff at the Vice Chancellor's office.

New normal pushed us to the limits, yet we managed to overcome as we functioned as a collective team. Yet, finally the work would be incomplete if not for the researchers who had put faith in us and submitted papers and reviewers who filtered them. This year's IRC is the most decentralized event out of all IRCs, facilitating intellectual deliberations of this scale is no easy task. To keep this grid alive and robust the contributions made by Director IT and his team needs a special word.

We have truly embraced the new normal. We have not run away from it, instead we have transcended it. Thank you all for accepting and believing in us. We shall prevail and we shall overcome.

Thank you very much!

MANAGEMENT, SOCIAL SCIENCES AND HUMANITIES



PLENARY SESSION

Session Summary

Session Chair: Hon (Prof) Charitha Herath, Professor of Philosophy Member of Parliament, Sri Lanka

Rapporteur: Ms. Krishanthi Anandawansa, Senior Lecturer, Faculty of Management, Social Sciences and Humanities

The plenary session of the Faculty of Management, Social Sciences and Humanities (FMSH) was conducted under the sub-theme 'Revisiting National Development in the New Normal'. The session was chaired by Hon. (Prof.) Charitha Herath, Member of Parliament representing Sri Lanka Podujana Peramuna (SLPP) and Former Head and Professor of Philosophy at the University of Peradeniya.

Distinguished speakers of the plenary session were Prof. Hendrik Vollmer, Associate Professor of Accounting at Warwick Business School, UK; Hon. (Dr.) Suren Raghavan, Member of Parliament representing the Sri Lanka Freedom Party (SLFP), Sri Lankan academic & a former governor of the Northern Province; Prof. Dakshina De Silva, Prof. of Economics at Lancaster University, UK; Dr. Thomas E. Fernandez, Regional Coordinator - South East Asia, Humanitarian Logistics Association, Northants, UK and Co-Founder and Director Logistics and Consulting of Fair & Easy Co., Ltd., Bangkok; and Dr. Bimali Indrarathne, researcher and academic at University of York, UK.

The first speech was conducted by Prof. Hendrik Vollmer on 'The Place of Accounting in the New Normal'. Initiating his presentation, he stated that he would elaborate on a tri-partied structure by explaining: the idea of the 'New Normal'; Accounting in the 'Old Normal', and the changing role of Accounting. In relation to the first, Prof. Vollmer explained that the 'New Normal' has instigated complex change in human social activity and much such change that occurs in the periphery goes unnoticed. Speaking about Accounting in the 'Old Normal', he stated that questioning the 'Normal' could be a sign of disruptiveness and it is only when the 'Normal' is challenged that one realizes what it is. He further explained that Accounting's place in the 'Old Normal' is broadly identified in the domains of the economic, public and ecological spheres, where the first is the most conventional, since it associates accountants with economists to keep track of economic value. The

public sphere involves issues of accountability of businesses and public servants, while ecosphere relates to social and environmental accounting, where planetary ecosphere is the point of reference given least attention. Prof. Vollmer explained that recently emphasis has been given to the provision of equal weight to concerns of the three spheres in Accounting.

He further elaborated that governments, particularly the UK government, have shown continued interest under the present state of disruptiveness on economic considerations; that 'building back better' starts with the economy. In the present crisis, while there is expectation on the government's performance, there is much pressure on public accountability, and social and environmental accountability too has gained importance. Compared to the economic and ecological spheres, Prof. Vollmer stated that there is lack of clarity and severe issues of accountability in the public sphere to which corporations are liable, and thus, more attention should be paid to that domain.

In conclusion, Prof. Vollmer emphasized that the public sphere still lies at the centre, that critics have stated of inadequacies in maintaining proper standards in the public domain, and that there is a requirement for better Personal Relations (PR) to efficiently manage Accounting. Finally, it was suggested that Accounting in Public Service should be prioritized as the centre in order to entrench Accounting in a good place, since the economy, cost and economic value are fundamental all through Environmental, Social and Corporate Governance (ESG), ecological issues, The Triple Bottom Line (TBL) framework (social, environmental and financial perspectives adopted by Organizations), and integrated reports are gaining importance in the 'New Normal'.

The Chairperson commented that Prof. Vollmer's discussion on the three spheres of economic,

public and ecology in relation to Accounting is important and insightful, and that an interesting question was put forth: that countries have not considered the public sphere seriously.

The second plenary speaker, Hon. (Dr.) Suren Raghavan delivered some conceptual views under the title 'The Cross-fertilization and Interlocking Relationship between Higher Education (HE) & National Development'. Hon. (Dr.) Raghavan stated that both HE and National Development are the predominant discourses in state reformations after the fall of the Berlin Wall. Sri Lanka just emerged from a wave of social discussions, protests and political 'jolt' about HE institutes such as the KDU, and the various political debates suggest that in reality diverse political dimensions of change exist, and the 'New Normal' is compared to what existed under the 'Normal'. The question is: Could one consider what existed as 'Normal'?

It was explained that according to researchers, countries that have invested in HE have experienced a deepening in their democratic contract with citizens and economic progress. China is a great model which transformed its people from below the poverty line to working middle-class within 30 years, although it is possible to argue that it has a one-party, non-democratic government. Counter-arguably, a democratic process should not benefit institutional norms, but citizens at bottom line. China's observers claim that the Chinese government made heavy investment in HE by sending over 30m Chinese students abroad for education purposes to UK and Europe, despite language barriers.

Hon. (Dr.) Raghavan then took up the question: How does one survive with existing values in the 'New Normal'? The global challenge is that the very essence of humanity is challenged in the face of the unseen, unknown Corona virus. We are trying to handle it despite huge human/social cost. As a political scientist, he further explained that it was quite surprising to note that developed countries were most affected in terms of per capita debt rate and economic loss, which in turn questioned the notion of development.

The neo-reality of social function has forced re-thinking and outlook on HE and National

Development. Statistics show that developing countries are paying a bigger price in terms of economy and re-adjustment. Hon. (Dr.) Raghavan stated that as per his view there are three points of elaboration: HE is traditionally a process of meeting and exchanging analysis by adults on often a physical location, to further understanding of given and selected topics. COVID-19, while affecting many other areas, challenged the very epicentric essence of such meeting, gathering and human interaction, and deeply disturbed HE by challenging how we thought above it overnight.

The speaker stated, according to records, 70% of students in state Universities from rural/semi-rural areas were cut off from education overnight, thereby questioning their fundamental right to education and being in the main-frame, since investors only install towers/facilities on the basis of a Return on investment (ROI) acceptable model. This generates eye-opening questions for governing bodies: Who are we accounting for? Is the end-day analysis merely profit, ROI and goods importation?

New freedom and opportunity to democratize education should develop in 'New Norm' virtual education. The elitist tradition which suggested those who were not enrolled for university could not enter it changed with the 'New Norm', since the virtual platform of learning/teaching enabled anyone interested to learn, irrespective of qualifications and entry criterion. There is now 'real' value and a more democratic approach on per rupee investment on Universities, since academic discourse is also reaching the 'real' citizen. COVID-19 has broken the barrier between the learned and the willing-to-learn.

Through the paradigm shift in the 'New Norm' in the intrinsically inter-woven relationship between HE and National Development, it has offered a new opportunity to revalue philosophical orientation of concepts. Connecting questions are: For whom are these two activities done particularly in a state like Sri Lanka? What is the actual benefit of a society with HE? What is the 'real' development of society? How far does it reach the most common citizen on the basis of social contract?

COVID-19 has also shown that health security is as important as military security approaches for a

country. Though an island and having one international airport and port, we have failed to prevent COVID-19 entering the country. Rigorous vaccination process with military assistance has shown results. However, COVID-19 proves that a country's security lies on food and health security. These need to be prioritized on the way to the 'Next Norm', along with military security. Deep/long-term debt is inevitable, yet simple economic financing economy is fruitless. Strong/discerning use of state resources is required. How/Where is structural/operational change required must be understood. Change should be re-looked on a deepening democracy and how the bottom-line individual can manage post-COVID-19 life and the 'Next Norm'. Such a new 'learning curve' is more realizable for Sri Lanka with its small economy, GDP level and medium sized population with fairly integrated communication and other infrastructure.

In conclusion, Hon. (Dr.) Raghavan stated that with crisis management based on participatory democratic agendas sensitive to multicultural identities and political formations of Sri Lanka, the country could have a fair and just transition to a different kind of post-pandemic economy and social contract between state and citizens. Post-COVID structural agenda is only possible with conscious and deliberate change of design and delivery of HE that reaches the subaltern, and this would in turn re-design what is understood as 'National Development'.

The Chairperson's brief comment on the presentation was that the speaker touched on important and philosophically-related issues on the COVID-19 crisis.

The third plenary speaker, Prof. Dakshina De Silva's speech was on 'Tiebout Sorting & Environmental Injustice' a collaborative study done on the US with 4 eminent researchers. Initiating his presentation, Prof. De Silva explained that motivation for people to change location comes from matters such as economic reasons and environmental catastrophes. In US, approx. 40m Americans (13% of population) move annually between Counties, and the primary reason is housing-related and tendency to seek better environmental quality. While moving decisions affect policy designs, people also move to find better suited locations for their ideologies rather

than wanting to change government policies in where they live. If personal characteristics affect migration, local pollution may contribute to reshaping the socio-demographic distribution of areas within a country.

Prof. De Silva stated that the objective of their paper is to explore the relationship between migration within the US, income and local pollution, and results show that local environmental quality matters in households' migration decisions. Instead of using aggregate population changes for residential change, the paper observes migration patterns of both home and destination characteristics, and the income of moving/non-moving households in all Counties (3,109) in the lower 48 States.

A household maximizes expected utility by moving to a cleaner location (conditional logit problem). Net migration patterns denote more movement towards coastal areas. With data of Toxic Release Inventory (TRI) by US Environmental Protection Authority (EPA) per County and number of firms available, it is possible to collapse by County and year to arrive at TRI ratio, which is the number of TRI reporting firms in a County over the Number of establishments per County. Particle matter data captures air pollution, particularly that by cars. The study finds there is less movement from one's location into a particular County having a large industry pollution base with high particle matter (i.e. California and Florida). Also, it is found that households move to high income Counties, not out of State but within and in shorter distances. The question is who moves out: rich or poor? The coefficient of the TRI ratio indicates that on average households that move to 'cleaner' Counties are 'richer' than those that stayed back. Thus, environmental justice is sorted by income, yet the policy implication is that addressing environmental justice issues may require designing policies aimed at dealing with income disparities.

Yet simple requirements such as having running water or education opportunities in the 'New Normal' have changed situations and most in UK and US are moving to suburbs with preference for remote access. Face-to-face interaction is not needed any more, and the movement to suburbs has given more opportunity to local authorities. Any country and government can create

opportunities as such, including Sri Lanka. Instead of clustering government offices like in Battaramulla, why not have Provincial offices? The clustering and movement to Colombo creates congestion, issues with city planning, and rise in housing prices.

In conclusion, Prof. De Silva mentioned that it is such issues and that historically, waste downsize has been located in poor neighbourhoods with high minority ratios which make this paper's topic important.

The Chairperson commented that regardless of present COVID-19 situation, this is an important issue that needs focus in countries like Sri Lanka. Environmental Impact Assessment would be the only certificate giving permission for people to build houses in certain areas of Sri Lanka, where running water, traffic, waste and toxic issues are to be addressed in that one document, and this has its own diverse problems in policy making bodies.

The fourth speaker of the Plenary Session of FMSH was Dr. Thomas E. Fernandez who spoke on 'Humanitarian Logistics in the New Normal'. Initiating the presentation, Dr. Fernandez explained that 'Humanitarian Logistics' (HL) meant logistics management of relief and development goods, and is different from commercial logistics. While relief goods arrive after a disaster, and suddenly increase airport and port goods arrival, create problems in physical cargo handling and meet custom limitations, development goods arrive when logistics can be planned.

The type of disaster also affects logistics. While man-made disasters can be sudden onset like terrorist attacks, there is also slow onset disasters such as political/refugee crisis for which we could prepare. Natural disasters too have sudden (Tsunamis, volcanic eruptions- unpredictable and Hurricanes- predictable) and slow onset disaster (famine, drought). Overall, there are 4 phases of disasters: Preparedness, Response, Recovery and Mitigation. Preparedness concerns the availability of safe/close-proximity warehousing, deciding on the goods for relief, and human capacity building. Response involves deciding what was destroyed, and what relief goods/medical equipment are needed. In the Recovery phase, road repairs, reinstallation of electricity/water pipes, and 'building back better' for development occurs.

Finally, Mitigation involves planning for recurring disasters to reduce future vulnerability.

In traditional processes of relief goods, demand/supply assessment is required, problems in coordination, over/under supply and distribution (crowding) might occur, and warehouses with trained staff need to be installed. In the 'New Normal' under COVID-19 emergency, demand assessment had issues like vaccination rejection and choosing of vaccines, while in the supply chain, there was a severe supply shortage of vaccine, PPE and masks. Problems included lack of coordination like in the traditional system, but coordination was even more important. Warehousing problems in COVID-19 included maintaining social distancing, problem of conversion from labour intensive to automation, and needing cool/cold storage for vaccines. Distribution-wise, requirement of social distancing, especially in villages, and travel cost and having to go in person for vaccination were issues for villagers.

Development goods in the 'New Normal', unlike in traditional processes had certain changes. In terms of demand assessment, new goods were needed i.e. sanitizers, PPE and vaccines. Supply resorted to pull strategy, while problems with customs delays, new goods requiring additional tax exemptions/licenses emerged (i.e. vaccine import approvals). Warehouses increased cold/cool storages, and distribution of vaccines and increased demand for PPE had to be met. In addition, the new, bio-hazardous problem of PPE disposal ensued.

In conclusion, Dr. Fernandez summed up changes in the 'New Normal': the shift in HL for relief goods towards new products requiring cool/cold storage, and relief effort demand needs to be managed amidst uncertain supply. Social distancing in labour intensive warehousing and distribution arise, vaccine centres had to be set up and beneficiaries had to travel in person. While for development goods, the 'New Normal' would include vaccines on ongoing basis with cold/cool storage, at the end point, the sustainable disposal of large-scale bio-hazardous new waste material remains an issue that has to be addressed.

The Chairperson elaborated that it is important to look at key issues on the nature of disasters and means of mitigating such 'new' conditions, since we are in a disaster-driven environment worldwide. In conclusion he recalled that Sri Lanka faced both natural (2004 Tsunami) and man-made (ethnic war) disasters.

The fifth and final speaker of the Session was Dr. Bimali Indrarathne, who spoke on 'Language Teaching & Teacher Education in the New Normal'. Initiating her talk, Dr. Indrarathne mentioned that her focus would be language learning/teaching in the context of Sri Lanka in the 'New Normal'. The status of English Language Teaching (ELT) in pre-pandemic era saw issues such as employees' limited English proficiency levels, Ordinary Level (O/L) proficiency being quite basic/elementary, and secondary school English teachers' Common European Framework of Reference (CEFR) levels being quite low. Some reasons identified were vague competency descriptors in curriculum, textbooks having unauthentic/unnatural language, and problems in assessments: lacking standardization; non-reflecting on international guidelines of good language test task design; unauthentic input materials and test items; and not testing language skills, which means O/L and Advanced Level (A/L) results might not necessarily reflect student abilities. Dr. Indrarathne further stated that another issue in the pre-pandemic was that teacher training encouraged narrow subject specialization over cross-cutting skills or content-and-process integrated delivery.

In the aftermath of COVID-19, globally, a British Council Survey (2020) conducted among 9600 teachers/teacher educators across 150 countries, revealed several findings: remote teaching was new with majority confident in it; respondents expressed need for more training and clearer educational guidelines; and need for more support in delivering training. In addition, the Survey revealed several issues: problems in classroom management; remote assessing, fears of cheating at exams; catering for mixed-abilities; long prep time; and poor/no internet connection. A global picture of a review of studies showed several key challenges in 2020-2021 in ELT: internet connection problems; students' lack of access to computers/smart phones; keeping up student motivation; and poor teacher digital literacy skills.

Dr Indrarathna then explained the Sri Lankan ELT situation after the pandemic, based on an ongoing survey with 188 ELT teachers across the country teaching at Primary, Secondary and A/L classes. Some teacher responses are: they had no experience in online teaching/use of interactive tools in pre-pandemic era; student attendance for online classes were 25-50%; number of students not having access to electronic devices was less than 25%; majority can manage internet connection though costly; signal strength was good; and most had confidence in teaching online but least confidence in it being as effective as face-to-face teaching. Some key challenges teachers identified were poor network signals; student economic background; their access to internet; and students' lack of training on handling technology, while they indicated preference for support in terms of free data packages; quick training; and clear guidance from authorities. All these indicate that the Sri Lankan situation is not far different from the global picture. The study also revealed that teachers preferred to have a blended method of teaching (online & face-to-face) in future.

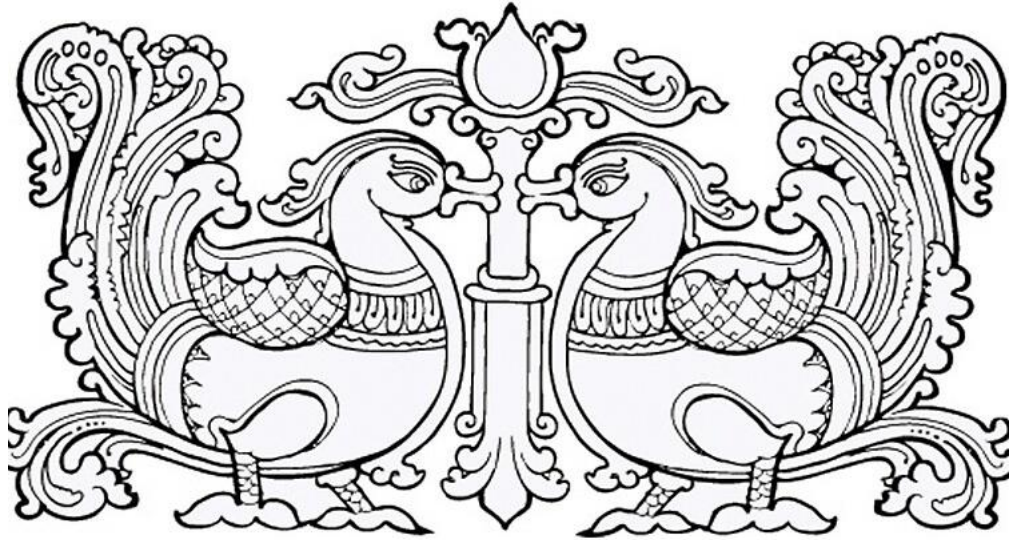
In terms of online teacher-training during the pandemic, Dr. Indrarathne explained that the British Council conducted an online teacher training for the first time in Sri Lanka for 128 teachers in 9 Provinces in 6 months, and lessons learnt were: the reiteration of feasibility of online teacher training in Sri Lanka; blend of synchronous and asynchronous mode of delivery; digital divide; and digital literacy of participants.

Finally, possibilities/realities of ELT's future were elaborated. Some global innovative practices including translanguaging, collaborative teaching, use of Internet of Things (IoT) technology for teaching systems, using Artificial Intelligence education (AIED) for developing online ELT systems, and use of flipped classrooms to increase teaching/learning performances at diverse educational levels are explored in South Korea, China and Hong Kong. The blended approach in the 'New Normal' also has challenges: finding suitable materials/resource development; rethinking assessment; digital literacy; making technology accessible and learners/parents ready for online teaching. Dr. Indrarathne concluded by stating that COVID-19 is a good opportunity to address most

issues that already existed in the pre-pandemic and to think the way forward.

Following the elaborate Q & A session, the Chairperson Hon. (Prof.) Charitha Herath thanked all speakers on behalf of KDU for their

presentations and stated that the subject of the 'New Normal' was treated in many different and conceptual aspects, especially in present times of crisis by bringing important arguments and policy positions that need to be met.



TECHNICAL SESSIONS

Competitive Edge Through Automation: A Study on the Sri Lankan Apparel Industry

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Abstract— The Sri Lankan Apparel Industry is one of the significant contributors to the country's economy as it generates considerable amount of export income. Tasks in the apparel industry which involve a higher amount of labour involvement have been replaced by automated technologies such as Robotics, Computer Aided Designing and Computer Aided Manufacturing technologies in order to achieve a competitive position in the industry. The objective of the study is to examine the impact of automation on achieving a competitive edge in the Sri Lankan apparel industry. Process automation, intelligent manufacturing and the global customized production were used in this study to achieve the objective by using cost advantage as the mediator. This study employed the deductive approach, and quantitative data were utilized to achieve the objectives. A questionnaire was distributed among 65 respondents selected to gather quantitative data. An exploratory research was conducted by the researchers conducting three interviews with industry experts, which helped to design the overall study. The researchers analysed the effect of the mediator through the Sobel test. As per the data analysis conducted in this study, it was found that there is a correlation between process automation, intelligent manufacturing, and customised production with competitive advantage, and there is a strong relationship between cost advantage and competitive advantage. The qualitative findings of this research conclude that apparel companies should invest in automation to gain a popularity in the global market. Thus this study proves that automation should exist in a developing country like Sri Lanka to achieve a competitive advantage.

Keywords— automation, competitive advantage, apparel industry, cost advantage

I. INTRODUCTION

A. Background of the study

The apparel industry of Sri Lanka has shown a steady growth in the past three decades proving it to be a most significant contributor towards the Sri Lankan economy (BOI, 2020). It has been the largest gross export earner in Sri Lanka since 1986 and 52 percent of total export earnings resulted through apparels. The apparel industry has been the largest net foreign exchange earner since 1992 (Dheerasinghe, 2009).

With the development of the apparel industry in the world Sri Lanka also initiated towards producing textiles and garments with the intention of distributing to the domestic market in 1960 and garments were manufactured with the objective of distributing worldwide from 1970 (Dilanthi, 2015). According to (BOI, 2020) due to apparel exports Sri Lanka has earned a total export revenue of 5 Billion Dollars and a contribution of 44 percent to the national exports of the country in 2018.

Sri Lankan apparel industry being considered as a low-wage cost-competitive model of production, the apparel manufacturers provide advanced solutions to the industry's complex and changing global needs focusing more on creativity and experiencing in vast amounts of fields such as Design, Research and Development division and Innovation. This has transformed the Sri Lankan garment industry to a regional apparel hub (BOI, 2020).

With the competition which arose in the world apparel market, the Sri Lankan apparel industry too have faced with many challenges. Proper

Identification of challenges will help the industry gain success and be stabilized among other key players in the global market. In Sri Lanka MAS Holdings, Brandix are considered to be the apparel giants as their competitiveness, advanced technology, and knowledge transfer capacity tends to be superior than other players (Dilanthi, 2015).

The GSP+ scheme which removes import duties on exports to the European region encourages increased value addition within Sri Lanka. Sri Lanka reported the highest export earnings which is \$15.1 Billion in 2017 (Anon., 2018). Thus, the Sri Lankan garment industry has become successful due to the GSP+ scheme given by the European Government. Thus, if it was not given, it might have been difficult to achieve a competitive advantage in the apparel industry.

During the past more human capital existed in the apparel industry, but now it has been automated, replacing human operators with industrial machinery. The challenges faced by the apparel industry could be faced successfully and a better and consistent quality could be achieved in the apparels while increasing the organization productivity with the help of automation (Michelini, 2013). The apparel industry will achieve competitive advantage in market depending on the level of advanced technologies and automatic tools and equipment that are used in Planning, Manufacturing, Supply chain and Retailing. High quality garments could be achieved by clothing manufacturers through automation while retaining the global demand (Enam, 2009).

B. Research Problem

The apparel industry of Sri Lanka was mainly based on labour intensive techniques in the past decades. With the introduction of technology Sri Lankan apparel industry started automating their processes by reducing human labour. The Sri Lankan apparel industry will have to automate their processes in order to compete with the competitors successfully and to be the best in the apparel industry. This research will find out whether automating processes while reducing labour involvements will lead to achieve a competitive advantage in the market and whether automation will lead to achieve a cost advantage in the Sri Lankan apparel industry.

C. Research Objectives

The objectives of this study are two folds; To identify the impact of automation on achieving competitive advantage of apparel industry of Sri Lanka and to identify how the Sri Lankan apparel industry achieves cost advantage through automation.

D. Literature Review

Existence of mechanization provides human operators with machinery to assist them with physical work and automation will greatly reduce the need for human sensory and mental requirement. Automation exists in most parts of the apparel industry such as in fabric inspection, fabric spreading and cutting, sewing, pressing and material handling (Enam, 2018). It is expected that automation will ultimately lead to the decrease of the production lead time of the apparel company, increase the product quantity and increase the worker efficiency (Goldnfiber, 2016).

This study will focus on the effect and the relationship between independent variables such as Process automation, Intelligent manufacturing, Customized production towards the dependent variable competitive advantage and the mediating relationship of cost advantage due to automation to achieve the competitive edge in the apparel industry which will be based on the Porter's Generic Model.

1) Impact of Process Automation towards Competitive Advantage

According to Singh & Prasad (2009), Process Automation could be briefed as the use of computer technology to control the industrial machinery while replacing human operators.

Competition tends to be one of the major challenges in the apparel industry of Sri Lanka. Challenges which arise through competition could be faced successfully with various technological advancements. Use of model-based approach for automatic inspection of fabric, use of laser knife or water jet in the cutting department, and use of pressing robot in the pressing process of apparels have been implemented in the apparel industry to gain a competitive advantage in the apparel industry. Through these technological advancements, vertical integration and horizontal integration could be achieved in both the apparel manufacturing sector and all parties in the value chain (Jayatilake & Withanaarachchi, 2019).

2) Impact of Intelligent Manufacturing towards Competitive Advantage.

Intelligent manufacturing is considered to be a specific work environment where integration and application of intelligent technologies become possible (Han, 2017). Through automating the apparel industry by implementing various techniques such as Robotic Process Automation, the business processes could be made more efficient as the employees will have more time to work on product innovation and its improvement. This will eventually lead the apparel producing companies to distribute the apparel products faster than the competitors and achieve a competitive advantage in the market (Putzer, 2018). The robotic technology introduced in apparel sector in the sewing department, pressing department and fabric handling department as stated, will prove that intelligent manufacturing will have a positive impact towards achieving competitive advantage in apparel companies (Ahmad, et al., 2020).

3) Impact of Customized Production towards Competitive Advantage

Customized production of apparels will refer to manufacturing apparels in standard designs where their sizes will be produced to fit the individuals and designs will comprise of different pockets, cuff shapes, fabrics and colours that are personally embellished to suit different consumer tastes (Saravanan, 2009).

The competitiveness of companies could be seen in the ability to react quickly to the rapid changes in customer requirements and to cope up with these changes various flexible automation tools such as CAD and CAM are used to design apparels (Kim & Culler, 2014).

Information technology efficiently supports customized production of apparels by shortening the virtual distance between the manufacturers and consumers. Customers at present prefer quality, style, and uniqueness in apparel products over homogeneous products making apparel companies focus on mass customization to gain a competitive advantage in the whole apparel industry (Nayak, et al., 2015). According to Bernard, et al. (2012) Companies are interested in customized production strategy because they expect a competitive advantage and an increase of their profit.

4) Impact of Cost Advantage towards Competitive Advantage.

According to Porter (1985), if a firm succeeds in achieving and sustaining the cost leadership, then the company could be identified to be an above-average performer in its industry which means achieving competitive advantage. According to (Singh & Prasad, 2009), the main objective of automation is to focus on reducing the manpower and costs using automated machines in the apparel industry such as automatic collar marking machine which marks the collar pieces point, buttonholing indexer which allows button holes between one and twenty to be inserted at a time, front pocket hemming unit which is used to hem front trouser pockets, and fully automated pocket setter unit which allows the pocket to be folded automatically once the operator places the pocket into the loader of the creasing unit. Automation makes it possible for apparel manufacturers to increase the efficiency while reducing defects and most importantly they could reduce the overall cost of manufacturing (Enam, 2009). As low costs can be achieved due to automation in the apparel industry, it is clear the fact that apparel industries could achieve competitive advantage due to cost advantage which is as shown in Porter's Generic Model.

5) Relationship between Process Automation and Competitive Advantage.

According to Nayak & Padhye (2018), automating the processes of the garment industry will help to achieve the competitive advantage in the apparel industry while producing apparels of high quality at lower costs. Thus, it is clear the fact that a process automation will ultimately lead to achieve competitive advantage in the industry because challenges which arise through competition could be faced successfully with various technological advancements (Jayatilake & Withanaarachchi, 2019). Cost advantage will be mediating the relationship between process automation and competitive advantage because cost advantage could be achieved through process automation as low costs could be achieved in the apparel industry through automating all processes (Singh & Prasad, 2009). Thus, apparel companies could gain a competitive advantage by being superior than the competitors due to the low cost that will be achieved through process automation.

6) Relationship between Intelligent Manufacturing and Competitive Advantage.

In the near future, intelligent manufacturing will be an important tool in the garment manufacturing industry as it will lower the operational costs of the apparel company although the initial investment is high (Nayak & Padhye, 2018). Use of intelligent manufacturing techniques will also lead the apparel producing companies to distribute the apparel products faster than the competitors and achieve a competitive advantage in the market (Putzer, 2018). It is also clear that a cost advantage could be achieved due to the application of intelligent manufacturing techniques as the operational costs in the apparel industry could be reduced (Nayak & Padhye, 2018). Thus, cost advantage will be mediating the relationship between intelligent manufacturing and competitive advantage to gain a superior position than the competitors.

7) Relationship between Customized Production and Competitive Advantage.

According to Bernard, et al. (2012) companies are interested in customized production strategy because they expect a competitive advantage and an increase of their profit. Thus, the cost advantage will mediate the relationship which exists between customized production and competitive advantage. By supporting the cost advantage in the apparel industry through customized production, a firm will succeed in achieving the cost leadership in the industry. Eventually, after achieving the cost advantage, the apparel company could be identified to be an above-average performer in its industry which means it could achieve the competitive advantage (Porter, 1985).

II. METHODOLOGY

This study was conducted under the Independent variables Intelligent Manufacturing, Process Automation and Customized Production while Competitive Advantage was used as the Dependant variable and Cost Advantage as the Mediate variable. Saunders, et al. (2019) have explained research design through the concept of research onion and it shows the issues highlighting the techniques used to collect data and analysis procedures. The researchers of this study have used the deductive approach under the survey strategy to conduct the study on the impact of

automation in achieving the competitive advantage in Sri Lanka. Realism was used as the philosophy to conduct this study and cross-sectional time period was used. The researchers conducted the study under mono method, collecting quantitative data using questionnaires during the time period October 2020. The data was analyzed using different quantitative and techniques. In this study both primary and secondary data have been used to gather data. A questionnaire was distributed by the researchers under the survey strategy to the target population. Secondary data which were required to conduct the research were obtained through previous researches, various journal articles, reliable websites and government statistics.

A. Conceptual Framework

According to the Conceptual framework illustrated in figure 1, Process Automation, Intelligent Manufacturing and Customized Production have been considered as Independent variables and Competitive advantage has been considered as the Dependant Variable. According to Baron & Kenny (1986) the researchers considered Cost advantage as a mediating variable in this study.

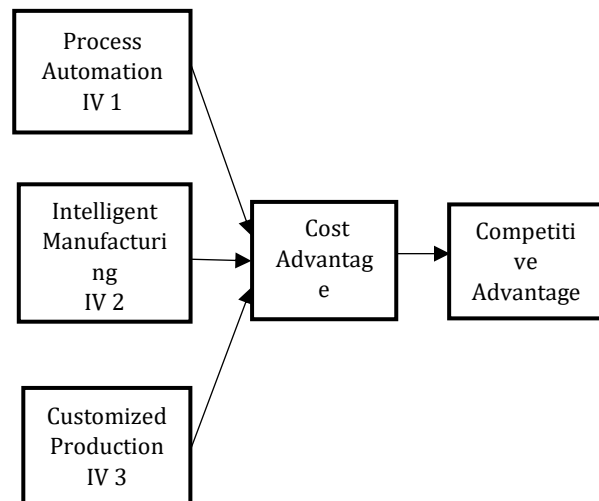


Figure 1: Conceptual Framework
Source: Developed by Researchers

Corresponding to the conceptual framework, following hypothesis were developed by the researchers.

H1: Process automation will have a positive impact on competitive advantage.

H2: Intelligent manufacturing will have a positive impact on competitive advantage.

H3: Customized production will have a positive impact on competitive advantage.

H4: Cost advantage will have a positive impact on competitive advantage.

H5: Cost advantage will mediate the relationship between process automation and competitive advantage.

H6: Cost advantage will mediate the relationship between Intelligent manufacturing and competitive advantage.

H7: Cost advantage will mediate the relationship between customized production and competitive advantage.

III. DISCUSSION AND ANALYSIS

A. Normality

Normality could be termed as the degree to which the sample data distribution corresponds to a normal distribution. Negative Kurtosis values indicate a Platykurtic distribution while positive values indicate a Leptokurtic distribution and positive skewness values indicate a leftward shift of the distribution while negative values denote a rightward shift (Hair, et al., 2014). In this study, Cost Advantage shows a platykurtic distribution while all other variables show a leptokurtic distribution. All skewness values in this study show a negative skewness indicating a rightward shift of the distribution.

B. Linearity

In this study linearity was tested between Competitive Advantage, the three independent variables including Process Automation, Intelligent Manufacturing, Customized production and the mediate variable cost advantage.

R-Squared or R² refers to the amount of variation and the value ranges between 0 and 1 while a higher value will indicate a higher amount of variation (Almquist, et al., 2019). In this study the researchers obtained values between 0 and 1 proving a higher amount of variation. The R² value for process automation and competitive advantage is shown as 0.562 which shows that 56.2% variation of process automation exists according to the findings. All other variables which are Intelligent manufacturing, Customized production

and cost advantage shows 0.296 (29.6%), 0.342 (34.2%) and 0.571 (57.1%) variations respectively. The R² value for the linear indirect relationships are 0.650, 0.579, 0.583 which are 65%, 57% and 58% respectively proving a higher amount of variation.

C. Reliability

Reliability is considered to be the degree to which the variable measures the “true” value (Hair, et al., 2014). According to (Taber, 2016) Cronbach’s Alpha is commonly used in studies as an indicator of instrument or scale reliability. Cronbach’s Alpha is considered to be a measure of reliability that ranges from 0 to 1 and values of 0.60 to 0.70 is considered to be an accepted level of reliability. If the value is 0.8 or greater it is a very good level (Hair, et al., 2014). According to this study all independent variables and the mediate variable have a value greater than 0.8 while the Dependent variable represents a value of 0.903. Thus, it indicates that the data analysis was measured effectively and efficiently.

Table 1: Reliability Test

	Cronbach's Alpha	No. of items
Process Automation	0.896	05
Intelligent	0.880	04
Customized	0.885	05
Competitive	0.903	05
Cost Advantage	0.856	04

Source: Researchers

D. Validity

Validity depicts the extent to which a set of measures which correctly represents the concept of the study and it relates to the consistency of the study. It is the degree to which a measure accurately represents what it is supposed to (Hair, et al., 2014). The questionnaire prepared by the researchers was approved by the supervisor.

E. Multicollinearity

According to Hair, et al. (2014), Multicollinearity is the extent to which a variable can be explained by other variables in the analysis. It is believed that as multicollinearity increases the interpretation of the variate will be complicated because it is more difficult to determine the effect of any single variable. To check whether there is any

multicollinearity among the variables the Variation Inflation Factor (VIF) can be used. It denotes how much variance or standard error is inflated when multicollinearity exists (Hair, et al., 2014).

According to the findings of this study all the tolerance values are greater than 0.1 and all VIF values are less than 10 which indicates that there is no multicollinearity.

F. Correlation

A correlation test will test the relationship between two continuous variables and the strength of the variable will be interpreted as a coefficient. Values between -1 and +1 will result in a perfect relationship and values between 0.7 and 0.9 will result in a Strong relationship. Furthermore, values between 0.4 and 0.6 will result in a moderate relationship while values between 0.1 and 0.3 will result in a weak relationship (Almquist, et al., 2019). Thus, it can be concluded that there is a strong relationship between process automation and competitive advantage and also in between cost advantage and competitive advantage. A moderate relationship will result in between the variables intelligent manufacturing and competitive advantage and between customized production and competitive advantage.

Table 2: Correlation Test

Hypothesis	Pearson's Correlation	Significance
H1	0.750	0.000
H2	0.544	0.000
H3	0.584	0.000
H4	0.756	0.000
H5	0.744	0.000
H6	0.629	0.000
H7	0.664	0.000

Source: Researchers 2020

All the Pearson correlation values obtained in the study are positive. Therefore, there is a positive linear direct relationship between the independent and dependent variables while there is a positive linear indirect relationship between independent, mediator and dependent variables. This study shows the Pearson correlation coefficient is between -1 and +1 which could be identified as the accepted level.

G. Regression

Regression analysis is used to predict the missing values of a variable based on its relationship to the other variables. Multiple regression will be carried out if there is more than one independent variable (Hair, et al., 2014). Linear relationship will be used to analyze the relationship between Process automation, Intelligent manufacturing, Customized production towards Competitive advantage in the Sri Lankan apparel industry.

Table 3: Modal Summary

Model	R	R square	Adjusted R square	Std. error of
1	0.769 ^a	0.592	0.571	0.525

Predictors: (Constant), Process Automation, Intelligent manufacturing, Customized production, Competitive advantage.

Source: Researchers 2020

According to the modal summary given in the table, R value represents a positive linear relationship with the dependent variable as it is a positive value of 0.769. The R square value also stated a value of 0.592 which is a value between 0 and 1 and it can be shown as a percentage which is 59%. Values between 0.7 and 1.0 indicates a strong positive linear relationship (Ratner, n.d.). Thus it can be concluded that this study contains a strong positive linear relationship because the value of R is 0.769. The adjusted R squared value of this study is 0.571 which is 57% of the variance of competitive advantage which is determined by the changes in process automation, Intelligent manufacturing and Customized production. The adjusted R squared is considered to be a modified version of R squared which has been adjusted to the number of predictors in the model. The adjusted R squared value which is 0.571 is statistically significant as it suggests the variance of Process automation, Intelligent manufacturing and Customized production which is 57% of the variance of competitive advantage. According to table 2 overall standard error of the estimate defines the measure of variation. The standard error of estimate is 0.525.

Table 4: ANOVA

Model	Sum Of Squares	Df	Mean Square	F	Sig.
Regression	24.337	3	8.112	29.453	.000 ^b
Residual	16.802	61	0.275		
Total	41.138	64			

- a. Dependable variable: Competitive advantage
 b. Predictors: Process automation, Intelligent manufacturing, Customized production
 Source: Researchers 2020

According to the above table it can be concluded that the overall regression model is significant where $F=29.453$ and $P < 0.05$ under 95% confidence level. Therefore, by looking at the overall significance level given in the ANOVA table which is .000 it can be concluded that the study is statistically significant.

Table 5: Coefficients

Model	Unstandardized coefficients		Standardized coeff	t	Sig.
	B	Std.			
(Constant)	0.45	0.39		1.145	0.257
IV1 Process automation	0.614	0.111	0.604	5.523	0.000
IV2 Intelligent manufacturing	0.071	0.127	0.064	0.559	0.578
IV3 Customized production	0.184	0.119	0.178	1.539	0.129

Dependent variable: Competitive advantage
 Source: Researchers 2020

As per the beta values in table 5, a change of one unit in Process automation results in a change of 0.604 units in Competitive advantage while all other variables constant. As such there is a direct impact of process automation with high significance. However, the significance value of intelligent manufacturing and customized production are above 0.05, which indicate that there is no direct influence towards the Competitive edge. Accordingly, the final regression model can be derived as below.

$$\text{Competitive Advantage} = \beta_0 + \beta_1 + \beta_2 + \beta_3$$

$$= 1.145 \text{ (Constant Value)} + 0.604 \text{ (Process Automation)} + 0.064 \text{ (Intelligent manufacturing)} + 0.178 \text{ (Customized Production)}$$

H. Sobel Test

The researchers conducted the mediating analysis using the Sobel test carefully elaborating the conditions of the mediator as per (Baron & Kenny, 1986). As per the Sobel test statistics, process automation has a partial mediation where as intelligent manufacturing and customized production has a full mediation. Accordingly, Intelligent manufacturing and customized production can be used to reduce the overall cost of the production.

Table 6: Sobel test statistics

Models	Sobel test Statistics
Process automation —→ Cost advantage	3.581
Intelligent manufacturing —→ Cost advantage	4.546
Customized production —→ Cost advantage	4.579

Source: Researchers 2020

I. Discussion

Apparel industry has become a prominent industry worldwide and Sri Lanka will have to focus on using automated techniques in the apparel industry in order to achieve the competitive advantage with the help of process automation, mass customization and intelligent manufacturing while achieving a cost advantage as discussed by the researchers in this study.

As discussed in this study all challenges which arises due to the competitiveness in the industry could be faced successfully with technological advancements and automation which will help apparel companies to stay competitive in the industry while being the best player. Various intelligent manufacturing techniques such as robotics and artificial intelligence will help distribute the apparel products at a faster pace than the competitors helping to achieve a competitive advantage in the industry. Providing differentiated products from what the competitors will distribute to the market will help become superior than competitors as customers will always prefer unique apparels over homogeneous ones. The relationship between cost advantage and competitive advantage was proved by Porter's Generic model in this study as a company will be known to be an above average performer if it succeeds in providing apparels at a low cost. For Sri

Lanka to sustain in the market as a third world country, it should always have to go with the cost benefit which could be achieved through Automation. With the invention of technology such as CAD and CAM in the apparel industry apparel companies could offer customized products at a low cost.

IV. CONCLUSION

This research study could be considered important since this study was conducted by taking Senior level managers and industry experts in the apparel companies of Sri Lanka. According to the findings it can be concluded that a competitive advantage could be achieved in the apparel industry of Sri Lanka by utilizing Process automation, Intelligent manufacturing and Customized production. It can also be proved that Cost advantage will mediate the relationship between process automation, Intelligent manufacturing, and customized production towards competitive advantage. Cost advantage could be achieved in the apparel industry using automation as low costs in production could be achieved while producing high quality apparels.

It also can be concluded that, in Sri Lanka, even though people working in companies prefer to have less automation, in order to sustain in the market and to achieve a cost advantage, automation should exist in apparel companies.

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A Study on the Relationship Between Employee Perceived Autonomy and Job Satisfaction of Remote Employees

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Abstract— The extant literature on the determinants of job satisfaction of the employees working from home/remote employees has mainly discussed from a strategic perspective, with little research exploring employee perceived autonomy and its relationship with the remote employees' job satisfaction. Perceived autonomy is considered to result in higher levels of job satisfaction. In consistence with this stream of research, this study aims to identify the relationship between perceived autonomy and the job satisfaction of remote working employees. For this purpose, data were collected through a five-point Likert scale measurement survey questionnaire from a sample of 92 employees of a leading organization in the financial services providing industry in Sri Lanka. The correlation coefficient was applied to understand the relationship between variables. A positive relationship between employee perceived autonomy and job satisfaction of remotely working employees was identified from the findings. Hence the study contributes to the literature by providing a differentiated insight into the relationship between perceived autonomy and job satisfaction. Theoretical and managerial implications followed by limitations and recommendations for future research have also been discussed in this paper.

Keywords— *job satisfaction, perceived autonomy, remote working*

I. INTRODUCTION

With the significant shift of work arrangements to remote working due to the COVID-19 pandemic, it is important that top management of organizations understand the psychological implications and consequences of the remote working arrangements. According to Desrosiers

(2001) changes in work methods/arrangements and technological developments associated with them may have unintended or unforeseen psychological consequences. This study was an attempt to expand the knowledge in this stream by examining the relationship between employee perceived autonomy and job satisfaction of remote employees.

A. Problem Statement

With no much difference to the rest of the world, Sri Lankan corporate sector also experienced a dramatic shift to remote working and the financial service providing industry is among the top industries that embraced remote working as an ideal way of working in the 'new normal'.

The organization on which this research was based, is a medium scaled organization in the financial services providing sector in Sri Lanka and located in Colombo. When the first COVID-19 wave hit the country, the top management of the targeted organization has made the decision to declare work remotely and has been observing how the strategy worked over the months. It was evidenced that the work force was delighted at the initial stage with the benefits associated with remote working however soon after, the top management has experienced some criticisms from the workforce over the way they have been asked to work remotely, the way their performance is being reviewed and the felt lack of trust on them by their superiors during this time frame. Majority of the employees in the monthly feedback sessions have expressed their dissatisfaction and concerns about the lack of trust-based culture and the lack of autonomy they perceive with the shift to remote working.

As a response to the feedback and comments from employees regarding the lack of autonomy during remote working, the top management has taken necessary initiatives by providing guidance to the managers of remote employees to make sure the employees who are working remotely are provided with adequate autonomy to perform their tasks remotely. After six months from this initiative, the top management intended to assess the effectiveness & success of its autonomy initiatives through examining the perceptions of employees on the current levels of autonomy and the employees' satisfaction associated with it.

Having said that intention of the top management, this research which conducted upon the request of the top management of the target organization, attempted to identify the relationship between perceived autonomy and the job satisfaction of the remote working employees and through the outcome of the research to support the organization to strengthen the autonomy driven work environment for remote employees.

B. Objective of the study

To identify the relationship between perceived autonomy and the job satisfaction of the remote working employees.

C. Literature Review

1) Remote working: The remote working is a way of work that's been referred by various names such as working from home, telecommuting, teleworking, virtual employment etc. As per Schall (2019), the terms remote working, working remotely, working from home, teleworking and telecommuting are comparatively synonymous as their common idea is working outside the conventional office and communicating through technology.

In the attempt to clarify who is referred as a remote employee in this research, from the literature is it emphasized that remote working employees are considered as organizational employees in the same sense as traditional employees. Thus, remote workers include individuals who are full-time or part-time employees of a particular organization, who accomplish at least some or entire of their work from a remote location instead of at the work premises where this work being facilitated through the use of information technology and

personal telecommunication equipment (Desrosiers, 2001).

2) Job Satisfaction: Job satisfaction refers to a person's feeling of satisfaction on the job (Karunaratne, 2021). It can be identified as a pleasurable or positive emotional state resulting from ones' job experience. (Locke, 1976 as cited in Karunaratne,2021). When focusing on the literature on the job satisfaction of remote working employees, according to Schall (2019), remote working has a positive relationship with job satisfaction. And that relationship is mediated by each perceived autonomy, work-family conflict & telecommuting intensity.

3) Perceived autonomy: Autonomy comes from the Latin words "autos" which means 'self' and "nomos" meaning 'rule' (Thompson, 2006).According to Spector (1986) as cited in Gajendran and Harrison (2007), perceived autonomy is the employees' personal assessments of the extent to which they can structure and control how and when they do their particular job tasks. As per Hackman and Oldham (1976) as cited in Gajendran and Harrison (2007), the increased flexibility in the timing and execution of tasks experienced by the employees will enhance the employees' perceptions of autonomy.

When considering the conceptualizations of autonomy, few popular concepts are found. Breugh (1985) as cited in Bhave and Gagne (2011), separated autonomy into three sub components - work method, work scheduling and work criteria. He has defined work method autonomy as the discretion in choosing the procedures/methods to go about one's work, work scheduling autonomy as the feeling of which one could take control of the sequencing or timing of his or her tasks and work criteria autonomy as the discretion in making changes to indicators/standards used to evaluate one's own performance.

Lin and Ping (2016) have viewed job autonomy as a favorable work condition that allows employees to involve their decision making in fulfilling the job responsibilities and also that employees' perceptions about their job autonomy tend to impact their psychological states of experienced meaningfulness of work, felt responsibility and knowledge of results according to Nwoku,

Chiamaka and Tochukwu (2013) as cited in Lin and Ping (2016).

Autonomy is conceptualized as the extent to which the job provides the employees the freedom and independence over their work schedules and work processes (Hackman and Oldham, 1975 as cited in Bhave and Gagne, 2011).

In line with the current thinking in organizational behavior studies, Humphrey and Morgeson (2006) in their study "The work design questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work", have identified three distinct but complimentary perspectives on employee autonomy. They are work scheduling autonomy, work methods autonomy and decision-making autonomy. This conceptualization by Humphrey and Morgeson (2006) is considered as the base for the measurement of perceived autonomy in this research.

4) *Perceived autonomy and job satisfaction*: Not many researches are found from literature which examined solely the relationship between perceived autonomy and job satisfaction in a remote working context. In a study by Desrosiers (2001), the resulted positive relationship between the amount of telework and job satisfaction of teleworkers is identified to have mediated by the perceived autonomy. Thus, it appears that perceived autonomy on the job of remote employees is positively related to their job satisfaction.

The meta-analysis conducted by Gajendran and Harrison (2007) to analyze the psychological mediators between telecommuting and its consequences have identified that perceived autonomy mediates the positive effects of telecommuting on the job satisfaction of remote employees. It implies that perceived autonomy has positive effects on job satisfaction of telecommuters.

The findings of the research 'the relationship between remote work and job satisfaction: the mediating roles of perceived autonomy, work family conflict and telecommuting intensity' by Schall (2019) have revealed that perceived autonomy mediates the positive relationship between remote work and job satisfaction. This finding of Schall (2019) promotes the idea that

perceived autonomy has a positive relationship with job satisfaction in a remote working context.

Few researchers have explored the relationship between autonomy and job satisfaction but not in a remote work environment. Russell (2017) has explored the relationship between job satisfaction, autonomy and motivation and he has used three different facets of autonomy - (work, scheduling and method) and four different facets of job satisfaction -(supervisors, coworkers, pay and operating procedures) for the measurement of the autonomy variable. A similar approach has been taken in the current research for the measurement of the independent variable. From the findings of Russell (2017), it was revealed that there was a significant relationship between autonomy and job satisfaction of pay.

In the research, 'The effects of job autonomy on work outcomes: self-efficacy as an intervening variable', Saragih (2011) has aimed to examine the relationship between job autonomy and work outcomes (job performance, job satisfaction, job stress) with self-efficacy as a mediating variable. As per the outcomes of the research, Saragih (2011) has concluded that job autonomy was significantly related to job satisfaction and performance with self-efficacy partially mediating the relationships.

Bradley, Nguyen and Taylor (2003) in their research 'Job autonomy and job satisfaction: new evidence' have tried to investigate the impact of perceived job autonomy on job satisfaction. From the results of their research, job autonomy is found to be a highly significant determinant of the five domains of job satisfaction (pay, fringe benefits, promotion prospects, job security and importance/challenge of work)

As per Chung (2017), autonomy is a predictor of job satisfaction and becoming more prominent in the workplace. In his attempt to investigate to which extent the relationship between job autonomy and job satisfaction exists, the results have shown a small but significant positive effect between job autonomy and job satisfaction.

The research 'Perceived autonomy and job satisfaction in occupational therapists' by Bordieri and Davis (1988), has surveyed perceived autonomy, overall job satisfaction, and specific work incentives and disincentives on 249

occupational therapists. From the results of the survey, it was evident that perceived autonomy was positively related to overall job satisfaction.

II. METHODOLOGY

A. Conceptual Framework

The independent variable of the study was perceived autonomy. This has been measured using three perspectives of autonomy which were conceptualized by Humphrey and Morgeson (2006). The three perspectives are namely work scheduling autonomy, work methods autonomy and decision-making autonomy. The dependent variable of the study was the job satisfaction of remote working employees.

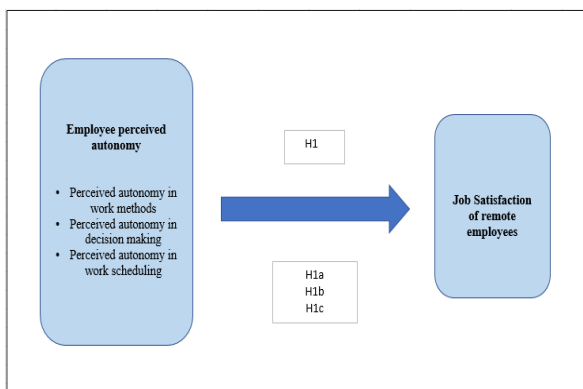


Figure 1. Conceptual Framework

B. Development of Hypothesis

The conceptual framework has paved the way to developing the hypothesis which is designed in a way that would answer the research question and meet the objective of the research. Three sub hypotheses were developed under H1 to get more comprehensive studying of the three perspectives of the perceived autonomy.

H1: Perceived Autonomy has a positive relationship with job satisfaction of remote employees

H1a: Perceived autonomy in work methods has a positive relationship with the job satisfaction of remote employees

H1b: Perceived autonomy in decision making has a positive relationship with the job satisfaction of remote employees

H1c: Perceived autonomy in work scheduling has a positive relationship with the job satisfaction of remote employees

C. Research Design

The descriptive survey design has been used so the researcher was able to describe the scenario as it was in the natural setting, source maximum information with minimal effort and time. The unit of analysis of this research is identified as individuals. This research is conducted during a specific time frame so the cross-sectional time horizon is used.

D. Population and Sampling

For this study, business analysts, finance system analysts and financial planning consultants who are currently working remotely since the year 2020 employed at the target organization which is located in Colombo Sri Lanka were identified as the target population. A total of 120 people was identified as the target population.

Based on Krejcie and Morgan's (1970) table for determining sample size, for a given population of 120, a sample size of 92 respondents was appropriate to adequately represent a cross-section of the population at a 95% confidence level. Simple random sampling was then used to select the sample to ensure that the sample was selected as a representative of the population and thus the findings could be generalized.

E. Research Instrument

The research instrument utilized in this research takes the form of a questionnaire. It was based on the previous researches related to autonomy, remote working and the Minnesota satisfaction questionnaire. The questionnaire items related to perceived autonomy are based on the work autonomy scale by Breugh (1985) as cited in Russell (2017) and Work design questionnaire by Humphrey and Morgeson (2006). The items related to job satisfaction are based on the well-known Minnesota satisfaction survey. The perceived autonomy and job satisfaction items are followed by five items related to demographic survey. The items other than demographic responses were tested based on a 5-points Likert scale.

F. Data Analysis Techniques

Cronbach's alpha was used to assess the reliability of the items in the questionnaire. Spearman correlation was used to determine the strength & direction of the identified monotonic relationship between the independent and dependent variables.

III. DISCUSSION AND ANALYSIS

A. Data Analysis

The expected sample population was 92 respondents of which 75 completed and returned for analysis. This was a representation of 81.5% of the randomly selected sample which was fairly good for the study analysis. The data collected were analyzed using correlation coefficient using SPSS 25.0 between variables and the results were presented in tables & graphs and discussed accordingly.

According to the case processing summary, the number of valid data is 75 units while the missing data is zero which implies that all the data is processed. From the reliability statistics, the researcher obtained a Cronbach's alpha value of 0.964. The general rule of thumb is that a Cronbach's alpha of 0.7 or above is good, hence can be concluded that this research questionnaire has a high level of reliability.

Having tested for validity and reliability, the distribution of the data in the two variables (independent and dependent) is tested using Kolmogorov - Smirnov test. Based on the one-sample Kolmogorov - Smirnov Test, the Asymp. Sig values of the independent and dependent variables are 0.028 and 0.200 accordingly. Theoretically, as the value for the independent variable of the study is <0.05 , it can be concluded that the data of the independent variable is not normally distributed while the data of the dependent variable is normally distributed.

1) Associations between the perceived autonomy perspectives and the overall job satisfaction of remote working employees: Scatter plots are drawn to see the associations between the perspectives of employee perceived autonomy and job satisfaction.

When the level of fondness for perceived autonomy dimensions increases, the satisfaction levels of the job increase. Hence it provided an impression that there are positive associations

between the dimensions of perceived autonomy and the job satisfaction. To verify these positive associations, non- parametric test - Spearman's rho was conducted on the autonomy dimension variables and dependent variable and arrived at the below-summarized correlation results.

Table 1. Summary Correlations between the perceived autonomy dimensions and job satisfaction of remote employees

Independent variable dimensions	Spearman Correlation results with dependent variable (Job Satisfaction)
Perceived autonomy in work methods	0.613
Perceived autonomy in decision making	0.850
Perceived autonomy in work scheduling	0.849
Correlation is significant at the 0.01 level (1-tailed)	

Source: Survey Data

According to table 1, Spearman's rho test resulted the given correlation coefficient, at $p \text{ value} < 0.01$, which depict that there are significant positive associations between the three autonomy dimension variables and the dependent variable. The resulting of strong positive associations between the perceived autonomy dimensions and Job Satisfaction, we can conclude that all three sub hypotheses (H1a, H1b, H1c) are accepted.

2) Association between overall perceived autonomy and job satisfaction of remote employees: A scatter plot is drawn to see the association between the independent variable and dependent variable. R squared of 86.8% implies that approximately 86.8% of the observed variation can be explained by the model inputs. When the level of fondness for overall perceived autonomy increases, the satisfaction level of remote employees increases. Therefore, a monotonic direct relationship was visible between the two variables - perceived autonomy and job satisfaction of the remote working employees. To verify the positive association between the above two variables, the non-parametric test - Spearman's rho was conducted.

Correlations

		Perceived_Au tonomy	Job_Satisfacti on
Spearman's rho	Perceived_Autonomy	Correlation Coefficient	1.000
		Sig. (1-tailed)	.928**
		N	75
Job_Satisfaction	Perceived_Autonomy	Correlation Coefficient	.928**
		Sig. (1-tailed)	1.000
		N	75

** . Correlation is significant at the 0.01 level (1-tailed).

Figure 2. Correlation between overall perceived autonomy and job satisfaction

Source: Survey Data

According to figure 2, Spearman's rho test resulted in a 0.928 correlation coefficient, at p value < 0.001 , depicts that there is a significant positive association between the two variables. The resulting of a large positive association between the overall perceived autonomy and job satisfaction, we can conclude that there is a positive relationship between perceived autonomy and job satisfaction of the remote employees. Hence H1 is accepted. To conclude the analysis, the demographic summary of the 75 respondents are as below;

Table 2. Summary of demographic analysis of respondents

Sample Descriptive							
Age (yrs)	n	%	Gender	n	%	Qualification	n %
<20	4	5.3	Male	49	65.3	GCE A/LS	0 -
20-29	35	46.7	Female	26	34.7	Diploma	17 22.7
30-39	33	44.0	Total n	75	100.0	Bachelor's Degree	38 50.7
40-49	3	4.0				Post graduate Diploma	18 24.0
50<	0	-	Experience	n	%	Masters Degree and above	2 2.7
Total n	75	100.0	< 3 months	5	6.7	Total n	75 100.0
Marital Status	n	%	3-11 months	12	16.0		
Single	45	60.0	1-5 yrs	34	45.3		
Married	30	40.0	6-10 yrs	23	30.7		
Other	0	-	10 Yrsc	1	1.3		
Total n	75	100.0	Total n	75	100.0		

Source: Survey Data

IV. CONCLUSION

A. Findings

As mentioned in the conceptual framework, the independent variable – perceived autonomy was overall measured through its three conceptualized dimensions namely work methods, decision making and work scheduling.

Given that, the findings of this study were evolved around perceived autonomy dimensions relationships with the dependent variable. The results from the research revealed that each of the perceived autonomy dimensions (work methods, decision making and work scheduling) have positive relationship with job satisfaction of remote working employees. This partially

supports the findings of Russell (2017) who tried to identify the relationship among autonomy job satisfaction and motivation through similar autonomy dimensions discussed in this research.

Not much literature available which have focused on the relationship that these individual perceived autonomy dimensions possess with the job satisfaction. So, the current research extends the perceived autonomy literature and strengthens the understanding of the impact of perceived autonomy on job satisfaction with more detailed exploration along the autonomy dimensions.

According to the research outcomes, a large positive association was identified between overall perceived autonomy and job satisfaction of remote employees. The R squared value of the linear model of these two variables stands at 86.8% which depicts that the dimensions tested under perceived autonomy are positively related with job satisfaction and the increase in perceived autonomy will increase the job satisfaction level of the remote working employees. Under this ground, H1 is accepted.

This fairly supports the findings of Chung (2017); Bradley, Nguyen and Taylor (2003); Saragih (2011) and Bordieri and Davis (1988) which have identified positive associations between perceived autonomy and job satisfaction. However, the mentioned evidences from the literature have derived from a non-remote working context.

Very little studies have explored the relationship between perceived autonomy and job satisfaction in a remote working context. Desrosiers (2001); Gajendran and Harrison (2007); Karunarathne (2021) and Schall (2019) are among the few that have contributed to the literature for a positive relationship between perceived autonomy and job satisfaction of remote employees. Hence, findings of this research would strengthen this stream of literature.

B. Theoretical & Practical Implications

The current research provides breadth to the knowledge of employee perceived autonomy and tries to fill the gap arising due to shortage of literature that's specifically related to perceived autonomy of remote employees, identifying the positive relationship of perceived autonomy with job satisfaction of remote working employees by measuring through three perspectives of

perceived autonomy as well as carrying out the study in a remote working context in a developing South Asian country and on a fast-growing financial services providing industry.

The study provides the top management of the target organization and the HR practitioners in general with an indication that employees feeling of 'freedom and independence' provided by superiors/organization has a positive relationship with the job satisfaction of the remote working employees.

Considering the outcome of this research, the managers/ organizations need to focus on cultivating a autonomy based culture which is developed around trust and confidence among the people who are working remotely. This culture needs to be strong enough to make the remote working employees feel that they are 'being trusted for the decisions they make and the work they do' by their bosses or organization while they perform the duties and responsibilities of the job remotely. At the same time as the other side of the coin, it is also important that remote employees fulfill or live to the expectations of organization in a way that would build adequate confidence and trust on them in the minds of the managers/ organization to receive the autonomy at work.

C. Limitations of the study

The research was conducted within a fairly short period which enabled limited exploring further avenues of analysis within the research scope. Also, the lack of physical interaction with the respondents blocked the opportunity for the researcher to connect with the respondents in ways such as informal interviews/observations which would have been helpful otherwise to get a better understanding of the scenario around perceived autonomy in the target organization.

In terms non-response rate, out of the 92 distributed questionnaires (through email), 17 were not reverted. The selected three dimensions of perceived autonomy considered in the study were based on the concept by Humphrey and Morgeson (2006). However, there are several other conceptualizations around perceived autonomy that also can be considered for similar analysis. It's worthwhile to acknowledge that the omission of some other mediators/variables that may qualify the results of this research.

More researches may be required to better understand the positive relationship between perceived autonomy and job satisfaction of remote employees in more remote context-specific work environments as this research has covered only a single (Financial Services) industry.

D. Conclusion

The objective of this research was to identify the relationship between perceived autonomy (feeling of freedom and independence over the work methods, decision making and work scheduling from an employee perspective) and the job satisfaction of remote working employees.

The findings of the research conclude that there is a positive relationship between perceived autonomy and job satisfaction of remote working employees. Based on the statistical analysis, the hypothesis is accepted. Out of the three dimensions of perceived autonomy that were tested, the perceived autonomy in decision making is identified as having the highest correlation with job satisfaction followed by perceived autonomy in work scheduling. The perceived autonomy in work methods resulted a relatively low correlation with job satisfaction compared to the rest of the two autonomy dimensions. This outcome implies the importance of providing adequate autonomy according to the nature of the jobs of employees that will fit into the remote working environment in organizations. Hence, the management of the target organization needs to consider the autonomy related preferences/concerns of employees in a remote working context and improve the remote working culture in a way that motivates employees and increases job satisfaction. Overall, all the three dimensions of perceived autonomy have been embraced by the employees which leads to job satisfaction while working remotely. Hence, we can conclude that the research has accomplished its objective.

E. Recommendations

Considering the demographic factors of the sample population, 77% are Bachelors and above degree holders. And out of the three perceived autonomy dimensions tested in the research, the perceived autonomy in decision making is identified to have the highest correlation with job satisfaction. This implies the fact that majority of employees are expecting that the organization would delegate the

decision-making authority accordingly and also adequate freedom and independence upon the decisions they make at work based on their intellectual knowledge from professional qualifications and experience.

The evidenced highest correlation between perceived autonomy in decision making and job satisfaction is also supported by the tenure that employees are been with the organization. Based on the demographic analysis, 45% of employees are in the time range of 1-5 years, 31% are in the range of 6-10 years and 1% are in the range of more than 10 years. This means the majority of the remote employees are known to the business for more than one year and undoubtedly when employees staying longer than one year they tend to expect a significant amount of freedom and independence in making decisions while performing their jobs.

Moreover, given the circumstances with remote working and based on the nature of the work performed in most jobs for example like finance system analysts, the jobs require the employees to make prompt decisions while dealing with finance systems. And before the pandemic when employees were physically available at work station they could consult their managers and get approvals for decisions then and there easily but with the remote work setting it may not be possible sometimes to reach the managers remotely and delays caused due to waiting for manager approvals. This was one of the major reasons that employees have raised their concerns to the top management about adequate autonomy while working from home at the monthly reviews in 2020. This is revealed through an informal remark made by an employee in the questionnaire apart from the structured questions.

Given the above employee experience and the evidence from the research outcomes, it is suggested to the top management of the target organization to widen the currently provided autonomy on decision making to adequate extent and to review the process frequently to make sure the people are feeling the provided levels of freedom for decision making are adequate.

Also, its recommended for the T&D division to conduct training/workshop sessions to managers of remote employees on delegating decision making/ authority and responsibilities effectively

to suit for a remote working context. On the other hand, though employees are happy with the autonomy they perceive while working remotely, some employees may need assistance in handling the new-found autonomy at work. So in such cases, it's suggested to the managers of the remote employees to maintain a supportive and trust based relationship with the subordinates and also to encourage them to get the maximum benefits out of the provided autonomy in most effective and accurate ways.

The second highest correlation is evidenced between the perceived autonomy in work scheduling and job satisfaction on remote employees. This implies that employees prefer to have some control over scheduling and sequencing their work processes around the remote working phenomena and that employees value the support and freedom their managers have given to them to strike a balance between work and life. In order to strengthen the current satisfaction levels of employees with this regard, it's suggested to the management to take a flexible approach when dealing with any requests coming from employees related to their work scheduling and working hours. Because remote working is a new experience for many employees despite the fact that majority of the global workforce was forced to embrace it as a safety measure during the pandemic. For some employees might have issues in defining the boundary between work and family life. So, it's important that the managers make the employees feel that they are being supported and provided with adequate flexibility throughout the process. Having frequent informal chats with them and providing advice and suggestions to balance their work-life, organizing socialization forums, etc. are some of the initiatives suggested to managers with this regard.

Also, it's recommended to the T&D division to conduct sessions on time management to employees for better time management and work scheduling in the future.

It's suggested to the management of the target organization to shift the performance evaluation culture of the organization from time based monitoring into results/targets based evaluation. This will eventually facilitate the autonomy for work scheduling for the remote employees and enable them to sequence their tasks in the most

effective way that they feel fit for their remote work environment at home towards achieving the targets.

The identified comparatively low correlation between perceived autonomy on work methods and job satisfaction is mainly due to the nature of the jobs. Most of the job roles are already well structured and it's revealed that there are no urgent requirements for the employees to change or amend work methods due to the shift to remote working as almost all the tasks are supported by technology (Laptop and network) and can be performed remotely. So, it's implied that employees have not considered perceived autonomy on work methods as a crucial dimension of autonomy leading to job satisfaction.

However, its recommended to the management of the target organization to review the work methods in a timely manner to make sure the employees are comfortable with the methods that are in use in a remote working environment.

Overall, it is suggested to the management of the target organization to carefully review the perceptions around autonomy that employees have communicated via the responses in this research.

The recommendations based on the three dimensions of perceived autonomy that were examined in this study are discussed above. It's strongly recommended to the policy makers of the target organization and in general, to ensure the employees are provided with adequate autonomy that would fit for a remote working context to get the optimum benefits out of remote working to employees and organization and to keep the employees satisfied while working from home.

F. Suggestions for future research

There are not many studies found in the literature which have examined the impact of employee perceived autonomy on job satisfaction in a remote working context. Hence it is recommended for future researchers to extend examining on the particular scope.

This research was conducted to explore the relationship between the perceived autonomy and the job satisfaction of the employees who are working remotely in the Financial services providing industry in the Sri Lankan context.

Further research could be conducted to cover the remote employees in other industries as there can be variation in the preference of perceived autonomy dimensions based on the nature of the industry. Then research can be extended to compare between industries about the extent to which employees in different industries get satisfied to the same autonomy dimensions.

Also, the scope of this research can be examined based on demographical factors such as gender, age, education level, marital status, and experience in future studies. Even though a demographic analysis in done for the sample population of this study, the association or the impact of those factors with the variables was not tested or examined. For example, people who have been with the organization for a longer period would experience a higher level of autonomy than the ones with a short tenure because of the trust they have built over time with the organization. That will result in higher satisfaction levels among long serving employees.

Also, based on the age, the way employees perceive the autonomy can vary. For example, the demographic analysis demonstrated that majority of the employees in the sample belong to generations Y and Z. People belong to those generations expect higher levels of freedom, independence and flexibility than previous generations. So such employees would cherish the provided autonomy as a privilege. Therefore, future researches can be conducted through these demographical channels to better understand the relationship between perceived autonomy and job satisfaction.

Lastly, the relationships studied in this research were assessed based on the data obtained from the employees based in Sri Lanka, a developing Asian country. This may raise concerns about generalizing the outcome globally. With this realization, employing cross-national studies to ascertain the relationship between perceived autonomy and job satisfaction of remote employees would add to the existing knowledge base and broaden the literature in this research stream.

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Fuelling the Start-ups: Nexus of Crowdfunding Awareness, Parental Influence, and Internet Familiarity on Start-up Intention

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Abstract— Lack of initial capital has long been reported as a prominent barrier for blooming entrepreneurial start-ups. Contrary to that, crowdfunding is treated as a “magic hand” for solving numerous financial demands of netizens. Yet, knowledge on crowdfunding has not tested for its capacity to affect start-up intentions. Based on Theory of Planned Behaviour (TPB), the present study primarily aimed at assessing the impact of Awareness of Crowdfunding (ACF) on Start-up Intention (SI). Furthermore, the study intended to ascertain the empirical evidences for the Parental Influence (PI) and Internet Familiarity (IF) to drive start-up intentions. Deductive reasoning hypothesized a positive influence of ACF, PI, and IF on SI. A quantitative inquiry tested the assumed causality by deploying a field survey. Four dimensions (security, service quality, convenience, and personal network) measured the ACF, while two dimensions each measured the PI (Parent’s profession, & family background) and the IF (Frequency of internet usage, and experience of using internet). A sample of management interns was randomly drawn based on a management faculty of a state university of Sri Lanka (N = 236). A self-administrative questionnaire served as the data collecting tool in which a five-point Likert scale ranked the responses. Results of structural equation modelling confirmed the claims. Respondents’ awareness of crowdfunding and parental influence were significantly predicting the start-up intention of interns. Theoretically, findings imply the potentiality of modelling awareness of crowdfunding as a predictor of start-up intention. Further, findings empirically confirmed the predictive role of paternal influence towards start-up intention.

Keywords— *crowdfunding, entrepreneurs, Sri Lanka, start-ups, start-up intentions, structural*

equation modelling, theory of planned behaviour

I. INTRODUCTION

Many people dream of starting a new business. But only a few realise their dreams due to numerous reasons. During a start-up, entrepreneurs face the common problem that “How to obtain capital?” Capital doesn’t come so easily. Due to the lack of start-up capital, some ideas remain dreams forever. Formal financing sources such as banks and other lending institutions often demand mortgages and excessive documental evidences yet with greater interest burden.

At the initial stage, entrepreneurs assume that they can obtain capital from formal sources, such as investors, venture capitalists and banks. Later, they realise applying for a loan from an external party is the most painful process that every entrepreneurial start-up has to get through, especially during the early stages of the business. With that, many withdraw from the process and often revert to the employment of their choice (Olutuase, Brijlal, Yan & Olugundudu, 2018).

In Sri Lanka, where 81.42% of the population represents the rural community (World Bank, 2098), financial constraint for starting a business is intensely prevalent. A study by Wijesinha & Perera (2015) on SME growth in Sri Lanka found lack of access to finance as the foremost constraint perceived by the potential entrepreneurs (49%). Moreover, the next significant constraint, lack of access to technology (10%) is also linked with financial constraints: for the acquisition of state-of-the-art technology. Several other studies have confirmed this as ruling road block on the way towards business start-up (Priyanath, 2006; Stephen, 2009; Howell, 2015; Sitaridis, 2017).

Since the severity of the problem is so high, the prevailing governmental and other institutional interventions are insufficient, causing restricted growth of number of start-ups (Phillips, Moos & Nieman, 2014; Block et al., 2016).

Crowdfunding is simply the pooling of small amounts by a large number of investors to generate a large sum of money over the Internet (Smith, 2019). This is often treated as an alternative way of financing the needs of netizens provided that they have got a financial matter to deal with (Schwienbacher & Larralde, 2010; Mollick, 2014; Belleflamme, Lambert & Schweinbacher, 2013). Crowdfunding is increasingly popular among younger generations (Schwienbacher & Larralde, 2010). For instance, the generations who were born with the latest technology at their fingertips are using crowdfunding for financing smaller ventures/ start-ups (Schwienbacher & Larralde, 2010; Block & Colombo, 2018).

Crowdfunding as a novel concept was argued to be holding a greater potential for overcoming a wider spectrum of financial constraints experienced by people in general.

A. Theory of Planned Behaviour (TPB)

Theory of Planned Behaviour (TPB) was founded by Ajzen (1985, 1987, 1991, 2002) and simplified the influencers of human behaviour. Here, attitude, subjective norms and perceived behavioural control were used as predictors of the behavioural intention of individuals (Figure 1). TPB is an extension of Theory of Reasoned Act (TRA). TRA predicts the behavioural intention based on attitude and subjective norms (Fishbein & Ajzen, 1975, Ajzen & Fishbein, 1980). Having realized the role of behavioural controls in human behaviour process, Ajzen introduced the TPB (1985) as an extended version of TRA. In practice, perceived behavioural control appeared to sharpen the behavioural intention. Consequently, the later becomes an effective model in explaining the behavioural motives over the TRA (Schwienbacher & Larralde, 2010; Mimiaga, Reisner, Reilly, Soroudi, & Safren, 2009).

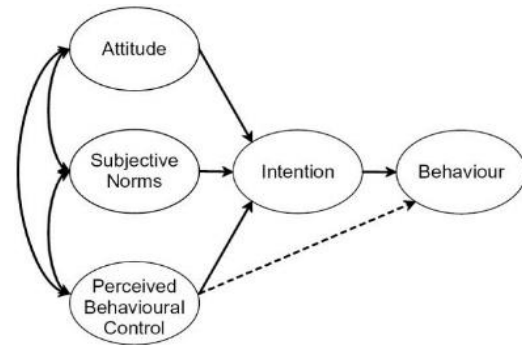


Figure 1. The Theory of Planned Behaviour (TPB)

Source: Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179-211.

TPB posits that individual behaviour is driven by behavioural intention where behavioural intention is a function of an individual's attitude toward the behaviour, the subjective norms surrounding the performance of the behaviour, and the individual's perception of the ease/difficulty with which the behaviour can be performed (behavioural control). TPB is one of the best theorised and tested theories in explaining human behaviour (Paul & Lin, 2002; Sharifuddin, Ramalingam, Mohamed & Rezai, 2014). It is been heavily applied in predicting the behaviour of individuals at organizations, specifically, in consumer behaviour (Sharifuddin, et al., 2014; Phaam, 2009), entrepreneurial & employee behaviour (Zhao, Seibert, & Hills, 2005; Krueger, Reilly, & Carsrud, 2000; Uddin, Mohammed & Hammami, 2016). The claims of the TPB are used in developing the argument of the present study.

B. Crowdfunding

“Crowdfunding” is similar to a technique that is used to seek capital for specific investments as well as start-ups (Schwienbacher & Larralde, 2010). It is well-known as a type of alternate finance. It is a kind of a technique that is used to raise small amounts of money from a massive number of people, typically over the internet. The concept works by drawing relatively small contribution from a relatively large number of netizens. It helps many entrepreneurs in finding start-up capital requirements from a wider mass of internet-based investors (Belleflamme, Lambert & Schweinbacher, 2013).

Mollick (2014) defined it as a funding effort that is drawn on a relatively small contribution from a relatively large number of individuals via the internet. Bradford (2012) indicated crowdfunding as an act that raise relatively small amounts of money from a huge number of individuals: the public. He talked crowdfunding as an ease and possible solution for small businesses and beginners. Furthermore, he examined that the internet has significantly reduced the transaction cost therefore anyone in the world can easily accesses to the crowd funding platform in free of charge.

Lambert and Schwiendbacher (2010) put crowdfunding in simple terms as the financing of a project or a venture by a group of individuals instead of professional parties such as banks, venture capitalists or business angels. They extended the definition of crowdsourcing provided by Klemann et al. (2008), and defined crowdfunding as “an open call, essentially through the Internet, for the provision of financial resources either in the form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes” (p.4).

Crowdfunding is an umbrella term used to describe diverse forms of fund raising, typically via the Internet, whereby groups of people pool money to support a particular goal (Ahlers et al. 2015; Moritz & Block 2014). The literature identifies four main types of crowdfunding. There are reward-based, donation-based, lending-based, and investment-based (equity) crowdfunding. The organizational context lending-based, and investment-based crowdfunding play a significant role in for-profit organizations where reward and donation-based crowd funds are fitting well with the not-for-profit organizations (Belleflamme, Lambert & Schweinbacher, 2013; Block & Colomobo, 2018).

The attractiveness of the crowd fund depends on the several characteristics of it (Mollick, 2014) which the authors of the present study believed to be nourishing the attitude of potential entrepreneurs towards the crowdfunding. They include security, service quality, convenience, and the personal network. Knowledge on these characteristics pertaining to one crowd fund will help in selecting it among many other and, ultimately, affecting its performance.

Security is a critical concern by any Internet user which is rising in the face of mounting cyber-attacks. Many of them are not willing to provide their personal information and the financial information to the websites in exchange for funds. Security and associated concepts such as trust & trustworthiness of web sites have been identified as leading factors that affect the effectiveness of them (Suh & Han, 2003). Gurung & Raja (2016) while assessing the involvement in e-commerce, adopted TPB and incorporated risk perception as a dimension of the attitude of users. Security, added with privacy and trust beliefs, were used in quantifying risk perception. Thus, the present study measures the awareness of crowdfunding in terms of their security.

Service quality is often regarded as a primary indicator of web and other information services and proven to be significantly affecting the web experience of users. Lee & Kim (2017) found service quality and hedonic value determining the relationship quality of social network services. They emphasized continuance of usage intention of social sites provided the service quality is acceptable. Perceived service quality of web sites is often regarded as the determinant of loyalty, satisfaction, value, trust and commitment of viewers (Thaichon, Lobo & Mitsis, 2014). It would be a prime concern of any crowdfunding proponent who in return would carve his/her attitude towards crowdfunding.

Convenience is treated to be a governing attribute of IoTs. It is the prime penetrator for netizens to seek online solutions over the manual offerings. With respect to web services (i.e. search tools), two forms of convenience are identified. The first described the utility functions of search tools while the second described the ease of use. Vaughan (1999) pointed out convenience as the most influencing factors towards the web performance. The notion of IoTs and convenience often go hands in hands. Hence, in any evaluation of web-based performance, convenience should be an essential indicator (Nolin & Olson, 2016). Crowdfunding users, being the netizens often seek how convenient the crowd sources are. Consequently, authors encompassed convenience as an indicator of crowdfunding awareness.

The personal network was found to be affecting crowdfunding success (Mollick, 2014). Moreover,

the interaction between the individuals who are involved in crowdfunding is relatively high, and then the success of crowdfunding is also increased. Similarly, individual social capital is positively and significantly associated with the success of crowdfunding projects (Hekman & Brussee, 2013). They suggest that successful crowdfunding platforms must consider the interaction between individuals. A potential crowdfunding seeker thus obviously would be willing to get to know the community associated with a certain source. First, it will be contributing to the decision to use the crowdsourcing while in another way it will boost the self-efficacy (through modelling/ vicarious experience) to adopt the crowdfund. Thus, the knowledge of personal network will be a principal element of crowdfunding awareness.

Accordingly, the present study quantified the awareness of crowdfunding opportunities through the service, service quality, convenience, and personal network attributes of crowdsources.

C. Entrepreneurial Start-up Intention

A start-up is a newly formed company or business usually with the purpose of offering innovative solutions for product or service demands. Even though many entrepreneurial start-ups feature a smaller scale, they play a giant role in economic development (Block & Colombo, 2018). Entrepreneurial start-ups create more innovations, new jobs, and bring competitive dynamics into the business environment (Yoon, 2004; Wijesinha & Perera, 2015; Olutuase, Brijlal, Yan, & Ologundudu, 2018). Each and every country encourages entrepreneurial start-ups for many reasons: particularly to foster innovations, new jobs, and economic growth, encourage business competitiveness, and introduce dynamics into the economic system.

Theoretically, entrepreneurial start-up intention is viewed as an individual's effort of starting their own business (Krueger et al., 2000). Entrepreneurial start-up intention is regarded as the first step in establishing businesses. The available literature on entrepreneurial start-up intentions suggests a wider range of dimensions. They are; attitude (Sharifuddin, et al., 2014; Sitaridis & Kitsios, 2016; Torres, et al., 2017), personality (Sitaridis & Kitsios, 2016; Voda & Florea, 2018), self-efficacy (Krueger & Brazeal, 1994; N'an, Urbano & Guerrero, 2011;

Torres, et al., 2017), behavioural control (Sharifuddin, et al., 2014; Torres, et al., 2017), subjective norms (Sharifuddin, et al., 2014; Torres, et al., 2017), risk taking (Torres, et al., 2017; Pownall & Lawson, (2005), proactiveness (Antonites & Nonyane-Mathebula, 2012), educational support (Kadir, Salim, & Kamarudin, 2012), structural support (Trang & Doanh, 2019), competitive aggression (Lumpkin & Dess, 2001), autonomy (Lumpkin & Dess, 2001), need for achievement (Voda, & Florea, 2018; innovativeness (Dutta, Kholekile, & Wang, 2015; Law & Breznik, 2016), demographic factors (Sharifuddin, et al., 2014; Sitaridis, & Kitsios, 2016; Voda, & Florea, 2018), and locus of control (Shapiro & Sokol, 1982; Dawson & Henley, 2015; Torres, et al., 2017; Voda, & Florea, 2018). Despite the diverse grouping of these dimensions were presented, primarily, two groups of factors can be identified as influencing the start-up intention, namely internal and external (Sitaridis & Kitsios, 2016). Internal factors reflect the individual attributes, traits, demographic profile etc. External factors include the resources requirements, legal & regulation demands, and other entrepreneurial infrastructure desired by a start-up (Sitaridis, & Kitsios, 2016). Likewise, Pownall & Lawson (2001) believed entrepreneurial intention is a collective outcome of both situational and individual factors. Situational factors of Pownall & Lawson (2001) refer to the context specific factors that describe how conducive the entrepreneurial environment is. Individual factors denote personal factors that explain the individual's potentiality to accept the entrepreneurial challenge. Thus, here the authors enumerated start-up intention using human capital factors and environmental factors.

Human capital, in the entrepreneurial context, refers to the individual's potentiality in initiating and managing a venture. It is a cumulative term used to denote an individual's knowledge, skills, attitudes and other factors such as experience, background etc. Human capital together with organizational capital and relational capital was found positively related to venture performance (Pena, 2002). There, they have included education, business experience and level of motivation as the indicators of it.

Human capital was positively related to entrepreneurial activities (Arenius & Clercq, 2003). These authors have divided human capital

into two parts; general human capital (knowledge) and specific human capital (skills). Further, human capital was reported positively associated with the entrepreneurial start-up intentions in which the previous business experience was an indicator (Islam, Bokhari & Abalala, 2018). Keister, Aldrich & Kim (2006) emphasised that human capital is significantly associated with entrepreneurial entry rather than financial capital and cultural capital. They have counted advanced education and managerial experience while assessing the human capital of entrepreneurs. The present inquiry of start-up intention too used human capital to quantify the start-up intention of undergraduates in which skills, entrepreneurial education and experience were the indicators.

Environmental factors refer to the external factors (Sitaridis & Kitsios, 2016) or the situational factors (Pownall & Lawson [20]) that explain the favorable/ unfavorable nature of the business environment of the start-up. For instance, it may include market factors, general economic factors, and technological variables, legal, cultural & social set-up, etc. Oluatase, Brijlal, Yan & Olugundudu (2018) investigated financial factors, technology, and economic factors to predict entrepreneurial intention and labeled them as environmental factors. Fogel (2001) examined the minimum level of rules and regulations, tax benefits & other incentives and training & counselling services as facilitating the new venture development. He grouped these variables as economic factors and social factors under the environmental factors. Environmental factors were positively associated with the interest of educated female students in starting up their own business in Saudi Arabia (Islam, Bokhari & Abalala, 2018). This study investigated the university courses, social media and government assistance as the indicators of the environmental factors. Based on the existing contributions, the authors of the present study identified economic factors and regulatory factors as the dimensions of environmental factors. Particularly, they engaged governmental assistance, government policies and technology as indicators of environmental factors.

Provided that the lack of start-up capital is the principal roadblock against the new venture formation (Brown & Earle, 2015; Carpenter & Petersen, 2002; Cosh, et al., 2009), crowdfunding as an easy means of financing can be treated as an

alternative source to fuel the start-ups. Neither theoretical and empirical support are presented so far to support this claim. Hence, the prime aim of the present investigation was to assess how knowledge on crowdfunding alone with parental influence and internet familiarity is powering the start-up intentions. Accordingly, based on the prevailing literature support, assuming that the lack of access to the start-up capital is the fieriest cause behind lowering start-ups, the authors intended to investigate whether awareness of crowdfunding opportunities would predict the start-up intention.

II. METHODOLOGY

Based on the theoretical premises of TPB, the hypotheses were developed based on the reviewed literature and are depicted in figure 2.

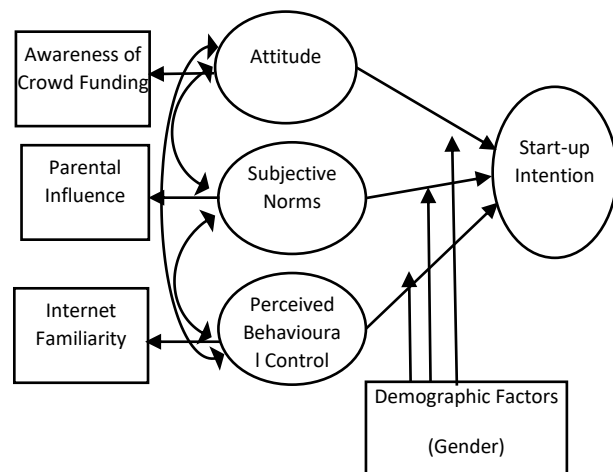


Figure 2. Conceptual framework of the study

Note: Based of the Theory of Planned Behaviour (TPB) of Ajzen (1985, 1987, 1991, 2002).

The proposed model is primarily based on the theoretical arrangements established by Theory of Planned Behaviour (Ajzen, 1985, 1987, 1991, 2002). Based on the arguments of the present research study, it is theorized that the attitudes are reflected by the awareness of crowd funding, subjective norms are denoted by parental influence, and perceived behavioural control is explained by the internet familiarity of the participants (Figure 2). Hence, the analysis looks at the nexus of relationship among the awareness of crowd funding, parental influence, the internet familiarity and the start-up intention along with the moderating effect of gender.

A. Research Design

The study approach was quantitative. The survey was carried out in a Sri Lankan state university. Participants were level four (final year) undergraduates of the management faculty, where entrepreneurship education is delivered via a number of course modules. The choice of level four students is backed by the claim that they are at the doorstep of their early career stage. 236 valid responses were obtained for the self-administrated questionnaire from randomly picked students. The structured questionnaire was pre-tested via a pilot study (n = 20) and refined beforehand, it was used for collecting data. The questionnaire consisted of 43 questions based on respondents' demographic factors (age, gender, education), attitude (awareness on crowdfunding), subjective norms (parental influence), perceived behavioral control (internet familiarity), and intention toward entrepreneurial start-up. A total of 25 items were there to assess the awareness on crowdfunding, 02 items for parental influence, 03 items for internet familiarity, 03 items for demographic factors, and 10 items for start-up intention. Responses were ranked on dichotomous (nominal) and multiple option scales (ordinal) for demographic items. A five-point Likert scale in which 1 denoted "strongly disagree" and 5 denoted "strongly agree" was used for items of awareness on crowdfunding, parental influence, internet familiarity, and start-up intention. The validity, accuracy, and reliability of the instruments were well-assured and only the items with greater measurement properties were incorporated into the final model. Resultantly, the final analysis included only 07 items for awareness on crowdfunding, 02 items for parental influence, 02 items for internet familiarity, 03 items for demographic factors, and 03 items for start-up intention. Structural equation modeling in the Smart PLS (version 3) software tested the hypotheses.

III. DISCUSSION AND ANALYSIS

Table 1 illustrates the demographic composition of respondents.

Table 1. Demographic composition of respondents

Attribute	Frequency	Percentage (%)
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Gender	Female	146	62
	Male	90	38
Age	20-24 Years	186	79
	25-29 Years	50	21
Education	Undergraduate	236	100

Source: Survey data 2019

Female students dominated the sample (62%). A typical class in Sri Lanka either in high school or university always follows the same pattern on par with the population trend. Respondents' ages ranged from 20 to 29 years. The majority of them (79%) were in the 20-24 age ranges. All the respondents had undergraduate-level qualifications.

Table 2. Descriptive statistics of the key variables

Variable	Minimum	Maximum	Mean	Standard Deviation
Awareness of Crowdfunding	3.27	4.70	4.14	0.32
Service	3.43	4.71	4.17	0.31
Service Quality	2.75	4.75	3.98	0.48
Convenience	3.50	4.83	4.25	0.38
Personal Network	3.25	4.63	4.17	0.33
Parental Influence	1.50	5.00	3.18	0.72
Internet Familiarity	2.67	4.00	3.25	0.47
Start-up Intention	2.88	4.46	3.85	0.33
Human Capital	2.17	4.17	3.40	0.37
Environmental Factors	3.00	4.75	4.31	0.37

Source: Survey data 2019

The descriptive analysis shows a relatively identical distribution of all the key variables. Compared to mean values of parental influence (3.18) and internet familiarity (3.25), the mean value of crowdfunding awareness is high (4.14). The average start-up intention was calculated as 3.85, which corresponds to the "agree" point of

the Likert scale. It implies the positivistic trend towards the start-up intention by the respondents.

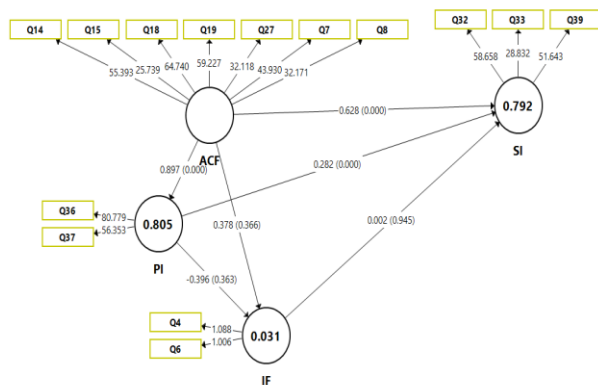


Figure 3: Path diagram of the SEM analysis

Source: Survey data 2019

There are three significant paths namely, Awareness of Crowd Funding (ACF) on Start-up Intention (SI), Parental Influence (PI) towards start-up intention, and awareness on crowdfunding towards parental influence. The bootstrapping process evidenced the statistical significance of the overall model (0.792, $p = 0.000$), and the three significant paths; ACF to SI (0.628, $p = 0.000$), PI to SI (0.282, $p = 0.000$) and ACF to PI (0.897, $p = 0.000$). The path from Internet Familiarity (IF) to start-up intention was found insignificant (Figure 3). The moderating effect of gender didn't load on any exogenous variable, thus no significant effect of gender is found towards start-up intention with respect to current data. The reliability and validity of the above results utterly depend on the properties of the measures adopted. All the properties of the final model comply with the standard values and are exhibited in table 3.

Table 3. Measures of the Model

Variable	Cronbach Alpha	rho A	Composite Reliability	AVE
Awareness of Crowdfunding (ACF)	0.935	0.938	0.947	0.720
Parental Influence (PI)	0.732	0.735	0.882	0.789

Internet Familiarity (IF)	0.653	0.658	0.666	0.575
Start-Up Intention (SI)	0.813	0.818	0.890	0.730

Source: Survey data 2019

Results supported two hypotheses and not the rest (Table 4).

Table 4. Summary of the hypotheses testing

Hypothesis	Supported/Not Supported
H1: Awareness of crowdfunding positively impacts the start-up intention	Supported
H2: Parental influence impact the start-up intention	Supported
H3: Internet familiarity positively impact the start-up intention	Not Supported
H4: Gender moderates the impact of awareness of crowdfunding on start-up intention	Not Supported
H5: Gender moderates the impact of parental influence on start-up intention	Not Supported
H6: Gender moderates the impact of internet familiarity on start-up intention	Not Supported

Source: Survey data 2019

TPB posited that attitudes, subjective norms and perceived behavioural control explain the behavioural intention of individuals (Ajzen, 1985, 1987, 1991, 2002). Based on these premises, the present study tested whether the awareness of crowdfunding, parental influence and internet familiarity impact the start-up intention of undergraduates. Results proved that the awareness of crowdfunding holds significant power in explaining the variation in start-up intentions. Start-up intentions were reported to be significantly affected by the start-up capital issue (Brijlal, Yan & Olugundudu, 2018). Particularly in Sri Lanka, this is seen as the foremost constraint towards blooming start-ups in the SME context (Wijesinha & Perera, 2015). Crowdfunding, as a non-traditional source of financing, thus offers a unique solution for start-up capital issues. Similar findings were reported by Belleflamme, Lambert, &

Schwienbacher (2010) and Block & Colombo (2018) where crowdfunding knowledge had facilitated entrepreneurial interventions by newcomers. Thus, the study concludes the effect of awareness of crowdfunding on start-up intention.

Parental influence has long been recognised as a significant predictor of the start-up intention of individuals (Rachmawan, Lizar, & Mangundjaya, 2015; Antawati, 2017; Wijerathna, & Thisera, 2018). Especially, when the parents are entrepreneurs at present or having any substantial affection with the entrepreneurial activity of any form, are often found highly influential in the decision making process of potential entrepreneurs (Wijerathna, & Thisera, 2018). As a powerful pressure group, certainly in Sri Lankan culture, there is a greater influence by parents on their children's career choices (Tennakoon & Lasanthika, 2019). Hence, it is concluded that parental influence as a subjective norm impacts the start-up intention of individuals.

Internet familiarity was conceptualized in the present study as the perceived behavioural control of the TPB. Yet, the data failed to establish that it was a significant lead of the start-up intention. Being self-efficacious and knowing that he/she can manipulate the expected behaviour collectively drive to perceived behavioural control and often found associating with the behavioural intention (Sharifuddin, et al., 2014; (Voda & Florea, 2019). This finding of the present study is inconsistent with the prevailing shreds of evidence. The factor loading of the two items that measured the internet familiarity were very low and barely loaded on the construct. Authors reasonably suspect that this representative deficiency might have caused the inconsistent results. Thus, suggested revisiting the assumed relationship with a thorough assessment.

The gender as a demographic moderator found significant on none of the three paths towards start-up intention. Existing literature showed mixed results and characterized by greater inconsistencies (Sharifuddin, et al., 2014; Sitaridis, & Kitsios, 2016; Voda, & Florea, 2018). Inconsistencies are inevitable provided that different studies accommodate different dimensions as demographic factors (For instance, age, gender, education, family background, prior experience etc). In the present study, the uni-dimensionality of the demographic variable might

result in lowering the effect of it on start-up intention. Authors expect the incorporation of multi-dimensions would produce a favourable outcome.

IV. CONCLUSION

In the light of blooming crowdfunding opportunities and shrinking start-ups, the study inquired how awareness of crowdfunding, parental influence, and internet familiarity predict the start-up intention. Survey results unveiled significant associations between awareness of crowdfunding, parental influence, and start-up intention. The study succeeded in deriving the theoretical implication in support of TPB, alternatively, where awareness on crowdfunding and parental influence modelled with start-up intention. Additionally, it suggested the magnitude of the dimensional impact of significant predictors on the start-up intention. Practical implications call for implementing sound awareness programs for young entrepreneurs on how to capitalize on crowdfunding opportunities, especially during the early entrepreneurial career. The inclusion of crowd-funded mini-projects to high school/university curricular would be beneficial too. Policymakers may adopt this approach as a remedial strategy that addresses the dwindling start-ups. The contribution of the study is bounded mainly by the limitations associated with the sampling, whereas participants represent only one state university in Sri Lanka. Due to lack of mastery, Level four undergraduates' career intentions may not be mature enough to reflect their intention on start-up participants. Future researches are revisiting the unestablished associations of the present study through varied methodological approaches; specifically, through the lenses of qualitative approach. Investigations in the areas of practical limitations and challengers of realizing the crowd funds as an alternative way of fuelling the start-ups also appear timely.

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University Students' Intention of Continuous Use of Zoom for e-Learning

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Abstract— During the COVID-19 pandemic, many institutions find it difficult to maintain students' engagement with e-learning systems. However, successful use of an e-learning system is dependent on users' perceptions about the systems used for e-learning. Recognizing the factors influencing the intention of continuous use of the system is a major problem faced by universities and higher educational institutions that implement e-learning for conducting academic activities. There is a lack of knowledge on the essential issues and elements that influence the student intention for continuous use of e-learning systems during the COVID-19 pandemic. Thus, the purpose of this study is to investigate the factors that influence Sri Lankan university students' intention for continuous use of government introduced zoom applications for e-learning during the COVID-19 pandemic. The questionnaire survey approach was used to collect data and a sample of 200 was selected from undergraduates of the Faculty of Management and Finance, University of Ruhuna. In this study, an empirical analysis was done by using the SPSS 25 version. Results of the study found that performance expectancy, hedonic motivation, effort expectancy, work-life quality, and internet experience are the most influential factors that have an impact upon Sri Lankan university students' intention for continuous use of zoom applications in e-learning. The study's findings provide important recommendations for policymakers, designers, developers, and researchers, allowing them to get more familiar with the main factors that influence upon the continuation of the use of zoom for e-learning during the pandemic.

Keywords— COVID- 19, e-learning, intention of continuous use, undergraduates

I. INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease transmitted from human to human rapidly and individuals infected with the COVID-19 virus suffer mild to severe respiratory infections (WHO, 2020). The mode of transmission of coronavirus from humans to humans necessitated social distancing and avoidance of crowded environments (WHO, 2020). The epidemic has spread to 210 countries and territories worldwide, with a total of 169,067,178 confirmed cases of COVID-19 reported, and a death toll of more than 3.5 million based on the statistics of Covid 19 world meter for the date of 26.05.2020. Given this, most governments have closed schools and institutions where large crowds are unavoidable until further notice. The sudden closing of educational facilities led officials to propose emergency remote teaching to ensure that students are not left idle during this pandemic period. As a result, for the time being, traditional approaches have been replaced by online e-learning (Mpungose, 2021). E-learning is defined as learning that is enabled electronically (Akbar & Rais, 2020). Typically, e-learning takes place over the internet where students may access their learning materials at any time from any location. Online courses, online degrees, and online programs are the most common forms of e-learning (Mpungose, 2021). At the same time, the government of Sri Lanka has ordered the closure of all educational institutions, including 15 state universities and around 40 additional state and nonstate tertiary education institutions as of March 12, 2020 (Hewagamage et al., 2020). Interruptions in higher education induced by COVID-19 may postpone the development of the leaders and skilled workforce needed for the country to successfully transition to upper-middle-income status (Hewagamage et al, 2020).

According to the Sri Lankan university grant commission, there are 98919 undergraduates and 34739 postgraduate students enrolled in 15 state universities. Due to the pandemic situation, face-to-face lectures were closed higher education institutions. Moodle-based learning management systems are hosted on university web servers to offset the impact of interrupting learning (Hewagamage et al, 2020). The Lanka Education and Research Network (LEARN) was linked to university web servers and was used for online learning. The network may track Zoom usage daily (Hewagamage et al, 2020). Furthermore, throughout the epidemic, all internet service providers in Sri Lanka gave free access to university web servers until August 17, 2020 (Hewagamage et al, 2020). Zoom is a video conferencing technology that has been introduced and imposed as a convenient medium for engaging with students virtually to disseminate content while they are in class (Mpungose, 2021). From the 17th of March 2020, Sri Lankan universities will continue their education system using the Zoom application. After more than a year, overall deaths and affected persons in Sri Lanka have been steadily rising due to the rapid spread of the covid 19 epidemic based on Sri Lankan Epidemiology statistics 2021. According to Sri Lankan Health Ministry figures, the overall number of deaths will rise to 20,000 in September 2021. Several times in the past, from 2020 to 2021, Sri Lankan universities attempted to re-open universities for physical education programs, but all attempts were futile, and universities continued education activities through the Zoom application. However, the undergraduates' intention to continuous use the online teaching is an important phenomenon to be investigated further as the level of participation with online teaching significantly fluctuates over the time. As the university administration expecting to continue this practice until the situation comes back to normal understanding the factors influence on intention to continuous use online teaching via Zoom is of paramount important. As the previous studies on this phenomenon is lacking, the aim of this study is to identify the factors influence on undergraduates' intention to continuous use of online teaching via Zoom.

A. Problem statement

Due to the extreme Covid 19 outbreak, most of the universities and higher educational institutes around the world have shifted their academic activities entirely to e-learning mode (Mpungose, 2021). Due to that traditional classroom activities moved to the online platforms and usual learning culture completely changed. In this transformation of e-learning required to be familiar with modern technologies for successful implementation (Mpungose, 2021). A significant consideration to consider in this implementation is whether the learners can use e-learning and whether it would be effective in an online environment based on their response (Demirel & Diker, 2010). When comparing the developed world to developing countries, it was discovered that developing countries face problems such as slow internet access, insufficient knowledge about how to use ICT, and a lack of content development when using e-learning (Jain, 2018). E-learning use and acceptance by users is a difficult problem for many institutions developing countries, but it is likely to be less of a challenge in developed countries. The reason for that is the ability of developed context students due to the use the e-learning systems, as major progressive steps have already been taken in this regard (Wang & Wang, 2010).

According to (Eltahir, 2019) the complexities of implementing an e-learning framework in developing countries remain a challenge due to the digital gap in the developing context. While learners can show favoritisms in traditional education and classroom settings, this alone does not guarantee success in an online learning environment.

The level of acceptance to continue using e-learning among university students, who are expected to benefit from it, determines e-learning performance (Lewis, Fretwell, Ryan, & Parham, 2013). Many studies have shown that most higher education institutes in developing countries that have already built e-learning programs are not adequate due to a variety of challenges (Authors, 2019), (Zozie & Chawinga, 2004). However, the issue of low use and acceptance persists due to several factors that contribute to learners' inability to use modern technologies in developing countries (Almaiah, Al-khasawneh, & Althunibat, 2020). As a result, empirical research is necessary to recognize the key challenges that face e-learning system continues use during the COVID-19

pandemic to assist policymakers in universities in overcoming the problem of low e-learning system use, which is the aim of this study.

Sri Lanka is a developing country that is experiencing a covid 19 pandemic, with deaths and infected people steadily increasing from 2020 to 2021. The Sri Lankan Ministry of Health anticipates that total deaths will rise to 20,000 by September 2021 (Epidemalogy, 2021). Sri Lankan government has attempted several times to re-open universities for undergraduate students, but each time has been unsuccessful. Due to the current situation, Sri Lankan universities continue academic activities by using the zoom application. The University of Ruhuna is a state university in the southern province of Sri Lanka, ranked third in webometrics rankings among Sri Lankan universities. In total, 9760 internal undergraduates and 987 postgraduates are enrolled at the University of Ruhuna, which is comprised of ten faculties. Concerning government instruction, University of Ruhuna has been conducting academic activities using the Zoom network since the 30th of March 2020 and continuing. For decades, the acceptance and usage of information technology have been critical to information systems study and practice (Dwivedi, Rana, Chen, & Williams, 2011). A mini survey was conducted with the participation of several academics in the university system to find out the trends in using online teaching. This revealed that though students were initially motivated to actively participating in online teaching, relatively participation level is reducing over the period. As it is uncertain that when the university is going to start offline teaching and learning practices and they are expecting to continue online teaching and learning mode in the future as well this low participation becomes a critical issue. Therefore, it is important that investigate the factors students concern about continuously using zoom for their academic activities in the future. Despite the above, this study aims to determine university students' intention to continuously use the Zoom application for e-learning.

B. Literature Review

E-learning is the use of electronic interventions for teaching, learning, and evaluation (Mlitwa, & Belle, 2011). E-learning is defined as flexible learning that makes use of ICT resources, tools, and

applications, with an emphasis on information access, interaction among teachers, learners, and the online environment collaborative learning, and the development of materials, resources, and learning experiences (Bagarukayo, 2015). E-learning allows students to improve their problem-solving skills while also allowing educators to better convey and teach knowledge. (Bagarukayo, 2015).

E-learning usage refers to either the amount of effort exerted in interacting with a particular technological system (Fitzgerald, 1993). Continuous use of technology refers to a person's future desire, expectation, or goal to employ presently in use technology or system. According to Ajzen and Fishbein 1980 this is a measure of a person's propensity to continue using a technology or system. E-learning definitions emphasized that e-learning is done by interact with the technology. Thus, e-learning refers to the use of technology. Several theoretical models have emphasized the significance of behavioral intention as the most important predictor of human behavior in the continuous use of technology (Lee & Rao, 2009). In the context of the present study, the intention was to assess if the undergraduates, who are using e-learning for their academic activities, would be willing to continue using the e-learning method for future studies. From the 30th of March 2020 Sri Lankan university students using zoom application for e-learning (Hewagamage et al, 2020) Thus, the study aims to assess students' intentions regarding the continued use of the provided e-learning system in future e-learning activities.

In the current study, we specify an e-learning application namely zoom. According to <<https://zoom.us/meetings>> Zoom is a free HD meeting app with videos and screen sharing for a limited crowd. The reason for selecting zoom for this study is Sri Lankan government introduced zoom for Sri Lankan universities for e-learning in the pandemic era. Government link zoom portal with LEARN system and provide free access to users in Sri Lankan universities (Hewagamage et al, 2020). Zoom is an information and communication technology application founded by Eric Yuan (Akbar & Rais, 2020). Thus, this study investigates the continued use of zoom applications for e-learning.

Theories of e-learning usage, Most widely used technology usage and adoption explained theories are Technology Acceptance Model (TAM) by Davis (1989), Theory of Planned Behavior by Ajzen (1991), Theory of Reasoned Action by Fishbein and Ajzen (1977), Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) and Unified Theory of Acceptance and Use of Technology2 (UTAUT2) by Venkatesh et al. (2012). According to (Hone, Tarhini, Hone, & Liu, 2014) UTAUT2 is the most commonly and widely used model in recent times to explore areas of use information technologies, including e-learning. Thus, in the current study, we used UTAUT to develop a theoretical model. Based on the model following constructs were selected as the drivers of e-learning usage.

Performance expectancy is described as the extent to which a person feels that using the method can assist him or her in achieving improvements in performance tasks (Venkatesh, 2003). Further indicate that an individual's degree of confidence in the use of a certain information system using, it will improve his or her learning performance (Almaiah et al., 2020). When performance expectancy is aligned with an e-learning sense, previous studies indicated that e-learning assists learners by allowing them to conduct their learning tasks quickly and easily, as well as enhancing the learners' educational skills and efficiency (Authors, 2019).

Effort expectancy refers to the degree of ease associated with learners' use of technology (Venkatesh & Zhang, 2014). It is the level of comfort associated with the use of information systems (Venkatesh & Zhang, 2014). And the extent to which a person feels that he or she can use technology without extra effort (Wilson & Budu, 2018). It demonstrates the ease at which users interact with technology (Wilson & Budu, 2018). Since e-learning is still in its early stages, effort expectancy is regarded as one of the most significant considerations in determining users' behavioral intention to use the systems (Salloum, 2018).

Social influence can be defined as the degree to which a person perceives influences of the system for using the new system (Venkatesh & Zhang, 2014). Further social influence describes as an influence that other people's opinions have over

someone's decision to use an information system (Ruiz, Mintzer, & Leipzig, 2006). People are more likely to use a particular device if it comes highly recommended by those that are important to them (Zuiderwijk, Janssen, & Dwivedi, 2016).

Hedonic motivation is the pleasure or gratification obtained from the use of a technology (Venkatesh & Zhang, 2014). It assesses users' perceived happiness and entertainment (Venkatesh & Zhang, 2014). Venkatesh has been using this variable in the UTAUT2 model to investigate the function of endogenous utilities. It's the joy of experimenting with a new system. The hedonic motivation's main impact is brought by the innovativeness inherent in a modern method (Williams et al., 2015).

Internet experience have a direct association with technology adoption (Ali, Raza, Qazi, Phuah, 2018) and Internet experience is accepted to be included as one of the key factors determining technology acceptance by past studies (Williams et al., 2015). Anandarajan et al. (2000) emphasized the importance of internet experience in technology-related investigations. Even though prior studies on web-based learning systems focused less on internet experience as a key determinant (Ali et al., 2018) this study attempts to investigate internet experience on e-learning continues usage.

Work-life quality refers to a person's expectation or impression that by using a tool, their work quality can increase; in this instance, the use of an e-learning system is intended to improve students' learning process by saving them time and money as they download learning materials and literature or interact with their colleagues or teachers (Hone, Tarhini, Liu., 2014). While many studies (Hone et al., 2014), (Kripanont, 2007) on acceptance of technology have investigated the importance of work-life quality (Tarhini, 2014).

In this study, UTAUT is regarded as a baseline paradigm that has been used to investigate the application of diverse developments in a variety of operational environments. Performance expectancy, effort expectancy, and social influence adopt from UTAUT developed by Venkatesh in 2003. Hedonic motivation, (Venkatesh & Zhang, 2014) from UTAUT2. In addition to internet experience (Ali, Raza, Qazi, Phuah, 2018) and work-life quality (Hone et al., 2014) have been adopted to develop the conceptual framework this study showed in figure 1.

C. Conceptual Framework

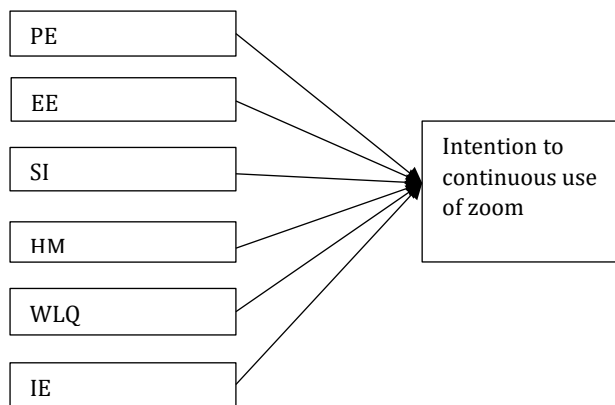


Figure 1. Conceptual Framework

Source: Author's Constructed 2021

D. Hypothesis Development

Performance expectancy in the e-learning context indicates the degree to which e-learning assists learners to conduct their learning tasks quickly and easily, as well as enhancing the learners' educational skills and efficiency (Zuiderwijk et al., 2016). Performance expectancy is an indicator of intention to use a new method in a variety of contexts, including e-learning (Hone et al., 2014). According to the current literature, Performance expectancy has a substantially positive relationship with behavioral intention's use of an e-learning method (Wilson & Budu, 2018), (Authors, 2019). As a result, the following hypothesis was formulated:

H1: Performance expectancy has a positive and significant impact on student's intention to continue the use of an e-learning system.

Effort expectancy means the degree of ease associated with users' use of technology (Punnoose, 2012). It is the level of ease associated with the use of information systems (Venkatesh, 2003) and the extent to which a person feels that he or she can use technology without extra effort (Zuiderwijk et al., 2016). Since e-learning is still in its early stages, effort expectancy is regarded as one of the most significant considerations in determining users' intention to use the method (Mpungose, 2021). The ease of use and user-friendliness of e-learning programs can influence individuals' adoption and desire to use such systems (Salloum, 2021). Previous research has shown that effort expectancy affects positively the

intention to use a system and is a key determinant of intention to use e-learning programs (Hone et al., 2014), (Dwivedi et al., 2011). Thus, this study assumes that if a learner finds an e-learning system easy to use, he or she is more likely to adopt it. As a result, the following hypothesis was developed:

H2: Effort expectancy has a positive and significant impact on student's intention to continue the use of an e-learning system.

Social influence defined by Venkatesh in 2003 emphasized that social influence is the degree to which a person perceives that essential other believe he or she would use the new system. That is the influence that other people's opinions have over someone's decision to use an information system (Zuiderwijk et al., 2016). The UTAUT model suggested that social influence captures the position of social forces, pictures, and subjective norms. Many studies have confirmed SI as a major influence factor that decides people's intention to use (Almaiah et al., 2020), (Williams et al., 2015). Thus, this research assumes that individuals' intentions to continuous use an e-learning method are conditioned by their lecturers, teachers, and colleagues' beliefs and based on the following hypothesis postulated:

H3: Social influence has a positive and significant impact on student's intention to continue the use of an e-learning system.

Hedonic motivation is the pleasure or gratification obtained from the use of a technology (Venkatesh & Zhang, 2014). It assesses users' perceived happiness and entertainment (Venkatesh & Zhang, 2014). Venkatesh used this variable in the UTAUT2 model to investigate the function of intrinsic utilities. Prior research (Zuiderwijk et al., 2016) discovered that hedonic motivation plays an important role in influencing users' intentions to use technology, especially in e-learning and (Hone et al., 2014) emphasized that because using an e-learning framework makes people happy, they are more likely to try it again. Based on that the following theory was postulated:

H4: Hedonic motivation has a positive and significant impact on student's intention to continue the use of an e-learning system.

Work-life quality (WLQ) refers to a person's understanding or belief that by using a tool, their work quality can increase, in this instance, the use

of an e-learning system is intended to improve students' learning process by saving them time and money as they can download learning materials and literature or communicate with their colleagues or teachers (Ali, Raza, Qazi, & Puaah, 2018). The value of work-life quality-related studies on e-learning is very limited. (Hone et al., 2014), (Ali, Raza, Qazi, & Puaah, 2018) have shown that Work-life quality has an important effect on the decision to use e-learning programs. As a result, work-life quality can be a good indicator of an individual's plan to use e-learning programs. Thus, the following hypothesis was derived:

H5: Work-life quality has a positive and significant impact on student's intention to continue the use of an e-learning system.

Internet experience means individual internet use and familiarity have a major association with technology adoption (Williams et al., 2015). Internet experience is recognized as a primary factor assessing technology acceptance by previous research (Dwivedi et al., 2011). Individuals' perceptions of using electronic systems are firmly developed as the internet experience increases (Hone et al., 2014). Previous research on Web-based learning systems have paid less attention to internet experience as the main determinant and this study aims to incorporate internet experience as an exogenous factor influencing e-learning system and purposed following hypothesis:

H6: Internet experience has a positive and significant impact on student's intention to continue the use of an e-learning system.

II. METHODOLOGY

This employed a descriptive research design that allows assessing the associations between the variables described in the model. After reviewing the literature, six independent variables were identified. Based on the conceptual framework shown in figure 1, six hypotheses were postulated.

This study focuses on investigating the intention to continuous use of online teaching of the Sri Lankan undergraduates. Hence, the unit of analysis was individual. The theoretical population of this study is undergraduate students at state universities in Sri Lanka. Due to the practical limitation and complexities Management undergraduates of the University of Ruhuna was selected as the study population. A questionnaire was designed using

Google Forms. Designed questionnaires were distributed among 250 undergraduates of the Faculty of Management and Finance, University of Ruhuna by using emails and social media networks, and 200 responses were gathered proceed for further analysis. The study had to adopt the snowball sampling method because requested respondents to pass the questionnaire among undergraduates in the faculty. The constructs of the research model were measured using previously validated instruments. The all the constructs used a five-point Likert scale where respondents marked their agreement scaling from strongly disagree (1) to strongly agree (5). Gathered data analyzed by using SPSS 25 version.

A. Sample Composition

Table 01. Sample composition

Variable	Category	Frequency	Percentage (%)
Age group	19-20	8	4
	21-22	83	41.5
	23-24	44	22
	25-26	50	25
	More than 21	15	7.5
Gender	Male	84	42
	Female	116	58
Undergraduate Year	1st year	79	39.5
	2nd year	17	8.5
	3rd year	17	8.5
	4th year	87	43.5
Number of semesters use zoom application for e-learning	1 semester	73	36.5
	2 semesters	59	29.5
	3 semesters	54	27
	4 semesters	2	1
	More than 4 semesters	12	6
Used device for access to zoom platform	Desktop	10	5
	Laptop	104	52
	Smartphone	85	42.5
	Tablet	1	0.5
Internet service provider used for access to zoom	Dialog	105	52.5
	SLT-Mobitel	77	38.5
	Airtel	1	0.5
	Hutch	17	8.5

Source: Survey Data 2021

Data was gathered from 200 undergraduates of the Faculty of Management and Finance, University of Ruhuna. According to the table no 1, 41.5%

represents the 21-22 age group, 25-26 age group represents 25% of the sample, and the lowest percentage 4% represents from 19-20 age group. According to the responder' year of study 1st, 2nd, 3rd and 4th years represent 79,17,17,87 students respectively. According to the gender 116 (58%), students are female and 84 (42%) are male. Pertain to the devices used for access for zoom platform most of the students (104) used the laptop, 85 students used a smartphone, 10 students used a desktop, and one student used a tablet. 105 (52.5%) used dialog and 77 (38.5%) use SLT-Mobitel as their internet service provider. Further, 17 students used Hutch, and 1 student used Airtel internet service provider for access to the zoom. 73 students used zoom only for one semester as a percentage it is 36.5%. 59 students use 2 semesters, and 54 students use three semesters zoom application for e-learning. 12 students experiencing zoom for more than 4 years and the rest of the others of the sample use the zoom application in three semesters for e-learning.

B. Reliability

The reliability of the constructs was measured using Cronbach alpha values and results are indicated in Table 2. The highest reliability value indicates (0.962) by Hedonic motivation while the lowest reliability value is reported by effort expectancy (0.825). According to (Bagozzi & Yi, 1988) a threshold level of 0.6 or the highest value is required to demonstrate a satisfactory level of reliability. As all constructs meet the threshold value there is no concerns about low internal consistency among the constructs.

Table No 2- Reliability Statistics

Variable	Cronbach's Alpha	No of Items
Performance Expectancy	0.900	5
Effort Expectancy	0.825	4
Social Influence	0.919	3
Hedonic Motivation	0.962	3
Work Life Quality	0.878	4
Internet Experience	0.885	3
Behavioral intention	0.934	5

Source: Survey Data 2021

C. Hypothesis testing

The hypothesis was tested using multiple regression analysis using SPSS and regression results are shown in Table 3. The Adjusted R Square value amounts to .701. Thus, the regression model explains 70% of the variance in the intention to continuously use e-learning with Zoom with the six independent variables specified in the research model and ANOVA test confirmed that the regression model is statistically significant (F = 78.622, P= 0.000).

Table No 3-Regression results

	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
PE	.445	.090	4.925	.000
EE	-.196	.098	-1.997	.044
SI	.068	.064	1.063	.289
HM	.191	.052	3.701	.000
WLQ	.904	.168	5.368	.000
IE	.370	.121	3.068	.002
Adjusted R Square	.701			
ANOVA	F = 78.622, (P= 0.000)			

Source: Survey Data, 2021

According to the table 3 Performance expectancy (b = .445, p = 0.000). Hedonic Motivation (b = .191, p = 0.000)., Work-Life Quality (b = .904, p = 0.000)., and Internet Experience (b = .370, p = 0.002)., have significant positive effect on explaining intention to continuous use of zoom application for e-learning. Thus, derived H1, H4, H5, and H6 hypotheses were accepted with observed data. Effort Expectancy had a significant negative impact on intention to continuous use of zoom application for e-learning, supporting H2 (b = -.196, p = 0.044). Social Influence was not found to have a significant effect on the intention to continuous use of zoom application for e-learning, not supporting H3. In sum, this study confirms the results of UTAUT.

III. DISCUSSION AND ANALYSIS

The main objective of this study is to investigate significant factors that might influence for intention to continuous use of zoom application for e-learning among undergraduates in Sri Lankan universities. Results of the study indicate that performance expectancy, hedonic motivation,

work-life quality, and internet experience significantly and positively impact to the intention to continuous use of zoom application for e-learning. Further, effort expectancy is significantly and negatively related to the intention to continuous use of zoom applications for e-learning.

This study found empirical support for the relationship between performance expectancy and intention to continuous use of zoom applications for e-learning. This means that undergraduates use the zoom application for future e-learning activities if they feel that the system helps them to reach their goals of learning activities and benefited from a climb up their expected performance level. These findings are consistent with previous work of (Samusdeen, 2019). This has implications for the vendors who develop the applications that adding more features to enhance the ability to meet the users' expectations.

The relationship between hedonic motivation and intention to continuously use zoom application for e-learning has been documented and the results confirmed the importance of the link between them. This finding indicates that undergraduates use the zoom application for their future studies if the application derives pleasure in e-learning described. This finding confirms the works of (Ali, Raza, Qazi, & Puah, 2018). This finding implies that the authorities must use it in more enjoyable ways to increase student's intention to use it for their future e-learning activities.

Consistent with the previous empirical findings of (Ali, Raza, Qazi, & Puah, 2018) the present study found empirical support for the relationship between Work-life quality and intention to continuous use of zoom application for e-learning. This means that the usage of the zoom application is supposed to improve students learning process by bringing savings for them in terms of time and cost when they download learning materials and literature or making communications with their colleagues or teachers (Hone et al., 2014). This implies that lecturers and instructors should allow students with little internet experience to use e-learning systems and to try to increase the work-life quality of university undergraduates.

Further, this study found empirical support for the relationship between internet experience and intention to continuous use of zoom applications for e-learning. Internet experience is considered a

key factor determining technology acceptance by past studies (Ali, Raza, Qazi, & Puah, 2018) and this study indicated the same results and derived that if students have previously strong internet experience, they might use zoom application in future e-learning activities. Therefore, administrative authorities will make it easier for students to use e-learning services by working with mobile and tablet providers to supply students with these devices on an installment or loan basis. Further, this implies that the country's cellular network providers offer low-cost Internet data services with dedicated dongles for university students.

Moreover, this study found significant results confirming the relationship between effort expectancy and intention to continuous use of zoom applications for e-learning. This implies that students are willing to used e-learning platforms for their future studies when they perceive that the online platform is not much complicated to learn and operate. This finding is consistent with the previous work of (Samusdeen, 2019). Further, this has an implication practically for the vendors who developed the online teaching and learning application that they should concern about designing more convenient and user-friendly applications.

Most of the studies, Venkatesh in his studies done by 2003 and 2014 and (Hone et al., 2014) indicate that social influence has a significant impact on the intention of use in technology. However, this study did not find empirical support for this claim. The possible reason for insignificant results would be that respondents in this context did not pay keen attention to the other influences practically for using the zoom application in their future studies. In sum, Sri Lankan university students' intention for continuous use of zoom application for e-learning explained by the performance expectancy, work-life quality, hedonic motivation, effort expectancy and internet experience.

IV. CONCLUSION

During the pandemic era, Sri Lankan universities launch the zoom platform for e-learning. As a result, universities must continue to use the zoom during the pandemic period. Sri Lankan undergraduates have been using zoom for over a

year, but there is a question about whether they would be willing to continue using it in the future. This study investigated the reasons that undergraduates seek from the system and system operators to continue utilizing zoom for their e-learning activities. According to the findings, the factors that Sri Lankan universities considered are performance expectancy; work-life quality, hedonic motivation, effort expectancy, and internet experience for continued use of zoom for e-learning. From a theoretical standpoint, the conceptual model validated in the Sri Lankan context gives a clearer understanding of the variables that affect students' intention and e-learning system usage behavior. The results will point to that more effort could be paid to make the adoption process a success. It gives them a deeper view of the preferences of university students in the case of e-learning system implementation, as well as what these students would want to see and see in their technology-assisted learning phase. So those potential implementations and current installations can be better tailored to meet these students' needs and desires.

We acknowledge the following limitation of the study while indicating directions for future research. The first limitations refer to the sample size and the context of the study. Due to time and financial constraints, the sample was limited to 200 respondents from the University of Ruhuna. A larger sample would increase the statistical power and offer rigorous findings (Hair et al., 2010). Future studies with a larger sample size representing undergraduates with other universities are therefore required. The second limitation pertains to the research design. This study used a cross-sectional design, wherein data were collected at one point in time. As intention to continuous use e-learning is viewed as a psychological construct where longitudinal empirical studies are required to gain in-depth understanding future studies with a longitudinal research design would greatly contribute to the literature.

The fourth limitation is related to the data collection tools. The present study used a questionnaire survey to collect primary data about the phenomenon of interest. Alternative mechanisms, such as interviews would facilitate an in-depth understanding of the continuous usage behavior and its determinants. Thus, future studies

that employ interviews and qualitative analysis of interview data would generate important insights into this phenomenon. The fifth limitation relates to the inclusion of independent variables in the research model. The study used only six factors based on the UTAUT theory. Additional variables specified in other theories, Theory of planned behavior, institutional theory, transaction cost theory, Diffusion of Innovation Theory might have impact on intention to continuous use of e-learning.

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Flexible Working Arrangements and Job Satisfaction of Public Sector Employees with Reference to Post COVID- 19 Situation in Sri Lanka

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Abstract— Due to the COVID-19 (Corona Virus Disease 2019) Pandemic, Flexible Work Arrangements (FWAs) have become a timely need. The emergence of the constructs of FWAs (Part time work, Work sharing, Flextime, Compressed work week, Home-based working) resulted from technological development. This study utilizes quantitative method and a qualitative approach. The purpose of this study is to examine the influence of personal attributes on employee satisfaction with reference to the mediating effect of the intention of public sector employees towards FWAs. Theory of Reasoned Action and Theory of Planned Behaviour models are utilized and the variables such as attitude, subjective norms, perceived behavioural control (Independent Variables), employee satisfaction (Dependent Variable) and intention towards FWAs (Mediating Variable) are used in the study. The population of the study comprises of public sector workers of the Western Province. Convenient sampling method is used to select 100 employees in the public sector. Data are collected through a survey method using an online questionnaire. The study concludes that the attitudes and perceived behavioural control have a positive influence on the intention of public sector employees towards flexible working arrangements while subjective norms do not influence on the intention of public sector employees. The study finds it significant that employees are more interested in FWAs in order to have more satisfaction in their career life.

Keywords— *Flexible Work Arrangements (FWAs), job satisfaction, intention, public sector*

I. INTRODUCTION

A. Background of the Study

Work flexibility has become a vital approach in many organizations following economic liberalization, technological advancements and increased concern on human resources (Nawaratne, 2013). FWAs are gaining popularity as it is safe, convenient and also encouraged by the government. With the current situation, about 136 countries have initiated some form of FWAs (Paskov, 2020). Applying FWAs are beneficial to employees due to work life balance, autonomy and productivity benefits they gain from FWAs (Bond & Galinsky, 2006; Kattenbach et al., 2010; Nadler et al., 2010; Wickramasinghe & Jayabandu, 2007). Employers are benefitted from high productivity, effectiveness, performance, profits and growth (Giovanis, 2018). The most significant concern about FWAs is the impact of flexibility towards employee satisfaction. Therefore, this study aims to explore FWAs as an effective solution to workplace issues in the public sector.

B. Problem Statement

Employee satisfaction has become a timely consideration of the public sector in Sri Lanka. The fixed work schedule causes dissatisfaction due to colleagues' chatter, daily commuting in public transports, wasted time and energy on roads, verbal instructions and increased risk of corona virus spread etc. (Kulathunga, 2020). Employees of the Private sector experience more satisfaction than the public sector therefore it is necessary to take measures to improve the job satisfaction of public sector employees (Velnampy, 2009). If not properly managed, it is not successfully contributing towards country's expectations as public sector is the nation's main service provider (Dissanayaka & Fernando, 2016; Nafael, 2001). Therefore, this study addresses the intention of

public sector employees about FWAs to improve job satisfaction and how personal attributes such as attitudes, subjective norms and perceived behavioral control affects intention and job satisfaction.

C. *Research Objectives*

The study has three main objectives; to identify the factors affecting employee satisfaction in the public sector, to examine whether there is a mediating effect of FWAs towards employee satisfaction in the public sector and to identify the most influential factor towards employee satisfaction in the public sector.

D. *Literature Review*

Sri Lanka needs to implement global employment strategies such as Flexible Work Arrangements (FWAs). Once employees get seasoned to FWAs they rarely move out to another organization where flexibility is not offered (Wickramasinghe & Jayabandu, 2007). Flexibility is vital for any private or public organization for survival (Browell & Ivers, 1998). There are many appealing FWA options for managers to choose from such as part-time, compressed work week, teleworking (home-based working), work sharing and flextime. Flexibility in amount of work-time, workplace, and workload can be enhanced by adopting one or few of FWA schemes ideal to the organization's best interest. FWAs gain popularity due to several reasons such as the conversion of single income households to dual income households hence there is a strong need to balance both work and family demands. Also since millennials are the future of work, organizations should provide work flexibility (Konczak et al., 2011). Both men and women desire FWAs, but men want the chances to work with psychological feeling in the day and good employment opportunities while women seek for FWAs to reduce stress, have a better work life balance and save time (Ciarniene & Vienazindiene, 2018).

The main theoretical framework underlying this study is Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB). This research utilizes a model derived from TPB and TRA to empirically examine the contribution of employee attitudes, Subjective Norms (SN) and Perceived Behavioral Control (PBC) towards the intention of public sector employees towards FWAs (Ajzen,

1991; Fishbein & Ajzen, 1967). Attitudes mirror a person's evaluation of acts dependent on the associated consequences and value of those consequences for the person (Stavrou & Ierodiakonou, 2011). The same study suggests that it is necessary for employees to have positive attitudes towards FWAs in order to easily adopt them. Subjective norms indicate the pressure by significant others on the individual about performing the behavior (Stavrou & Ierodiakonou, 2011) which can also be expressed as the sense that a person has about engaging in the behavior. For instance, peer behavior has a powerful impact on employees to select FWAs (Ko & Kim, 2018). According to the study the impact can be intensified when introducing FWAs to employees because they rely on their colleagues who have experienced FWAs before. Perceived behavioral control indicates employees' perception of how convenient it is for them to perform a certain action (Ajzen, 1991) All these three constructs attitudes, subjective norms and behavioral control are assumed to be related to the intention of employees to perform certain behaviors (Stavrou & Ierodiakonou, 2011). As in this case, engagement in FWAs. Thereby the independent variables are attitude, subjective norms and behavioral control while Intention towards FWAs act as the mediating variable. The most critical variable of the study is employee job satisfaction which is the dependent variable.

II. METHODOLOGY

A. *Research Design*

This study is a descriptive research which attempts to collect and analyze quantifiable information. This study is based on the philosophy of epistemology which explores the common acceptable knowledge to address the established facts. In this context specifically, a positivistic philosophical position is used where specifically tailored research questions and hypotheses which can be analyzed and evaluated. This study takes a deductive approach by developing hypotheses from existing theories before testing (Silverman, 2013). In this study, a survey strategy is used in order to collect extensive, reliable and rich data as it is the ideal strategy for this study because the study is descriptive by design. This research uses the mono method (only quantitative method) to gather, analyze and generalize the data.

Researchers gather data from the target sample via a structured, online questionnaire and analyzed them quantitatively. The time horizon for the study is cross-sectional. These stages are followed when proceeding with the study.

B. Hypotheses

According to the conceptual framework, this research study is conducted based on the following hypotheses.

H.1. Intention about FWAs mediates the impact of attitudes towards job satisfaction.

H.2. Intention about FWAs mediates the impact of subjective norms towards job satisfaction.

H.3. Intention about FWAs mediates the impact of perceived behavioral control towards job satisfaction.

H.4. Intention about FWAs has a direct effect on job satisfaction.

H.5. Attitudes have a direct effect on job satisfaction.

H.6. Subjective norms have a direct effect on job satisfaction.

H.7. Perceived Behavioral control has a direct effect on job satisfaction.

C. Conceptual Framework

In the current study, independent variables are Attitude, Subjective Norms and Perceived Behavioral Control, while Job Satisfaction is the dependent variable and Intention towards FWAs is the mediating variable. This conceptual framework is based on the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB). According to Ajzen (1991), Attitude, Subjective Norms and Perceived Behavioral Control are the contributing factors towards Intention which in return impacts Behavior. In this conceptual framework, Intention towards FWAs mediates the relationship between Job Satisfaction with Attitude, Subjective norms and Perceived Behavioral Control.

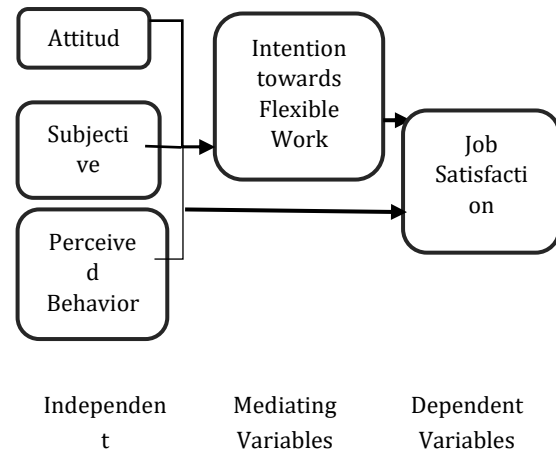


Figure 1. Conceptual Framework

Source: Developed by Authors

III. DISCUSSION AND ANALYSIS

A. Results

In order to evaluate the respective variables several demographic and general characteristics of the selected sample are analyzed after collecting the responses from the online questionnaires. The population for this study is selected as public sector employees in Sri Lanka. However, considering the time constraints, the population size is narrowed down to public sector employees in Western Province. Western province reports the highest number of employee participation in public sector; 20.3% in Colombo, 7.3% in Gampaha, 4% in Kaluthara districts respectively (Department of Census and Statistics, 2016). Out of the 100 respondents, most of them have a good educational level considering that there are 26% postgraduates and 25% undergraduates. Majority of them (41%) work in educational institutes. The majority of them are teachers (28%) and another 20% in management positions. There are 67% female workers and 33% male workers. Considering the age groups, the majority belongs to 21-30(41%) years and another 39% belongs to 51-60 year category. Out of 100 respondents only 43 (43%) state that they have been using FWAs for quite some time while 19 respondents (19%) report that they may have been using FWAs before. Forty-six respondents (42.20%) state that they have never used FWAs before. Out of the ones who are

accustomed to FWAs, a majority (56.6%) have been teleworking (home based working).

To test the consistency in the data, first the reliability is checked. Reliability is measured by Cronbach's Alpha value which is often used to measure the internal consistency of an instrument (Heale & Twycross, 2015). If the Cronbach's alpha value is more than 0.6, it is considered as the lower limit of acceptance (Hair et al., 2010) while the Cronbach's alpha value is said to be more reliable if it exceeds 0.7 it is considered as highly reliable (Fornell & Larcker, 1981). In this study, Cronbach's values for all the variables have exceeded the threshold point of 0.6 hence they can be considered as reliable and deemed suitable to conduct the research.

Table 1. Reliability of the Variables

	Cronbach's Alpha	Number of Items
Attitude	0.699	3
SN	0.691	3
PBC	0.622	3
Intention FWA	0.816	5
Satisfaction	0.894	6

Source: Sample Survey 2020

In this study Pearson Correlation is used to measure correlation between variables which is the most popular method of finding association between variables to identify correlations among the direct and indirect (Nettleton, 2014).

Table 2. Correlation of Direct Relationships

Hypothesis	Pearson Correlation	Significance Value
H4	0.687	0.000
H5	0.516	0.000
H6	0.325	0.001
H7	0.579	0.000

Source: Sample Survey 2020

Results from Table 2 show that intention towards FWAs and job satisfaction has the most significant positive association which has a significance value of 0.000 ($p < 0.05$) and a Pearson correlation value of 0.687 ($r < +1$). Therefore, this hypothesis (H4)

can be accepted. Similarly, H5, H6 and H7 can be accepted.

Table 3. Correlation of indirect relationships

Hypothesis	Pearson Correlation	Significance Value
H1	0.422	0.000
H2	0.175	0.087
H3	0.565	0.000

Source: Sample Survey 2020

Results from Table 3 show that all the hypotheses regarding the indirect relationships (H1-H3) can be accepted except for H2. Hypothesis 2 indicates a mediation effect by intention towards FWAs on the subjective norms and job satisfaction. This hypothesis is rejected because of the low significance ($p > 0.05$) and low association ($r = 0.175$). Intention about FWAs mediate the impact of attitudes on job satisfaction, which is moderately associated ($r = 0.422$) and is significant ($p < 0.05$). Similarly, H3 can be accepted. After the correlation is carried out the obtained results showcase that all the direct and indirect relationships within this study have correlation values that falls between +1 and -1. Therefore, all the hypotheses from H1-H7 can be accepted as valid hypotheses except for H2 as shown in tables 2 and 3.

To determine the effect of independent variables on dependent variables, regression is utilized. In this study there are multiple variables therefore the multiple linear regression is carried out to predict the outcome of a dependent variable. The model summary table showcases the strength of the relationship between dependent variable and the model. In this study, R is 0.662, which shows that the relationship between variables is moderately strong. In this study, the coefficient of determination (R Square) is 0.439. This suggests the notion that Job Satisfaction is influenced by 43.9% by Attitude, Subjective Norms and Behavioral Control, while other causes explain the rest ($100\% - 43.9\% = 56.1\%$).

Table 4. Model Summary

Model	R	R. Square	Adjusted R Square	Std. Error of the Estimate
1	0.662 ^a	0.439	0.421	0.523

Source: Sample Survey 2020

ANOVA (Analysis of Variance) table examines whether the model is acceptable from a statistical viewpoint. The regression row shows information regarding the variation accounted by the model while the residual row depicts the information about the variation which is not accounted by the model used under the current study. The ANOVA table of this study indicates a probability level of significance value of 0.000. Therefore, the probability (0.000) is much smaller than 0.05, then the multiple regression models can be used to predict employees' job satisfaction. Alternatively in other words, Attitude, Subjective Norms and Perceived Behavioral Control have a significant effect on job satisfaction.

Table 5. ANOVA Table

Model		Sum of	df	Mean Square	F	Sig.
1	Regression	20.086	3	6.695	24.508	0.000 ^b
	Residual	25.679	94	0.273		
	Total	45.765	97			

Source: Sample Survey 2020

In the coefficient section it displays the significant value for attitude as 0.02 which is less than 0.05; therefore, it has a partial significant effect on job satisfaction. The significance value for subjective norms is 0.014 which is less than 0.05. Therefore, it can be interpreted as it has a partial significant effect on job satisfaction. Meanwhile Perceived Behavioral Control has a significance value of 0.000 which is less than 0.05, which can also be interpreted as Perceived Behavioral Control having a significant effect on job satisfaction, which has the most significant impact.

Table 6. Coefficients

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.514	0.424		1.214	0.228
	Attitude	0.281	0.087	0.280	3.220	0.002
	SN	0.146	0.058	0.199	2.512	0.014

	PBC	0.439	0.091	0.416	4.842	0.000
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Source: Sample Survey 2020

For testing the mediating effect among variables the Sobel test is carried out using the online Sobel Test calculator (Preacher & Leonardelli, 2001). It determines if the effect of an independent variable is reduced, after including the mediator. If it results in a significant reduction, it proves the mediation effect is statistically significant. The results which are obtained from the test are depicted in Table 7. Sobel test (Sobel, 1982) states that mediating effect of a model should be significant when $p < 0.05$. The test results obtained from Sobel test indicate that there are mediating relationships between attitude and perceived behaviour control towards the dependent variable except for the relationship of subjective norms. Due to the absence of mediating effect by intention towards FWAs on subjective norms and job satisfaction, H2 is therefore rejected and it can interpret the low significance and correlation value of the subjective norms and intention towards FWAs in correlation Table 3.

Table 7. Mediating Effect of Attitudes towards FWAs

	Models	Sobel Test Statistics
Attitude	Intention towards FWAs	3.909
Subjective Norms	Intention towards FWAs	1.682
Behavioral Control	Intention towards FWAs	4.597

Source: Sample Survey, 2020

B. Discussion

The first objective of the study is to identify the factors affecting on employee satisfaction in public sector. Researchers hypothesize that intention towards FWAs, attitude, subjective norms and perceived behavioral control affect employee satisfaction in public sector (H4-H7). All the hypotheses are proven to be true as per the results obtained in Table 2. It is discovered that intention towards FWAs has a direct effect on job satisfaction. i.e.H4, valid. Further it is found out that if employees have positive attitudes towards FWAs, it has a direct effect on job satisfaction i.e. H5, valid. Subjective norms are also found to be affecting job satisfaction. Subjective norms are measured by worry, guilt and peer behavior and found that they affect the intention. This holds H6 to be true as well. Perceived behavioral control also

has a direct impact on job satisfaction. If an employee perceives that he can easily perform the behavior (in this scenario, the implementation of FWAs) he can gain more satisfaction. Therefore, H7 also holds to be true. Hence it can be stated that attitude, subjective norms and perceived behavioral control directly impact on employee satisfaction of the public sector employees.

The study's second objective is to examine whether there is a mediating effect on FWAs towards employee satisfaction in the public sector. At the initial stage, researchers hypothesize that the three independent variables (attitude, subjective norms and perceived behavioral control) positively impact towards public sector employees' intention, thereby resulting in employee satisfaction (H1-H3). However, the results from the Sobel test show that the mediating effect of intention is not that apparent in the relationship between subjective norms and job satisfaction. The correlation test also supports the findings of the Sobel test due to the low significance value in this relationship. Therefore, authors have to reject the second hypothesis because there is no mediating effect from the intention on subjective norms and job satisfaction. However, Sobel test results show that there is a mediation effect by intention in the two relationships between the other variables; attitude and job satisfaction and between perceived behavioral control and job satisfaction. This proves the H1 and H3 to hold true and H2 to be invalid. This finding contrasts with the assumption derived from Stavrou & Ierodiakonou (2011) that all the independent variables affect the intention of FWAs. This study finds that the relationships between only two personal attributes are mediated by intention, which are attitude and perceived behavioral control.

The third objective is to identify the most influential factor towards employee satisfaction in the public sector. As per the regression analysis results, it is proved that intention is the most influential factor towards employee satisfaction (Table 5). The intention has the most powerful association with job satisfaction as per the results obtained in Table 2. It can be because both attitude and perceived behavioral control also affect intention. However out of the three personal attributes (independent variables), Perceived Behavioral Control has the most significant effect on job satisfaction surpassing those of attitudes

and subjective norms according to the results from Table 2 and Table 3 implying that if the employee perceives pursuing FWAs are easy then it impacts his intention the most. The findings of this study state that employees are able to feel a wholesome level of happiness when they are allowed to practice FWAs, provided within an employee friendly environment. It is observed that both male and female employees prefer flexible working which is consistent with the findings of Ciarniene & Vienazindiene (2018). Employees report higher satisfaction when they are offered FWAs which justifies the vitality of work flexibility as stated by Browell & Ivers (1998). Overall, this study suggests that implementing FWAs in public sector organizations is a good way of enhancing employee job satisfaction.

IV. CONCLUSION

The current study contributes to fill a gap in the existing literature by generating new knowledge on FWAs. FWAs have become a worldwide practice due to the plethora of benefits they offer to many stakeholders namely employees, employers and society making it a win-win situation for every party. Although past literature has ample studies emphasizing on the aforesaid benefits of FWAs there are not enough studies done to measure the employee intention towards implementing FWAs and job satisfaction specially in the public sector of Sri Lanka. Therefore, this study contributes in fulfilling an empirical research gap. Further this study is based on the Theory of Reasoned Action (Fishbein & Ajzen, 1967) and the Theory of Planned Behavior (Ajzen, 1991) which remain as highly significant models to explain human behaviors. The study has realized the research objectives after completing the study. The findings indicate that employees have a positive intention towards implementing FWAs in publicly owned work settings. Therefore, this study suggests FWAs can be the solution for improving public sector productivity while enhancing the satisfaction of public sector employees in Sri Lanka. This research can benefit the public sector employees to decide whether to implement these new strategies. To enhance employee satisfaction FWA options such as teleworking, part-time, shift work, compressed work week and work sharing options can be used to optimize benefits for both employee, employers and national economy.

A. Limitations And Recommendations

In this study a sample of Western province public sector employees are selected, which makes it challenging to make generalizations to population sizes therefore there exists room for future research for conducting similar studies with a sample that can be generalized in order to make the results applicable to a large population or it can be carried out within a different geographic location. Although this study is done using the quantitative method only, future research can use qualitative method as well in order to get further insights about employee intentions. The current study also utilizes a pre-established theory as the foundation to conduct this study, however, new studies can utilize new models and theories. In this study, online questionnaire is distributed; hence some employees work in different fields such as educational institutes, health institutes, ministries and departments etc., but in different quantities in each field which makes it hard to benchmark how the public sector employees' intention towards FWAs change across different fields. There exists a gap to measure employee intentions of employees in one specific field or comparing employee intentions across the fields. There is room for future research to carry out qualitative research, utilizing a sample size that can be generalized, using a new model or using different pre-established models and how employee intentions vary with the field they work and their geographical locations.

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Exploratory Study in Conceptualizing Individual Work Performance (IWP) Construct in Three Different Industries in Sri Lanka

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Abstract— This research attempts to explore the conception of Individual Work Performance (IWP) construct among construction, IT, and manufacturing industries in Sri Lanka. Focus group discussions using 50 respondents, 5 interviews, and 108 responses for a brief questionnaire were used for the analysis. The majority was found conceptualizing IWP as the capacity to keep producing desired results where capacity was interpreted as future potential with predictive nature. Behaviours were preferred as performance in both construction and manufacturing industries while results were regarded predominantly as performance in the IT industry. Indifference towards multidimensionality of IWP in conceptualizing the said construct was observed, which could be a potential reason for methodological deficiencies in designing and executing performance management systems in Sri Lankan organizations. Performance was mainly viewed as a static phenomenon as over 75% measured performance annually or bi-annually. IWP was viewed as a predictive measure in the selected industries while the composite criteria of measuring performance were mostly found inadequate and far from global standards. Performance measuring mainly serves as a feedback mechanism than developmental or administrative purposes. The author presented a simplified model of the IWP construct using the existing literature while at the end proposed a model to conceptualize the meaning of IWP using research findings. It was revealed how we perceive IWP, and the instruments used to measure the same are mutually inclusive. More inclusive research on the multidimensionality of IWP, appropriate composite criteria, and the right mix of behaviour and result could be considered as future research areas.

Keywords— *individual work performance, behaviour, capacity*

I. INTRODUCTION

The definition of management by Daft, (2012, p.6) was found as the most compelling and all-encompassing account where he described the construct as “the attainment of organizational goals effectively and efficiently through planning, organizing, leading and controlling organizational resources.” According to Daft, this definition holds two important ideas namely the four management functions and the attainment of organizational goals effectively and efficiently whereas the author believes the most underlying idea behind this definition should be the nature of organizational resources being inherently scarce or limited yet demand to satisfy unlimited needs. It is the scarce resources that necessitate them to be managed. If the resources were plentiful the need for management would not be required. Accordingly, the author constructed a definition of performance management as the attainment of organizational goals effectively and efficiently through planning, organizing, leading, and controlling the performance of individuals and groups of an organization. In this context, the author identifies IWP or employee performance (EP) as a resource thereby acknowledging the scarcity of IWP.

The meaning of individual work performance has been a fundamental question in research and practice which has been answered by many scholars and practitioners in diverse ways. The difficulties associated with the process of understanding and measuring performance construct which is typically multidimensional, dynamic, and context-dependent were identified as “criterion problem” mostly by behavioral scientists. (Cascio & Aguinis, 2008)

This research primarily aimed to ascertain the nature of conception or the primary assumptions of IWP construct among three different industries in Sri Lanka namely construction, information

technology (IT), and manufacturing in the context of already established theoretical explanations in popular literature. Further, exploring the underlying purpose, theoretical and methodological characteristics of the current practices, and expectations of performance management among such industries constituted secondary objectives of this study.

The literature revealed behavior or the results argument in defining employee performance, as an example of a typical metaphoric delima of chicken or the egg, which usually resulted in a draw having both being important yet mostly context-dependent according to the nature of the work. (Aguinis, 2014). The works of Opath (2019) revealed a lack of theoretical rigor and methodological soundness of the existing practices of performance management among Sri Lankan organizations while Gunathilake (2021) highlighted the same with a special reference to the construction industry. This constitutes the primary gap that this research attempted to address in addition to the effort to propose a model in understanding the construct of IWP in broader terms.

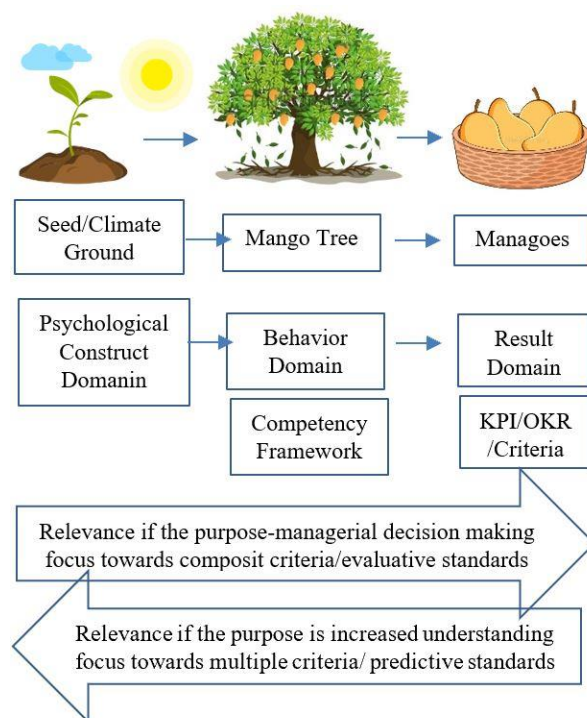


Figure 01: Illustration of IWP in terms of psychological, behavioral and results domains based on the past literature.

A. Literature Review

As cited in Armstrong (2014), Brumbach defined Performance as a certain way of behavior that brings out a particular result. According to Campbell, et al. (1990) performance is observable things people do that are relevant for the goals of the organization. Further performance has also been described as a process with behaviors as inputs and results as outputs (Armstrong, 2014) whereas Aguinis (2014) reject the conception of performance as results but regarded purely as behavior. Alternatively, Armstrong explained behaviors as a product of mental and physical effort applied to tasks according to which behavior also stands as an outcome in its own right (2014). Accordingly, both results and behavior could be regarded as two sides of one coin.

Human resource is widely accepted as the most important resource that helps create sustained competitive advantage (Armstrong, 2014; Daft, 2012) whereas it is the IWP dimension of Human resource that actually creates value for organizations where performance could be conceptualized as a resource characterized by being valuable, rare, inimitable, and could be organized to capture value (VRIO) according to the resource-based view of strategy (Barney, 2001). Managing the cattle is the means to managing a better yield of milk so it is justified managing behavior is the right way to manage results which is usually what matters the most in a managerial or business context. Since other factors beyond the control of the individual such as market conditions, climate, management decisions could also contribute to shaping the results, it is more appropriate to consider behavior in evaluating, predicting, and developing performance. This idea was illustrated in figure 01 using the analogy of a mango where mangoes are depicted mostly as the expected value which could not be conceptualized without the tree and its antecedents.

IWP is characterized by being evaluative and multidimensional. (Aguinis, 2014). Accordingly, performance could be judged and scaled as per their contribution to the success of individual jobs, teams, or the overall organizational goals. Further, we would be missing the whole idea of a good performer in terms of leadership if we consider only his or her decision-making aspect as there are many dimensions to leadership such as charisma, communication, negotiation, assertiveness, etc.

This constitutes the multidimensionality of performance.

Literature mostly conceptualized the multidimensionality of IWP as task and contextual performance. Task performance (TP) is closely related to actual work and contextual performance (CP) with personality variables (Aguinis, 2014; Borman & Motowidlo, 1993). Viswesvaran and Ones (2000) theorized organization citizenship behavior (OCB) and counterproductive work behavior (CWB) as components of contextual performance. Koopmans, et al. (2014) developed a four-dimensional conceptual framework of IWP including adaptive behavior in addition to TP, OCB, CWB.

Contextual performance literature has heavily been contributed by Borman & Motowidlo who have duly recognized two related notions that describes CP as Organization Citizenship Behavior (OCB) and Prosocial Organizational Behavior (POB) where first was defined as extra-role discretionary behavior intended to help other co-employees (altruism) and/or a demonstration of conscientiousness in support of the organization as generalized compliance, following rules and regulations of the organization while the latter was defined as behavior intended to promote the welfare of individuals and groups of the organization (1993). They also distinguish the two concepts POB as either role-prescribed or extra-role whereas OCB solely as extra-role making POB possibly causing negative impact towards the organization at the expense of helping a co-employee. (Borman & Motowidlo, 1993,p.100). Williams and Anderson (1991) have further classified OCB as organizational citizenship behavior targeting specific individuals (OCBI) and organizational citizenship behavior targeting the entire organization (OCBO) in addition to in-role behavior (IRB) which corresponds mostly to task performance. They defined in-role task performance as “behaviors that are recognized by formal reward systems and are part of the requirements as described in the job description” (Williams and Anderson, 1991, p.606). According to Motowidlo, et al. (1997), task performance bears a direct relationship to an organization’s core business by directly contributing to its core functions that support the core business.

Aguinis described the performance as a product of three determinants in an equation as given below. (2014) He identified declarative knowledge as requirements, goals, principles related to the task, procedural knowledge as the skills required to perform the task, and the motivation under three choice behaviors namely the choice to expend effort, level of effort and persist that level of effort.

$$\text{“Performance} = \text{declarative knowledge} \times \text{procedural knowledge} \times \text{motivation”}$$

MARS model of individual behavior could be identified as another model in describing performance in terms of behaviors (Wang, et al., 2016) which is illustrated with the following equation as cited by Gunathilake (2021, p.27).

$$\text{“Job performance (JP) = Motivation} \times \text{Ability} \times \text{Role Perception} \times \text{Situational Factors”}$$

Further, as figure 01 highlights psychological constructs such as values, beliefs, assumptions, attitudes, etc. influence behaviors which in turn cause results. If the purpose demands a more analytical approach to deepen the understanding of the associated constructs such as in the case of a research effort, it is advisable to focus on multiple criteria in measuring performance whereas, for managerial decision making particularly for training, promotions, increments, etc. during typical performance appraisals, composite criteria or evaluative standards are recommended. (Cascio & Aguinis, 2008) Composite criteria of performance advocate a single measure as the performance which denotes relative contribution of the employee to the overall effectiveness of goal achievement of the organization. Use of weighted scores such as calculating the weighted proficiency ratings (WPR) in competency frameworks (Ali, et al., 2021), composite scores of key performance indicators (KPI), and objective key results (OKR) are some of the examples of composite criteria. Multiple criteria stand for predictive measures that aim to predict future behaviors which are also useful in making recruitment and selection decisions. (Cascio & Aguinis, 2008)

II. METHODOLOGY

This cross-sectional study was conducted as exploratory research to expand the understanding of the individual work performance construct (IWP) in the Sri Lankan context. The scope of the research was confined to three broader industries

namely construction, information technology (IT), and manufacturing. The selection of the industries was based on the requirement to cover both production and service sectors and their impact on the national economy. Mix method was used based on pragmatic research philosophy (Saunders, et al., 2014) employing both quantitative and qualitative techniques such as questionnaire survey together with focus group discussions and interviews respectively. The study was based on the deductive approach as it utilizes several established models and theories. Qualitative analysis was given priority and the quantitative findings were used to support, compare, and contrast the former in the backdrop of established related models and constructs.

The data collection was primarily done using 5 focus group discussions including one exclusive discussion with each industry representative and two discussions with professionals from all three industries. Each group comprised 10 individuals. The same 50 participants were given a simple pen and paper questionnaire. Five in-depth interviews with three senior HR professionals representing each industry, one academic, and one chief executive officer were also conducted. Opinion of individual employees from the three identified industries formed the unit of analysis in sourcing quantitative data. As the population was considerably large, no sampling frame was used. A convenient sampling technique was used to identify a sample of 150 professionals including 50 from each industry. The questionnaire was distributed online to another 100 respondents in addition to the participants in focus group discussions and altogether received 114 responses with a response rate of 76%. Six responses were rejected being incomplete leaving 36 responses from each industry making a sample of 108 for the analysis. All modes of data collection were designed and carried out after an in-depth review of the literature.

Since the primary aim of the study was exploratory, no in-depth empirical analysis was conducted except for descriptive statistics using MS Excel 360. Content analysis technique was used in analyzing qualitative data where patterns of meanings, interpretations of IWP construct domains were identified.

According to the analysis of qualitative data behaviors, traits, results, and capacity were identified as facets of IWP which was questioned in the quantitative study as to what IWP means to respondents out of the following propositions.

- Employees' ability & **capacity** to keep producing desired results.
- To what extent employees display **behaviors** required.
- To what extent employees embody **traits**/qualities that are required to produce desired results
- To what extent employees have achieved desired **results**.

The primary reason or the purpose of measuring IWP was asked to choose between the following as highlighted during qualitative data.

- To communicate how competent employees are in delivering the required performance. (**Informational**)
- To identify performance gaps & address them accordingly. (**Developmental** purpose)
- To pay according to their contribution. (**Administrative** purpose)

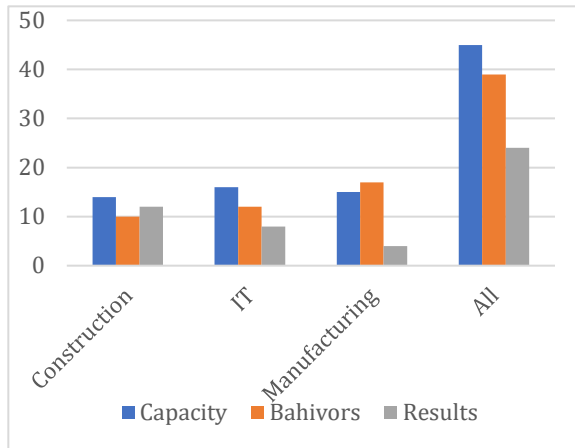
Respondents were asked to mark the current practice and their expectations separately out of measuring behaviors, results, or both as performance along with the frequency of measurement.

III. DISCUSSION AND ANALYSIS

A. Findings

Since traits are not under the control of individuals which are fairly stable and developed beyond their control (Cascio & Aguinis, 2008), it was replaced with the behavior as the verbal expression of behaviors and traits had been used interchangeably. For example, the following expression of one of the respondents during a focus group discussion suggests what she meant was the behaviors although the word traits were used in verbalizing the idea.

“Performance is the qualities or traits that are used and displayed on a day-to-day basis in achieving the tasks entrusted to employees during their



work”.

Figure 2: Conception of IWP construct in Construction, IT & Manufacturing industries in Sri Lanka.

Figure 02 illustrates the conceptualizing of the IWP construct among the respondents in the quantitative study where employees of IT and construction industries mostly interpret IWP as the capacity to keep producing desired results as a predictor measure which is also the case in the cumulative results of all three industries. Furthermore, according to figure 03 both the above industries seemed to be operating under the assumption that the performance is a static construct that remains fairly unchanged for a prolonged period which is the opposite according to past literature. (Aguinis, 2014; Cascio & Aguinis, 2008; Koopmans, et al. 2014) On the contrary, the manufacturing industry perceived IWP mostly as behaviors and relatively dynamic construct.

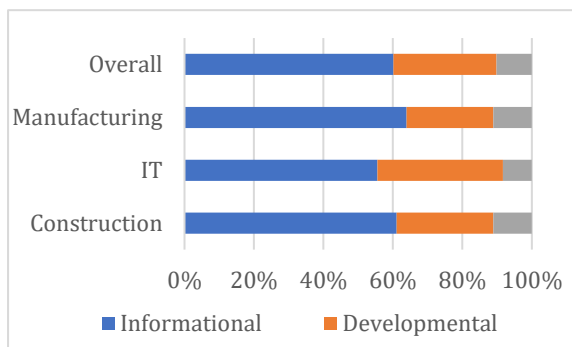


Figure 03: Conception of IWP in terms of Static and dynamic/temporal dimensionality.

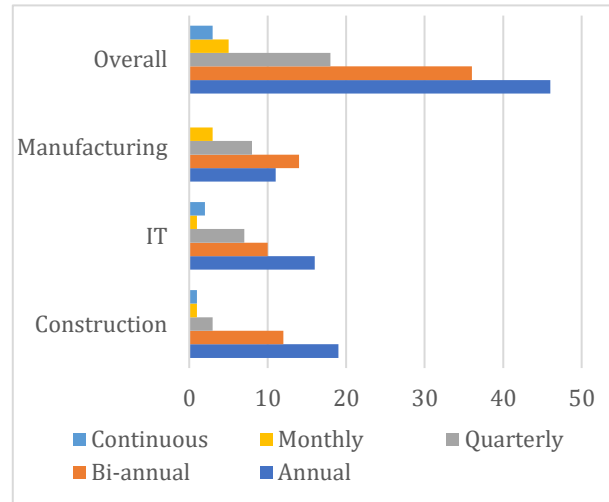


Figure 04: Main Purposes of Performance Management in Construction, IT & Manufacturing industries in Sri Lanka.

According to the results of the quantitative analysis, nearly 60% of the respondents believe managing IWP serves an informational purpose as a feedback mechanism for both individual and management and around 30% as a developmental tool to identify performance gaps while around 10% believe it to be driven by administrative purpose as valuable input for reward management, employee movement, etc.

As illustrated in figure 05, the majority expect measuring both behaviors and results as the performance which is not a reality in practice. According to qualitative analysis, an overlap of KPI/OKR being used both as a measure of results and behaviors was observed. Behavioral indicators in competency frameworks displayed many parallels with KPI/OKRs measuring results. Competency frameworks were found with many methodological loopholes such as no scientific approach for establishing relevant competencies, mostly relying on core competencies across organizations without generic or role-specific competencies, absence of weighted proficiency ratings (WPR), etc. Although the multidimensionality of IWP in terms of task, contextual, adaptive performance was not considered in quantitative analysis, qualitative study reveals a poor distinction of such dimensionality among respondents in interpreting the IWP construct.

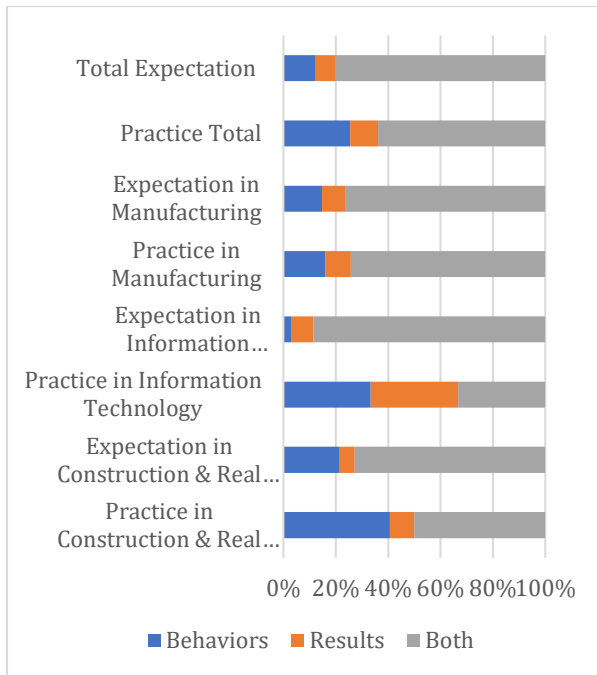


Figure 05: Conception of IWP in terms of practice & expectation.

In summary, the construction industry perceived IWP as a static capacity to keep producing desired behaviors while IT and manufacturing industries perceive it as a static capacity to keep producing desired results and mildly dynamic behaviors respectively.

B. Discussion

As illustrated in Figure 06, the author developed a framework for better comprehension of IWP based on the findings of this study. The developed model was inspired by the works of Armstrong, (2014), Cascio & Aguinis, (2008), and the MARS model of behavior (Wang, 2016). This model was based on three dimensions of performance namely capacity, behaviors, and results. The capacity, which could be argued as already being captured both behaviors and results as predictors of future potential, was still incorporated in the model to emphasize the importance of being forward-looking or the predictive nature of performance. Further, the relationship of underlying psychological constructs domain, behavior, and results domains were illustrated in the proposed model. As advocated in the MARS model of behavior impact of motivation, ability, role perception, and situational factors were also highlighted.

The behavioral approach to performance is most appropriate when the link between behavior and

results is not obvious, outcomes occur in the distant future and poor results are caused due to reasons beyond the performer. (Aguinis, 2014) Although this corresponds to service sector, the IT industry reported contradictory results by having a significant practice of measuring results. Results approach to performance, which, according to Aguinis (2014), is mostly appropriate when behaviors & results are obviously related, employees are sufficiently skilled or show improvement in required behaviors or when there are multiple means to achieve desired ends, typically corresponds to the manufacturing sector. On the contrary, the manufacturing industry reported behavior-based measurement of performance both in practice and expectation.

Therefore, these findings clearly contradict the contemporary theoretical understanding of the IWP construct among the selected industries which could be attributable to either lack of theoretical know-how of the respondents or the poor practice of performance management systems (PMS).

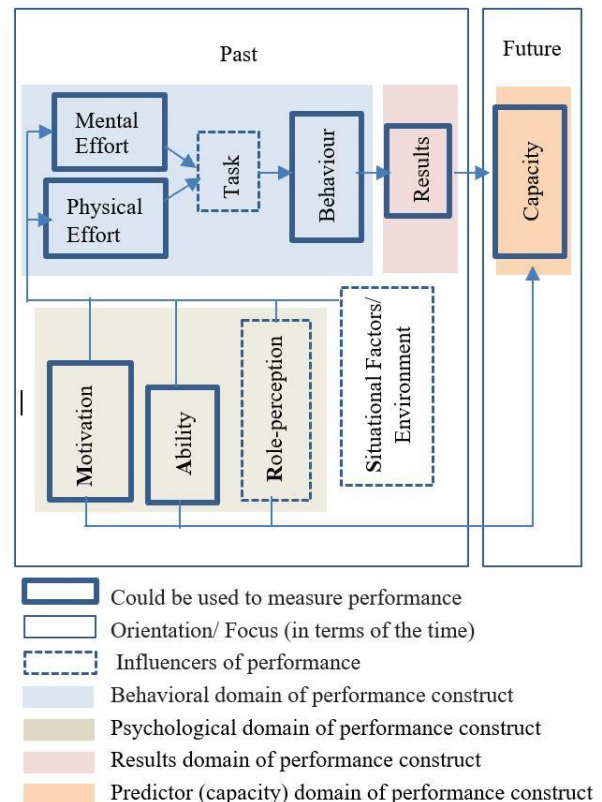


Figure 06: The model of IWP developed by the author using the insights gained from the study.

According to the comments expressed during the qualitative inquiry and interpreting past literature,

it is mostly viewed that the results or the outcome aspect of the performance were mainly misinterpreted as pure outcomes or results whereas they were used to measure behavioral capabilities or capacities as measuring them objectively is extremely difficult. Results were measured as they were the projections or the interface of performance and thereby the best means to judge behaviors or capacities as performance.

IV. CONCLUSION

In conclusion, IWP was mainly conceptualized as a capacity to produce desired outcomes characterized by predictive nature. Further, behaviors were favored against results and a mix of both could be identified in interpreting performance in construction, IT, and manufacturing industries. Construction industry IWP was predominantly identified as a static construct thereby justifying its measurement mostly annually or bi-annually. There is a demand for a combination of measuring both behaviors and results and the right composition of both constructs within the IWP domain in each industry remains to be explored. Qualitative investigation revealed considerably poor theoretical knowledge and practical exposure towards proper PMSs among the respondents. This could be regarded as a potential cause for the absence of proper PMSs among Sri Lankan organizations, particularly in the selected three industries.

Opinions expressed during qualitative study raised a serious question of the effectiveness of PMS mostly in construction industry which is attributable to the poor conceptualization of IWP. Multidimensionality of performance mostly in terms of task, contextual and adaptive behaviors, developing proper composite performance criteria to identify a single measurement of performance for managerial decision making and a multi-criteria for predictive purposes in widening the conceptualization of IWP construct could be stated as insights for future research. Further, this study could be made more rigorous by changing the research design to develop a statistically validated model of IWP through exploratory or confirmatory factor analysis. The proposed model of IWP and the simplified model based on past literature could be regarded as major contributions of this research towards the body of performance literature.

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The Impact of Supply Chain Visibility on Consumers' Purchase Intention of Organic Food

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Abstract— In the current world, information about food supply chains is demanded by consumers. The lack of information shared in the food supply chain is considered a significant issue faced by consumers. Driven by the need for supply chain visibility, this study was conducted to identify the impact of supply chain visibility of organic food on consumers' purchase intention. The study gathered and fulfilled information on the influence of visibility in the organic food supply chain information on consumer's purchase intention in Sri Lanka. The study adopted factors such as supply chain visibility, the quantity of information shared, accuracy of information shared, timeliness of information shared on consumers' purchase intentions. Based on this, a quantitative approach was taken to analyse data. The study shows that an increase in the quantity of supply chain information provided on organic food has a severe impact on the consumer's purchase intentions. It is identified that an increase in the quantity of information that consumers possess allows them to make well-informed decisions when it comes to purchasing organic food products. Furthermore, the study found that there is an increase in the timeliness of the information as a major impact on consumers' purchase intention, and even the availability and the ability to access necessary information can influence consumers' purchase decisions.

Keywords— *organic food, supply chain visibility, purchase intentions, quantity of information shared*

I. INTRODUCTION

A. Background of the Research

Today's domestic and international markets have become immensely competitive with the rise in globalization. Modern supply chain activities have

become more complex, and a product often travels through vast networks. With increasing trends in the field of Supply Chain Management (SCM), there has been a growing demand for Supply Chain Visibility (SCV). According to Lamming, (2001) Supply Chain Visibility can be defined as, the extent to which actors within a supply chain can access or share information. Supply Chain Transparency (SCT) relies on supply chain visibility. According to Bhaduri & Ha-Brookshire, (2011) the demand for supply chain transparency has been increased, in part, by the improved awareness perceived by consumers and the advanced technology in communication. Driven by the demand for supply chain transparency, organizations such as Nike, H&M, and Nudie Jeans Co have already started providing supply chain information using modern technologies (Egels-Zandén & Hansson, 2016). Consumers' purchase intentions can be influenced by providing them with information about the products' supply network. But until recently, consumers did not have a clear view of the supply chains of the products they purchase and consume. According to Basha et al, (2015) purchase intention can be identified as the best predictor of actual behavior. Caridi et al, (2010) suggest that supply chain visibility can be measured by quantity, accuracy, timeliness, and usability of the information. The researchers conducted this study considering organic food products which comes under agricultural food products. To cope with the increasing demand for supply chain visibility, organizations adopt novel applications such as the blockchain and the Internet of Things (IoT). Montecchi et al, (2019) state that blockchain technology operates mutually distributed ledgers that have been built on a series of innovations used for organizing and sharing digital data. Further, they mention blockchain-enabled advanced traceability, certifiability, and verifiability can

enhance consumers' provenance knowledge. Internet of Things include Radio-frequency identification (RFID) tags, Global Positioning Systems (GPS), and Near Field Communication (NFC) sensors and these can be used to achieve more control of a product's information. Therefore, this study was conducted to explore the impact of supply chain visibility of organic food on consumers' purchase intention.

B. Statement of the Problem

Information about the origin of a product, supply chain participants contributed, and how it got delivered to the consumers used to be invisible. Recent scandals in the supply chain, make consumers question the reliability of information available on the products. Montecchi et al, (2019) state British and Swedish consumers of 'Findus beef lasagna' were stunned to discover the labeled protein contents of the products were nearly 100% horsemeat, not 100% beef. This scandal led consumers across the globe to demand Supply Chain Transparency, in the food industry. According to Bhaduri and Ha-Brookshire, (2011) when the supply chain is transparent and provenance knowledge is enhanced, consumers can be aware of risks that they cannot anticipate, beneficial impacts on society and the environment, and that can influence their purchase decisions. Moreover, they stated a lack of information in purchase decisions may lead consumers in purchasing the wrong product which they certainly do not want to purchase when the supply chain was not visible. Baralla et al, (2019) state that in the field of the Agri-food industry, consumers demand assurance of the origin, provenance information, and transparency. The lack of information problem led the researchers to explore the impact of supply chain visibility on consumers' purchase intention in the context of organic food products to give the consumers what they demand: supply chain visibility.

C. Research Objectives

1) Main objective:

To identify the impact of Supply Chain Visibility of organic food on consumers' Purchase Intention.

2) Specific objectives:

- (i) To identify the impact of the quantity of information shared on consumers' Purchase Intention.
- (ii) To identify the impact of the accuracy of information shared on consumers' Purchase Intention.
- (iii) To identify the impact of the timeliness of information shared on consumers' Purchase Intention.

D. Significance of the Study

Concerning the supply chain of organic food, it also seeks to identify the types of information that are already available to consumers and to identify the supply chain information that consumers require. It is expected to truly give consumers a choice based on supply chain transparency, which will lead them to purchase the products that are sustainable, harmless for them and the planet, persuade organizations to reveal their supply chain claims and eliminate wrongdoings.

II. LITERATURE REVIEW

A. Supply Chain Transparency and Visibility

According to Saberi et al, (2019) Supply chain transparency relies on information sharing and visibility. Francisco & Swanson, (2018) states that the supply chain concept of transparency embodies, basically the idea of information readily available to end-users and firms in a supply chain. Trust and credibility highly influence the consumers' willingness to buy (Egels-Zandén & Hansson, 2016). Transparency is currently very important, and it can provide answers to many problems faced by both producers and consumers (Wulff, 2015). According to Saberi et al, (2019) supply chain transparency relies on information sharing and visibility. Francisco & Swanson, (2018) states that the supply chain concept of transparency embodies, basically the idea of information readily available to end-users and firms in a supply chain. Furthermore, Caridi et al, (2010) state that Supply chain visibility can be measured and tracked in terms of both quality and quantity. This research addresses those two areas regarding the supply chain visibility in organic food purchase intentions. There are three dimensions identified in supply chain visibility. Quantity of the

information shared, the accuracy of information shared, and the timeliness of information can be expressed as those dimensions. According to Caridi et al, (2010) the most desired topics of the information features to be considered in the supply chain visibility are the quantity of information, the accuracy of the information, and the timeliness.

Consumers have the urge to get information about the products they may purchase and then base their purchase decision on the information they receive. For example, consumers sometimes need assurance that fish products purchased are not farmed using illegal fishing methods (Francisco & Swanson, 2018). Novel technologies such as blockchain can ensure transparency, traceability, and security as a distributed digital ledger technology among supply chains (Saber et al., 2019).

B. Purchase Intention and Supply Chain Visibility

Consumer willingness to purchase products can be influenced by trust and that trust comes with transparency and credibility (Egels-Zandén & Hansson, 2016). In buying intentions, information availability and supply chain visibility in products have a big role in the modern logistics world (Kim et al., 2008). Consumers can perceive risks when there is information that is hidden from them in a product's supply chain. This perceived risk can influence customers' purchase decisions and attitudes negatively towards the product (Montecchi et al., 2019). Because of the lack of information in buying, consumers face perceived risks. Consumers ask sellers to provide clear health-related information and visibility for the organic products they buy in a complex data environment (Yu et al., 2019). For example, consumers want to know whether a product is made using organic methods of production. If they do not get the information in the right manner or if they do not get information at all they will doubt their safety and their health. This reflects negatively on consumer buying decisions. This is where provenance plays a key role in supply chain transparency. The term provenance is defined as "information about the creation, chain of custody, modifications or influences about an artifact" (Montecchi et al., 2019). Knowledge about provenance means knowing how products were produced, manufactured, stored, and delivered to end consumers (Montecchi et al., 2019).

Information about food products has become increasingly important over the past few years. Positive attitudes toward the origins of the food they consume have not been sufficiently captured in most of the published literature knowledge about food purchasing behavior (Bu & Go, 2008). Motivation and dedication towards living healthy lifestyle influences the organic food purchases in consumers. Though premium prices are charged for organic food, the consumers who believe in healthy food, animal welfare, and environmental safety think organic food buying is beneficial in many ways (Iqbal, 2015).

III. METHODOLOGY

A. Research Design

The quantitative research method was adopted in the study. The researchers gather data using an online questionnaire to gain more information about the impact to supply chain visibility of organic food. The research philosophy that the researchers have chosen to follow is positivism, which depends on quantifiable observations that are gathered using surveys, that were conducted to collect quantitative information about the impact that a visible supply chain has on consumers' purchase intentions. While following a deductive approach, researchers have collected and analyzed the data gathered and decide whether the data supports or rejects the hypotheses that have been formulated based on the literature.

B. Conceptualization of the Study

The conceptual model, illustrated in figure 1 was developed based on the literature review. Figure 1 depicts the influential factors of supply chain visibility on consumers' purchase intention in the context of organic food. The quantity of information shared, accuracy of information shared, and timeliness of information shared are the core variables related to supply chain visibility.

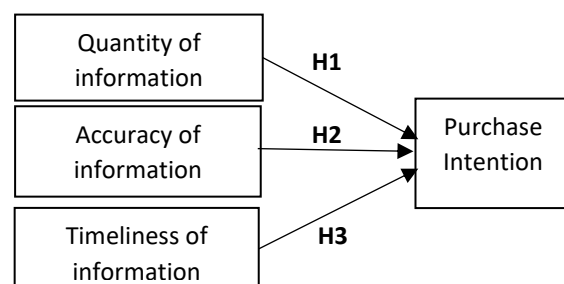


Figure 1. Conceptual Model
Source: Constructed by authors

C. Hypotheses of the Study

The following hypotheses were developed based on the conceptual framework depicts in Figure 1.

H₁: The quantity of information shared will influence the consumers' purchase intention.

H₂: Accuracy of information shared will influence the consumers' purchase intention.

H₃: Timeliness of information shared will influence the consumers' purchase intention.

Table 1 illustrates the indicators for each variable selected for the study and its references.

Table 1. Operationalization of the conceptual framework

Variable	Indicators	References
Quantity of information shared	Usefulness	(Caridi et al., 2010)
	Usability	(Caridi et al., 2014)
Accuracy of information shared	Authenticity	(Montecchi et al., 2019)
	Integrity	(Montecchi et al., 2019)
Timeliness of information shared	Accessibility	(Caridi et al., 2010)
	Availability	(Caridi et al., 2010)
Purchase Intention	Health Consciousness	(Voon et al., 2011)
	Environmental Consciousness	(Voon et al., 2011)
	Subjective norms	(Voon et al., 2011)
	Cost	(Voon et al., 2011)

Source: Constructed by authors 2020

D. Population and Sample

The population selected for this research is the customers that have bought organic food/ that are currently buying organic food or potential buyers of organic food in Sri Lanka. To be more specific, the customers would be the people aged over 18 years to 60 years. A sample of 173 respondents was

taken from the Western province based on the convenience sampling method.

E. Data Collection

To support the quantitative research method, a questionnaire was conducted online. A survey method was selected to collect the quantitative data. The questionnaire has been distributed to 400 potential respondents.

F. Data Analysis

Data analysis of the research has been done with the responses of 212 respondents at the beginning but towards the end, after data screening, the respondent amount decreased to 173. Data analysis was conducted using IBM SPSS Statistics version 26.0. The parameter estimation and model fitting have been explained in section four.

IV. DATA ANALYSIS AND DISCUSSION

A. Data Screening

The questionnaire has been distributed to the organic food consumers in the Western province where the researchers managed to collect 212 respondents. After data screening the sample was decreased to 173 respondents.

B. Reliability

The reliability of the constructs was tested using Cronbach's alpha. Table 2 depicts the Cronbach's alpha values for the four constructs. The Cronbach's alpha value of the purchase intention construct is 0.792 and the Cronbach's alpha value is 0.842 for the *quantity of information shared* construct. Accuracy of information shared construct has a Cronbach's alpha value of 0.764. According to Table 2, the reliability of the timeliness of information shared construct is at an acceptable level.

C. Demographic Information of the Sample Tested

Most of the respondents are females which gives a percentage of 64.7% and male respondents were 34.7%. The remaining 0.6% preferred not to mention the gender. Most of the respondents are between the age of '21- 30' years which represents 70.5% and the lowest respondents are from the age of 'above 50' which represents 2.3%. The age 'below 20', '31-40', and '41-50' represents 13.3%, 9.8%, and 4% respectively. Colombo district has the highest percentage value of respondents

(68.2%) and percentage for the Kalutara was 13.9% and for Gampaha district was 17.9%.

Table 2. Cronbach's alpha values for the constructs of the study

Variable	No. of items	Cronbach Alpha
Purchase intention	4	.792
Quantity of information shared	2	.842
Accuracy of information shared	2	.764
Timeliness of information shared	2	.518

Source: Survey data 2020

D. Sufficiency of Information and Required Information

According to the findings of the research, information about the price, product name, and the net weight of organic products, as well as the manufacturer's details, is readily available to the customers, this being due to the fact that this information is necessary for a product to have to be able to enter the market, after analyzing the date it can be seen that what consumers lack is the nutritional information. Increasing the information regarding the nutritional value of the product is likely to increase the impact it has on the consumers purchase intentions. Among the 174 respondents, 133 people want further information about the eco-friendly and sustainable efforts that a company undertakes, most of the respondents give more value to the eco-friendliness than a company's CSR efforts. Consumers require more information about the origins of the product, the product shelf life, and general information about the product and how it is handled rather than the ethical aspects of the product or company.

E. Model Testing

The parameter estimation of the proposed model was performed using ordered logit regression method. Nagelkerke R square was 0.569 which suggested that 56.9% variance in the outcome variable is explained by the independent variables. Information shared and the timeliness of information shared have significant impact on the purchase intention of the customers.

F. Discussion

a) *Supply Chain Visibility*: According to Lamming, (2001) Supply Chain Visibility is the extent to which actors within a supply chain can access or share information. Furthermore, visibility can be measured using a few factors such as the quantity of information shared, accuracy of information shared, and timeliness of information shared as it is shown in the research. When the factor information is given visibility of the supply chain can be seen, therefore the purchase decision will be done with a great amount of knowledge.

b) *Quantity of Information Shared (H₁)*: The quantity of information shared will affect the purchase decision of the customer. Caridi et al, (2010) have described that the quantity of information shared is one of the most important dimensions for the purchase decision. The more quantity of information is shared the more knowledge consumers have for their purchase intentions which will affect the consumers' decision significantly. To affect a consumer's purchase intention, the quantity of information is a significant and crucial factor.

c) *Timeliness of Information Shared (H₃)*: Timeliness of the information shared will affect the purchase decision of the customer. Caridi et al, (2010) have said that timeliness of the information shared is an important dimension of the study. This factor will affect the purchase intention of consumers. When more information is shared on time or updated on time the purchase intentions of the Sri Lankan customers will increase as the consumers hold more information than before.

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

1) *The impact of the quantity of information shared on purchase intention*: According to the result of the study, it is shown that an increase in the quantity of information provided about organic food and the supply chain practices, will most likely lead to an increase in the Sri Lankan consumer's purchase intentions. It can be concluded that an increase in the quantity of information that Sri Lankan consumers have allows them to make well-informed decisions when it comes to purchasing organic food products. For example, when it comes to buying organic food like vegetables, knowing where it is grown if any chemical has been used and if yes what they are, what packaging, distribution,

and warehousing methods have been used, all this information, as well as any other information that the manufacturers are willing to provide, will help the consumers decide whether they want to purchase the organic vegetables.

2) *The impact of timeliness of information shared on purchase intentions*: Timeliness of the information provided refers to the time expectation regarding the availability and the ability to access the necessary information needed to influence consumers' purchase decisions. Based on the results of the research it is found that an increase in the timeliness of the information impacts Sri Lankan consumers purchasing intention. When the information about the organic food products is available to the customers when they need it and it is ensured that the information provided is up to date, the trust that the consumers have is highly likely to increase, further, it allows the consumers to make more knowledgeable decisions when it comes to purchasing organic foods.

B. Implications

By looking at the findings of this study the researchers can conclude that supply chain visibility has significant impact on consumers' purchase decision. Therefore, sharing information about supply chain practices is of immense importance due to the increase in the need for information about organic food products. The insight gained from this study is beneficial for not only consumers of organic foods but also various major companies that are making supply chain information visible to consumers. Findings of the study may help the manufacturers and marketers of organic foods to identify what factors impact consumers purchase intentions the most and help them come up suitable strategies for conveying the necessary information.

C. Limitations

Due to practical limitations to perform, the researchers have narrowed down the scope of the study by considering only organic food products in the local market whereas, the whole food supply chain has not been observed. Therefore, the findings of this research would be limited to the organic food supply chain. The sample that has been targeted in this research is only the Western province including Colombo, Gampaha, and Kalutara whereas the other provinces are not

considered in the study. This research gives information on a handful of the population. As mentioned in the previous sub-sections, to improve supply chain visibility, an organization should adopt novel technologies such as blockchain, Global Positioning System, and Radio Frequency Identification tags. However, this study would not consider the practicability of implementation of those technologies, and that would also be a limitation of this study.

D. Recommendations for Further Research

The findings of this study can serve as a base or foundation for further researchers to build up upon with regards to the supply chain visibility of not only organic food but also Fast-Moving Consumer Goods (FMCGs), regarding the accuracy, timeliness, and quantity of the information that is made available to the consumers and how it affects their purchasing intention. Further studies can be conducted to provide or recommend technologies that will enhance the visibility of the supply chain.

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Studying the Issues Faced in Commercial Bank Branch Operational Related Fraud Management

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Abstract— Bank Branch Operational Related Frauds are common to any Commercial Bank. This study therefore focused on studying the issues faced in Branch Operational Related Frauds with special reference to Internal Controls, Operational Risk Management, Internal Audit Methodologies, and Staff Ethical Behaviour / EOHR. Accordingly, the study has been conceptualized by identifying the Branch Operational Related Fraud Management as the Dependent Variable and four independent variables as Internal Controls, Operational Risk Management, Internal Audit Methodologies, and Staff Ethical Behaviour / EOHRM. Further, this study adopted a mixed method approach with quantitative and qualitative analysis. Under the quantitative chapter, univariate, bivariate, factor, reliability, sample adequacy and parameter analyses were done. The macro view of the Parameter estimate established that the Operational Risk Management is the most Significant Independent Variable to the Dependent Variable of Branch Operational Frauds. Also the macro level second most Independent Variable to the Dependent variable is Staff Ethical behaviour and EOHR. Besides, the micro view of the parameter findings established that RCSA process and HR Efforts are the most significant indicators which could minimize Frauds. On the other hand, the bivariate analysis has evidenced that the relationships between the Branch Operational Related Fraud Management have a negative significant relationship with all the Independent Variables. To establish reliability, the Cronbach's Alpha coefficient values were analysed, and it states that there is an internal consistency among the variables, and the KMO test states the sample size is adequate. The qualitative analysis of the study was a thematic analysis and these findings were able to back the quantitative findings.

Keywords— *frauds, controls, risk, audit, HR*

I. INTRODUCTION

A. *Background of the Study*

A Bank mainly mobilizes the financial resources of a country and canalizes them into productive lines of investments. Therefore, a Bank can be identified as a back born of an economy in a country. Collapse of one Bank in a country may result in collapsing the other Banks in the Banking Industry of that country which may have serious repercussions to the entire economy. Central Bank of Sri Lanka acts as the regulator for banking sector which regulate, monitor and authorize in carrying out Banking business in a prudent manner.

Branch Operational Related Frauds are being reported in every year in every Commercial Bank in Sri Lanka despite the fact of implementing robust Internal control systems, best Operational Risk Management practices, Effective Internal Audit Methodologies, and Efforts of Human resources Departments to establish Ethical culture in banks. In all most every fraudulent incident in a Bank, a Branch staff member had either directly involved in carrying out these Frauds or they have abated to it. A dishonest Bank Staff member could play havoc with Banks funds. These Frauds can be categorized as Insider frauds (Banker's Bunks). Therefore, the Banks has to guard itself and its customers against the dishonest Bank employees. It can be observed that there are two principal methods of getting something from others illegally. One way is physical force and the other way is by trickery. The first type of theft is called robbery and the second type is Fraud. A robbery generally seems to be violent and more traumatic than a fraud and attracts more media attention however losses from fraud far exceed losses from a robbery. Generally, Fraud involves deception, confidence and trickery.

Branch Operational Fraud is different from unintentional operational errors which are made by the Branch Banking Operational staff. As an example, if a Branch Teller credit incorrect deposit to a customer accounts it cannot be considered as an operational fraud, because it had not been carried out with intent or for the purpose of gaining advantage over another through false pretense. On the other hand, if a Teller purposely debits a customer account to trick the customer and use those funds for his personal benefit, then it is a Fraud!

B. Research Questions

Following Research questions are developed to address the problem statement.

- i. What are the Internal Control gaps/weaknesses in Branch Operations which may lead to Frauds?
- ii. How Operational Risk Management mechanisms could prevent Operational Frauds in Branch Banking Operations?
- iii. How the Business Lines prevent Operation related Frauds via creating awareness among staff with regard to Internal Controls?
- iv. What is the best practical method in conducting Audits of Branch Banking Operations in a prudently accepted manner to identify the control weaknesses to mitigate Branch Banking Operational related frauds?
- v. How the Bank Staff Ethical Behavior / Ethical Orientation of Human Resource Management could contribute to minimize Branch Operation related Frauds?

C. Research Objectives

1) Core Objective

Studying the issues facing in Branch Operational Related Fraud Management with special reference to Internal Controls, Operational Risk Management, Internal Audit Methodologies and Staff Ethical Behavior & Ethical Orientation of Human Resource Management.

2) Secondary Objectives

In order to identify the above core objectives, the following secondary objectives are developed.

- i. To explore the Internal Control gaps/weaknesses in Branch Operations which may lead to Frauds prevailing in the Branch Operations?
- ii. To identify proper Operational Risk Management mechanism to combat Operational Frauds in Branch Banking Operations?
- iii. To assist the Business Lines to prevent Operation related Frauds while embedding ethical criteria to the Branch Network and thereby creating awareness among staff with regard ethical behavior?
- iv. To analyze the best practical method in conducting Branch Audits in a prudently accepted manner to identify the control weaknesses to mitigate Branch Banking Operational Related Frauds?

II. METHODOLOGY

A. Conceptual Framework

Based on the hypothetical behavioral pattern, the proposed conceptual framework is depicted in Figure 01 below.

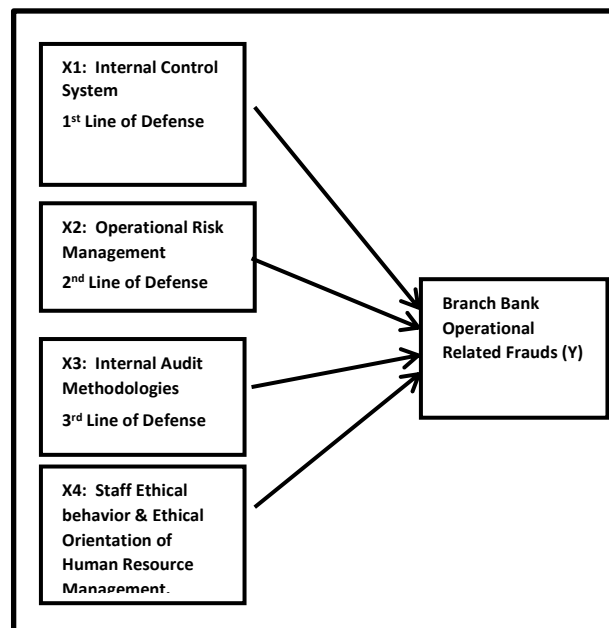


Figure 1: Conceptual Framework

Source: Developed by Author 2020

B. Formulation of Empirical Model

The formulation of the empirical model of the research was developed based on the conceptual framework of the study as shown below.

$$Y_{ij} = f(X_{1ij}, X_{2ij}, X_{3ij}, X_{4ij}) + Err,$$

Where:

Y = Vector of Operational Related Frauds

X1 = Vector of Internal Controls

X2 = Vector of Operational Risk Management

X3 = Vector of Audit Methodologies

X4 = Vector of Staff Experience with regard to Fraud Risk Management

i = Of a Bank

f = of NDB CBank

Err = Error

C. Sample Profile

This study is having a mix approach with qualitative aspects and quantitative aspects and for qualitative aspect five staff members are selected on judgmental sampling method. Besides, for quantitative aspect 100 respondents are selected by using convenience sampling methods. For judgmental sampling researcher had categorically selected Internal Audit Department of NDB bank PLC and its Branch Network Management since the staffs attached to the Internal Audit Department of NDB bank PLC and Branches are the people who can provide best information to achieve the objectives of the research.

D. Data Collection Method

This study is a mix study, with qualitative and quantitative approaches. For quantitative data collection method, semi structured questioner method will be used while for qualitative data collection method researcher will adopt the Interview method since Interviews can be used as a primary data gathering method to collect information from individuals about their own practices, beliefs, or opinions. Further, these can be used to gather information on past or present behaviors or experiences.

E. Data Analytical Method

The quantitative data will be analyzed under Univariate, Bivariate and multinomial data analytical methods. Further, the researcher under

the multinomial data analytical method intends to carry out the reliability testing, validity testing, Factor analysis and Parameter Estimates. Besides for the Qualitative data analytical method the researcher will carry out a thematic analysis.

III. DISCUSSION AND ANALYSIS

A. Results

1) Bi Variate Analysis

In order to establish the relationships between each Independent Variable and the Dependent Variable, bivariate analysis has been carried out by using SPSS Version 22. The study has adopted Pearson's correlation coefficient for the analysis and it was noted that the relationship between all the Independent Variables to the Dependent Variable were negative and it is significant.

2) Univariate Analysis

In univariate analysis it was observed that the respondents have agreed for all Independent Variables. However, it has been observed that for the Dependent variable the respondents have disagreed.

3) Sample Adequacy

The Kaiser-Meyer Olkin (KMO) and Bartlett's Test measure of sampling adequacy is used to test the suitability of Factor Analysis.

Table 1. Sampling Adequacy- KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.835
Bartlett's Test of Sphericity	Approx. Chi-Square	144.161
	df	10
	Sig.	.000

Source: Survey Data 2020

According to the Table 1 The approximate of Chi-square is 144.161 with 10 degrees of freedom, which is significant at 0.05 Level of significance. The KMO statistic of 0.835 is also large (greater than 0.50). Hence Factor Analysis is considered as a suitable method for further analysis of the data.

4) Reliability Test

The Cronbach's Alpha coefficient had been used in order to measure internal consistency and varies between 0 and 1 and the cut-off point is 0.6.

According to Sekaran (2003) the acceptable value of alpha should be about 0.60. In general, reliabilities less than 0.60 are considered to be poor, those in the 0.70 range is acceptable, and those over 0.80 is considered as good. The test has been conducted through SPSS (version 22) for measuring the internal consistency of the instrument, based on the average inter-item correlation. The result of Cronbach's alpha test of each variables and results are shown in Table 2.

Table 2. Reliability Test

Variable	Cronbach's Alpha
Internal Controls	.835
Operational Risk Management	.704
Internal Audit Methodologies	.740
Staff Ethical Behaviour & EOHR	.621
Branch operational Related Frauds	.752

Source: Survey Data 2020

The Cronbach's Alpha coefficient values for all variables are above the limit point 0.6 this indicates an acceptable internal consistency among the variables. Therefore, the variables used were concluded as reliable.

5) Parameter Estimates

The holistic view of the parameter estimate of this study had been presented by analyzing the parameter estimates of all four Independent Variables (Internal Controls, Bank Operational risk Management, Internal Audit methodologies, Staff Ethical Behavior & EOHR) has been depicted in Table 4.

Table 3. Parameter Estimates

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	287.294	34.876		8.238	.000
Internal Controls	-.243	.216	-.138	-1.127	.265
Operational Risk Management	-.832	.382	-.320	-2.179	.034

Internal Audit Methodologies	-.405	.450	-.147	-.901	.372
Staff Ethical Behavior & EOHR	-.599	.292	-.260	-2.049	.045

Source: Survey Data 2020

The rule of thumb which has been adopted to determine the significance level is if the significance level is below .05 it is significant. Therefore, according to the Table 3 it can be stated that Operational Risk Management is the most Significant Independent Variable to the Dependent Variable of Branch Banking Operational Fraud Management. Besides, Branch Operational Risk Management and Branch Operational Related Fraud Management are inversely related by -.832 odds with a significance level of .034.

On the other hand, the second most significant Independent Variable to the Dependent variable is Staff Ethical behavior & EOHR. According to the Table 4 the significance level is .045. As such it could be concluded that Staff Ethical behavior & EOHR and Branch Operational Fraud Management are inversely related by -.599 with a significance level of .045.

6) Factor Analysis

Factor analysis has been carried out to identify the strongest factors and the weakest factors of the individual indicators / variables that are presented under all. Independent Variables and the Dependent Variable. Initially the researcher had carried out a factor analysis for the individual indicators in order to get an understanding of the strongest factors and the weakest the factors of the specific Variable. Thereafter, to observe a holistic view under the factor analysis same has been further extended for each Individual Variables which are presented under specific Independent and Dependent Variables.

Factor analysis of the four Individual Variables that are analysed under Internal Controls reflected that Supervisory Controls in Branch Operations is the strongest factor. At the same time factor analysis of Operational Risk Management established that both variables Risk and Control Assessments and Fraud Prevention Policy depicted under OPM are equally strong factors. Similarly, with regard to

Bank different Audit Methodologies discussed two variables namely Risk based Audits and Cycle based Audits and the study established both these are equally strong factors. Factor analysis of Staff Ethical Behaviour and EOHR revealed that HR efforts and selecting right caliber of staff both the variables are also equally strong factors.

7) Qualitative Analysis

The qualitative analysis of this research is based on the data collected through personal interviews with five different respondents. This qualitative analysis has been carried out using thematic approach. In accordance with the objectives of this study the qualitative analysis was aimed to identify the relationship between Branch Operational Related Fraud Management with Operational Risk Management, Internal Controls, Internal Audit Methodologies, Staff Ethical Behavior and Ethical Orientation of Human Resource.

Then the analysis started manually with the use of transcripts. Upon careful perusal of these transcripts the researcher has identified five main themes under which the respondent's answers are falling. Finally, it was thematically established that the Branch Operational Related Frauds could be reduced via Strengthening the Internal Controls, Deploying Proactive Branch Operational Risk Management, Implementing Internal Audit Methodologies and also by enhancing the Staff Ethical Behavior via HR efforts. Further, it is thematically agreed by all the respondents who are well experienced Bankers that the RCSA needs to be strengthened to minimize Branch Operational Related Frauds. On the other hand, they strongly agreed that staff ethical behavior is a must to prevent Frauds. Therefore, the qualitative analysis has backed the quantitative analysed data of the study.

B. Discussion

Branch Operational Related Fraud Management had been a major challenge in today's context in Banking Industry. The Banks have heavily invested in strengthening the Internal Controls, Establishing the Operational Risk Units with robust technology and deploying experienced well trained qualified staff in order to Manage Operational Frauds. At the same time Internal Audit Methodologies are also available in Banks to evaluate the effectiveness of Internal Controls. On the other hand, the HR of

Banks make efforts to embed ethical culture into Branch Banking.

This study parameter estimate has specifically identified that the Bank Risk and Control Self-Assessment (RCSA) process and the Branch Operational Fraud Management is inversely related by -2.275 odds with significance of p.000. At the same time the Operational Risk Management and Bank Operational Fraud Management are also inversely related by -.832 odds with significance of p.034.

Therefore, strengthening of Branch RCSA process is a must to manage the Branch Operational Related Frauds. The RCSA is a structured mechanism for a business lines to then and there identify and assess the Operational Risk and this is facilitated by the Operational Risk Unit. The main key processes in Branch Operations include Cash, ATM, Account Opening, Fixed Deposit Upliftments, Dormant Account Reactivations, marking liens, Issuance of Instruments such as Cheque Books, Cards, PINs, Drafts, TOD/Excess accommodations, Pawning etc where a Fraud could happen at any time. Therefore, to strengthen the RCSA a proper ground level identification of RCSA scope/effectiveness by the ground level stakeholders categorically needs to be established and this must be facilitated by Operational Risk who has the expert knowledge via Monitoring, Analyzing, Studying of Existing Controls, Assessment of Control Effectiveness, apart from routine assessments of frequency of Frauds, Impact of Frauds, Tolerance, Risk Direction and finally the likelihood of a Fraud.

It is the view of the researcher that if the RCSA is correctly embedded to the critical processes in Branch Operations then it could effectively manage the Branch Frauds. As such a proactive participation of the Operational Risk Units in monitoring, analyzing, studying, assessing the effectiveness of internal controls are essential. This proactive engagement will strengthen the Branch Risk and Controls Self-Assessment process which in turn will real time combat with Branch Operational Frauds by eliminating the Opportunities to commit Frauds.

Apart from the above, study parameter estimate has further established that the Staff Ethical Behavior & EOHR has a significant inverse relationship with the Branch Operational Related

Fraud Management. Therefore, the HR in Banks must actively involve in combatting Branch Operational Related Fraud Management by their efforts of embedding ethical criteria to the Branch Banking. The Human resource efforts to embed ethics must cover all HR functions specifically recruitment and selection, training and development, performance appraisal, pay and reward management and employee relations then it will play an instrumental role in creating an ethical culture and climate in the Branch Banking. HR efforts should not be carried out in isolation that is only in few functions. These efforts needs to be bundle under four dimensions namely acquire (recruitment), develop (Traning & Induction) retain and motivate ethical employees. This process will create Ethical Organization Culture.

With regard to Internal Audit Methodologies of the Banks this study factor analysis has identified both Risk based and Cycle based Audits are equally strong factors to reduce Frauds. Therefore, practicing either method is acceptable. However, the surprise element of the Audits, Preventive Approach, Issue escalation and Risk assesement aspects should not be compromoised. It is the view of the writer that preventing Frauds is the responsibility of the Business lines as the first line of defense but it does not mean that Internal Auditors are off the book with regard to finding Frauds and preventing same. The Auditors should consider where the Fraud Risk is present within the organization and should respond proactively via Audit Methodologies when auditing the Branch Internal controls. Evaluation, Examination and Assessment in audit planning is crucial as per the auditing experience of the writer.

The strengthen Branch Internal Control environment is definately reduce the Branch Operational Related frauds and this fact has been thematically established in the qualitative part of the study which had also been cross established under the Univariate analysis. The Internal controls such as Supervisory Functions, Delegated Authority Levels and Surprise Verifications by higher authorities should be strengthened during the day-to-day operations to minimize Frauds. On the other hand, t is the view of the writer that wrong tone at the top, collusion, understaffing, traning and experience also weeken the Controls at day today Branch Operations.

IV. CONCLUSION

Under the parameter estimate in this study it has been identified that the Bank Risk and Control Self-Assessment (RCSA) process and the Bank Operational Fraud Management is inversely related by -2.275odds with significance of p.000. At the same time the Operational Risk Management and Bank Operational Fraud Management are also inversely related by -.832 odds with significance of p.034.

Therefore, it is important to strengthen the Branch RCSA process in order to manage the Branch Operational Related Frauds. The Operational Risk Units to gather with the Branch Network Management should focus predictive and proactive risk management techniques with the help of advance technology, along with Effective Corporation among Branch Staff to make the RCSA process effective. As such it is correct to conclude that lack of awareness of RCSA process among Branch Staff may facilitate fraudsters to exploit this lack of awareness for their gains.

Besides, the study had further established that the Staff Ethical Behavior & EOHR and Branch Operational Related Fraud Management is also inversely related by -.599 odds with a significance of p.045. On the other hand, the Efforts made by the Human Resources and Branch Operational Related Fraud Management is inversely related by -1.209 odds with a significance level of p.001. Therefore, the Human Resource Managements in Banks must proactively involve in combatting Branch Operational Related Fraud Management by embedding ethical criteria to the Branch Banking.

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The Impact of Gender and Location on Career Indecision: Special Reference to Sri Lankan State Universities

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Abstract— Making a career decision is one of the most important problems that adolescents face during their transition from university to work environment. In making a decision on career advancement pertaining to a preferred career, young adults and adolescents face high levels of anxiety. The inability to choose a career is referred to as career indecision among university undergraduates. Career indecision is linked to concerns such as career development and difficulties in making career-related decisions, as well as self-efficacy, career counselling opportunities, and family support, many of which can affect a student's capacity to make career decisions. The purpose of the study is to identify whether there is a significant impact of the target population's segregation based on gender and university location on career decision-making among Sri Lankan state university management undergraduates. The sample included 345 final-year management undergraduates from metropolitan and rural state universities. Data were collected using a self-administered questionnaire and the hypothesis was tested using an independent sample t-test. According to the study's primary findings, career indecisiveness is higher among males, while the geographical location of state universities is shown to be insignificant in terms of being career indecisive. When it comes to designing human resource development programs and policies, the research findings are useful to policymakers, government institutions, and the public at large.

Keywords— *career indecision, gender, location, management undergraduates, state universities*

I. INTRODUCTION

Career Indecision has been seen as one of the essential and focal areas of career psychology, which has caught the consideration of numerous

scientists because of its money-related and mental costs (Osipow, 2009). Therefore, most researchers revealed career decision-making related problems are leading to arise career indecision (Lock, 2009). Career indecision is a negative status that refers to an inability to select a career goal or having selected a career goal, to experience significant feelings of uncertainty about the goal (Callanan and Greenhaus, 2010). According to the Sri Lanka scenario, Management undergraduates record a significant percentage (around 20%) from total Sri Lankan undergraduates and it has gradually risen. (University admission handbook, 2019-2020). As a creating nation like Sri Lanka, there is a tremendous interest in managerial experts to offer help for financial development and adding to the achievement of unstable business conditions (Liyanage, 2013). Graduates passing out from state universities could be considered as an important asset concerning uplifting the country's economy (Ukil, 2016). Graduates' contribution to the enhancement of the knowledge workforce is massive. Their calibre at the strategic business level is a major determinant in the growth of the state as well as private institutions. However, the issue at hand is, the current economic situation of the country has not expanded in order to create value-added employment opportunities for graduates. Therefore, graduates do not motivate to take correct decisions regarding their career prospects. Since no previous scholarly work has dealt with the phenomena of career indecision concerning gender and university location, the study was conducted in the context of Sri Lankan state universities. The territory education sector was chosen because it was thought to have the most likely group of society who were indecisive about their careers. Thus, the research question of this study is to identify whether there is any

significant impact on career indecision based on gender and geographical location.

In order to find out the answer to the research question, the general objective is to identify the impact on career indecision based on gender and geographical location.

A. Research Problem

Graduates who passed out from universities are considered a significant resource for the economy in the long run (Brown et al., 2013). When considering the unemployment statistics in Sri Lanka, it is 4.8% (Department of Census and Statistics, 2019). When considering the graduate unemployment rate in Sri Lanka, 54.8% of Art degrees and 45.2% of other degrees were recorded (LFS,2019). Figure 1 shows the average unemployment figures for the last few years. When looking at these numbers, it's clear that unemployment rates have either continued to rise or have increased.

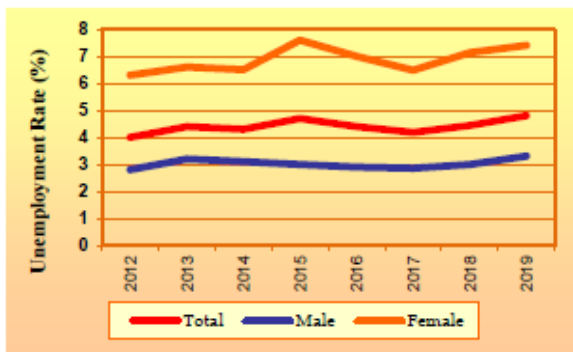


Figure 01. Unemployment Rate by Gender

Source: LFS 2019

Table 01. Unemployment Data on G.C.E A/L, & Above Persons

	2015	2016	2017	2018	2019
Total	38.7	39.8	41.9	45.8	41.9
Male	23.4	26.4	30.5	28.9	28
Female	49.4	49.6	50.7	59.2	53.3

Source: LFS 2019

Results of Table 01 could be viewed as the source of a looming problem of G.C.E A/L & above Person's career indecision, which in turn affects a country's economic development.

Since career indecision is a complex issue that experiences a high level of uncertainty regarding one's career choices and impacts on the overall

growth of the economy (Lopez and Ann-Yi, 2006). According to Herr, Cramer and Niles (2004), 50% of university students experience career-related problems, some of which are associated with students being undecided about various career options, causing anxiety in university students (Gati et al., 2000). The severity leads to lifelong consequences for the individual's vocational future, psychological and physical well-being, social acceptance, ultimately overall quality of life (Mann, Harmoni and Power, 1989). When considering gender, many differences can be identified among males and females especially in cognitive abilities. The poor female labor force participation and high female unemployment rates (Department of Census and Statistics, 2018) may necessarily mean the indecisive nature of making career decisions. It could be other pressures from culture and society. Concerning the geographical location of the universities, most people have a perception that facilities and the quality of the graduates may higher be based on proximity to the capital city of the country. When analyzing the university rankings, it is apparent that metropolitan universities are higher in the rankings. Thus, based on the facts given above, the problem statement of the study is to identify whether there is any significant impact on career indecision based on gender-wise segregation as well as the physical location of the universities, among management undergraduates in Sri Lanka.

B. Career Indecision

Career indecision is a negative status that refers to an inability to select a career goal or having selected a career goal, to experience significant feelings of uncertainty about the goal (Callanan and Greenhaus, 1992). Zimmerman and Kontosh (2007), found that many career development studies have described career indecision as an inability to make career-related decisions and linked it to the interpersonal and intrapersonal processes of an individual. In addition to that, career indecision concerning problems relating to career development, specifically problems relating to career decision-making (Fouad, 1994). Esters (2007) describes career indecision as problems individuals may encounter as they make a career decision, as well as an antecedent that may influence career choices. In the context of career indecision among university students, career indecision is considered to be an inability to choose

a university major subject or career (Herr et al. 2004).

II. METHODOLOGY

In order to achieve the research objective, a descriptive research design based on the quantitative approach was used. This research is a cross-sectional and approach that was deductive as testing an existing theory to confirm if the theory was applicable in the research context through data collection, analysis, and interpretation of results. The target population of this study included all the Management undergraduates in Sri Lankan state universities. The exact sample of 345 respondents was from the four state universities such as the University of Sri Jayewardenepura, University of Colombo, University of Ruhuna and University of Sabaragamuwa based on convenient sampling. In this study, the University of Sri Jayewardenepura and the University of Colombo were categorized under the metropolitan universities and the University of Ruhuna and the University of Sabaragamuwa were categorized as the rural universities. Thereby the respondents of the survey research are university undergraduates in their final year. Thus, the unit of analysis for the present study is “individual”. The self-administered questionnaire has been used as a primary data collection tool for this study.

Based on the previous research studies it has been revealed that there are significant differences among males and females when it comes to focusing on various aspects related to decision making (Francic et al.,2015) (Koch et al., 2015). Therefore, the literature mentioned that there is a significant difference among various traits of decision making between males and females. Accordingly, the researcher has built up the hypothesis below;

Hypothesis 1– The student being a male or a female has a significant impact on being career indecisive.

University systems can be categorized based on many factors such as staff size, the degrees offered, faculties etc (Dill & Soo, 2005). One such factor is the location of the university, which can be further categorized as metropolitan and rural. The differences in the exposure of opportunities arise due to various factors such as the availability of resources that differ between rural and urban state universities, the access to information is somewhat

questionable when it comes to rural universities when comparing to metropolitan universities (Johnston & Hugginss,2016). Thus, the following hypothesis has developed.

Hypothesis 2 – The geographical location of the university has a significant impact on career indecision.

III. DISCUSSION AND ANALYSIS

A. Results

Demographic analysis was done while considering the frequencies of demographic variables. A dataset consisted of 345 valid responses was used to carry out the analysis part. Out of 345 responses, 62% and 38% represented female and male respondents respectively. Most of the respondents were from the University of Sri Jayewardenepura, which was 32% of the total responses.

Hypothesis 1– The student being a male or a female has a significant impact on being career indecisive

Table 02. Independent Sample Test (Gender)

Career Indecision	Levene's Test for Equal Variances		t-test for Equality of Means	
	F	Sig.	T	Sig. (2-tailed)
Equal variances assumed	7.48	0.007	2.474	0.014
Equal variances not assumed			2.408	0.017

Source: Survey Data 2020

According to the Table 2, T-test has been used to test the predetermined hypotheses. When observing the group statistics, there was a difference between males and females with regard to career indecision. Thus, a high mean value (Males 2.9816) represents high career indecision. The low mean value represents (Female 2.6874) low career indecision. When reviewing the significance values of the independent sample t-test, the significance of t value in equal variance not assumed was 2.408 and significance is 0.017. It indicated as less than 0.05. It ensures a statistically significant difference in career indecision between male and female undergraduates. Therefore, career indecisiveness among the male undergraduates was higher. Hypothesis 1 is supported according to

the analysis and this fact was beyond the findings of previous studies.

Hypothesis 2 – The geographical location of the university has a significant impact on career indecision.

Table 03. Independent Sample Test (Location)

Career Indecision	Levene's Test for Equal Variances		t-test for Equality of Means	
	F	Sig.	T	Sig. (2-tailed)
Equal variances assumed	7.48	0.007	2.723	0.064
Equal variances not assumed			2.224	0.077

Source: Survey Data 2020

When considering the Table 03 results of the geographical location, a T-test was carried out. Observing the group statistics, the mean values of rural universities (2.723) were high when comparing to metropolitan universities (2.224). When reviewing the significance values both rural and state universities are exceeding 0.05. Therefore, the researcher identified the geographical location of the university has an insignificant impact on career indecision. Hypothesis 2 was not supported according to the findings and ensures the proximity to the capital city or level of resources and facilities in the university do not account for students to be indecisive when taking their career-related decisions.

B. Discussion

The t-test results backed with Hypothesis 1, indicating that males had a more indecisive career nature. It was established and confirmed in previous studies (Francic et al.,2015) that certain cognitive and behavioral characteristics such as impatience, aggressiveness, restlessness, and impatience were seen among males. Females seem to be more concentrated and determined when engaging in decision making. This finding applied not only to pick a career path but also to workplace decision-making. When compared to the current study findings, a previous study finding (Koch et al., 2015) that cited gender as an immaterial factor in

career indecision does not correspond with the current study findings.

Based on the statistical conclusions on geographical location, Hypothesis 2 was not supported. Despite the fact the physical location of each university might differ from each other, undergraduates in a given university are comprised from all over the world. Furthermore, the number of resources and facilities available inside a certain university had no impact on whether or not an undergraduate was more or less career indecisive.

IV. CONCLUSION

The objective of this study is to identify whether there is any significant impact on career indecision in light of state university management undergraduates in Sri Lanka when it comes to the segregation of the target population based on gender as well as the geographical location of the state universities. Based on the findings, gender has a significant impact, while geographical location does not significantly impact on career indecision. Further, study results revealed that males are more indecisive and geographical factors do not define the indecisiveness of the undergraduates. From a theoretical perspective, this study revealed that the gender of an undergraduate as a significant factor when explaining the career indecision and location of the university could not be considered as a barrier to being career decisive. These research findings could be beneficial to design the career counseling programs in the Universities, Higher Educational Institutes, and Schools of the country. Further, employers and the management of the organizations could be benefitted to understand the indecisive nature between two genders. The government and related policy-making institutions also would be in a position to identify the gaps, requirements and drawbacks when formulating the relevant policies. The major limitation of this research is a classification of the universities as metropolitan and rural was done on an arbitrary basis, purely based on the proximity to the city centre. As future research, implications and directions could opt for private universities in Sri Lanka as a comparison study.

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The Role of Environmental and Psychological Factors in Assisting Sustainable Entrepreneurial Performance (SEP) of Women-Led Micro Firms: A Study Based in Kandy District

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Abstract— Women entrepreneurs have most certainly been identified for their notable additions towards the socio-economic advancement of most countries over the past decades. However, the majority of the literature on female entrepreneurs have been cantered on developed countries, and inadequate knowledge is found on women entrepreneurs in developing countries such as Sri Lanka. In accordance with bridging the said theoretical and empirical gap, this study mainly assembled a unit of analysis of women entrepreneurs in the micro-enterprise sector in the Kandy district with a sample that covered all its divisional secretariat areas. Reliability and validity were tested by carrying a pilot survey of 25 respondents. With the gain of 210 respondents on the final survey, it was found that both the main variables in study had positive relationships with Sustainable Entrepreneurial Performance. Further, opportunities for green entrepreneurship and training support did not prove any relationship, while the rest that are social perception, analytical planning, proactiveness, teamwork, government support policy, business environment, green attitude, perceived controlled behaviour, optimism, innovation, leadership and psychological factors had positive relationships with Sustainable Entrepreneurial Performance. Government, private organizations, and Non-Government Organizations (NGO) should consider necessary efforts to enhance the business talents of women with more industrial opportunities and better entrepreneurial setting in Sri Lanka. This study, thereby offers vastly to the knowledge about women entrepreneurship in a developing economy and also assists to consolidate anyone's

understanding about this subject and the scope of entrepreneurship while presenting practical implications for researchers and policymakers.

Keywords— *women entrepreneurs, environmental factors, psychological factors, micro firms, sustainability*

I. INTRODUCTION

Entrepreneurship, a concept trailed among all genders worldwide, can be referred to the practice of starting new organizations or revitalizing mature organizations, particularly new businesses generally in response to identified opportunities. (Eroglu, 2011) With this eminent elaboration of entrepreneurship, it can also be mentioned that this paves a way for the previously unheard and unseen women population to voice out their opinions and strengths by engaging in the field of entrepreneurship by bringing out their entrepreneurial skills. This largely applies to women, due to the fact of evidence that women starting a business are more likely to agree with the motivation of making a difference to the world and if the sustainable development goals are to be tackled through entrepreneurship, then it is surely beneficial to this objective to get more women on board. (Bosma, 2020) Sri Lanka, about which this study was carried out being one of the developing countries in the world; it can be suggested that the country undergoes challenges of general entrepreneurship development and especially women entrepreneurship immensely due to the lack of knowledge creation, enterprise development and also technological development. Women are disproportionately influenced by these inclinations, as they are restrained in their economic enterprises and proceed to face unemployment at twice the rate of men (6% and 3%, respectively) notwithstanding reaching correspondence in school enrollment.

(Gunewardena, January 2016) Only 30% of women above the age of 15 are employed, indicating that labor force participation is as much an issue of women's economic opportunities as unemployment (Senanayake, 2015).

Different empirical studies reveal women are handicapped by religion, culture and various traditions and that more than half of the total female entrepreneurs regularly face gender related challenges environmentally and psychologically concerning operating businesses as well as expanding them. In accordance, many scholars have identified several factors that affect women entrepreneurship in different countries and supportively Frese (2009) has explored the association between psychological characteristics and performance while Mitchelmore and Rowley (2013) have investigated the link between factors of environment and business performance. This research stands out from the above-mentioned, because in reality, their focus areas were on entrepreneurs regardless of gender, in addition to the factors relating to various personal, organizational, socio-cultural, economic, environmental, and sustainable issues. Women entrepreneurs were also not found to be of concern in studies regarding sustainable entrepreneurship. Nevertheless, this study certainly highlights factors that affect the sustainable success of female entrepreneurs in small businesses, with particular reference to the Kandy District of Sri Lanka.

A. Research Objectives

With the significant aim of bridging the gap of focus on women entrepreneurs and SEP, the following objectives are considered.

- To examine the role of environmental and psychological factors in making the sustainable entrepreneurial performance of women-led micro firms in Kandy district
- To identify the factors that increase the sustainable entrepreneurial performance of women-led micro firms.
- To identify challenges for women entrepreneurship in micro firms.
- To suggest the ways to improve the women entrepreneurship in micro firms.

B. Research Questions

The specific questions deliberately answered as a result of this study are,

- 'Do the environmental, psychological factors positively affect in assisting Sustainable Entrepreneurial Performance (SEP) of women-led micro firms?'
- What is the impact of environmental factors on SEP of women-led micro firms?
- What is the impact of psychological factors on SEP of women-led micro firms?
- What are the most significant factors among environmental and psychological factors that affect women-led micro firms?
- With the impact of environmental, psychological factors, what conditions would be brought upon the making of SEP of women-led micro firms?

II. METHODOLOGY

This research based on the identification of the role of environmental and psychological factors on SEP of women-led micro firms entitles an employed positivism philosophy as for the consideration of a scientifically obtained sample in which the data is assembled through a field survey by a structured questionnaire with the analysis conducted by quantitative means. Moving further towards the core of the research onion as presented by Saunders & Lewis (2013), the research approach plays a significant role in carrying out a study, for which this study follows a deductive approach where relevant hypotheses were generated with the application of existing theories and where data were obtained, and current theory was tested to confirm the soundness based on actual practical occurrence evidence. Following such a research approach, this study utilizes the means of self-administered telephoned questionnaire as its strategy of collecting the relevant data by the target respondents even amidst the challenge of the COVID-19 pandemic. This strategy was found to be beneficial as for the three prime benefits presented by Bryman (2012): the ability to maintain quality control over the entire process of data collection, the speed of data collection and cost-efficiency. This study also presents that only quantitative methods are adopted in data collection [questionnaire survey] and analysis [correlation and regression] through to take the supreme

advantage of making definite outcome those can be proven scientifically. Due to certain constraints appended to the study, specifically access to the information, lack of time, absence of required resources; the eminent mono method was chosen as the proper method to illustrate the content of the study. With the consideration of the further layers and necessities of the research onion; the study applied descriptive statistics such as mean, median, mode, standard deviation, sample error and questionnaire content made with Likert scale to analyze the assembled data. Along with the usage of descriptive statistics, the study followed a cross-sectional nature in time horizon by developing the relationships between two independent research variables and one dependent variable. As implied in the title of the research, this study accompanies the Kandy District as its population as this district represents the fourth highest population with a multi-ethnic and multi-culture population of 1,369,899 (Statistics, 2012) also, women forming the majority (52.3%) of this population. With the gathering of the data that the district secretariat of Kandy comprises of 562 women entrepreneurs as per the Women Development Officer, the sample was chosen to represent women-owned micro-scale enterprises with a capital expenditure of less than Rs. 5 million and less than 10 employees in the district, after which the companies that existed for at least three years were screened. This is because, micro-enterprises as described by the Department of Small Industries are the industries with a capital expenditure of less than Rs. 5 million, an annual turnover of Rs. 15 million or less and employing less than 10 employees. To get a reasonable sample size, Morgan's table and sample calculation with a 95% level of confidence and a 5% confidence interval was used to select a sample of 528 women entrepreneurs in these micro firms, which was occupied by stratified sampling methods.

Data gathering was carried out using self-administered questionnaires as stated above, which constituted of 99 items categorized into 5 sections with close ended as well as Likert scaled questions. Besides this primary data gathering, the research also utilized a few main secondary data sources as reports, survey results, journal articles by (Ranasinghe, 2008) that were already published. Following this data collection, this study utilized the data analysis on the Statistical Package

for Social Scientists Software to obtain the reliability and validity of the data and hence the development of the relationship between the variables.

A. Experimental Design

The following figure represents the experimental design utilized in the study in developing relationships by serving its purpose of a conceptual framework.

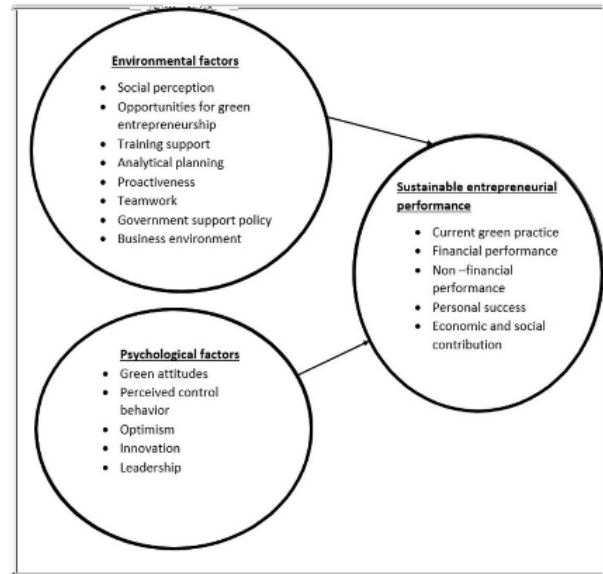


Figure 1. Conceptual Framework

Source: Authors 2020

B. Hypotheses

The following hypothesized associations were subjected to empirical testing in this study:

H1 - There is a positive relationship between social perception of the women entrepreneurs and sustainable entrepreneurial performance of women-led micro firms.

H2 - There is a positive relationship between opportunities for green entrepreneurship of the women entrepreneurs and SEP of women-led micro firms.

H3 - There is a positive relationship between training support of the women entrepreneurs and SEP of women-led micro firms.

H4 - There is a positive relationship between analytical planning of the women entrepreneurs and SEP of women-led micro firms.

H5 - There is a positive relationship between proactiveness of the women entrepreneurs and SEP of women-led micro firms.

H6 - There is a positive relationship between teamwork of the women entrepreneurs and SEP of women-led micro firms.

H7 - There is a positive relationship between government support policy of the women entrepreneurs and SEP of women-led micro firms.

H8 - There is a positive relationship between business environment of the women entrepreneurs and SEP of women-led micro firms.

H9 - There is a positive relationship between green attitudes of the women entrepreneurs and SEP of women-led micro firms.

H10 - There is a positive relationship between perceived control behavior of the women entrepreneurs and SEP of women-led micro firms.

H11 - There is a positive relationship between optimism of the women entrepreneurs and SEP of women-led micro firms.

H12 - There is a positive relationship between innovation of the women entrepreneurs and SEP of women-led micro firms.

H13 - There is a positive relationship between leadership of the women entrepreneurs and SEP of women-led micro firms.

H14 - There is a positive relationship between environment factors of the women entrepreneurs and SEP of women-led micro firms.

H15 - There is a positive relationship between psychological factors of the women entrepreneurs and SEP of women-led micro firms.

III. DISCUSSION AND ANALYSIS

A. Results

This chapter displays and analyzes the data obtained and discusses it accordingly to achieve the research objectives. Data were collected from 210 respondents in 20 divisional secretariat areas through a self-administrated telephone survey. Other than the ultimate survey, a pilot survey was carried to measure validity and reliability.

Variable	Item	Initial Cronbach's Alpha value	Removed items	Cronbach's Alpha value if items removed
Social perception	SP	0.716		
Opportunities for green entrepreneurs	OGE	0.980		
Training support	TS	0.988		
Analytical planning	AP	0.871		
Proactive	PR	0.689		
Teamwork	TE	0.996		
Government support policy	GP	0.854		
Business environment	BE	0.758		
Green attitudes	GA	0.591	GA item 2	0.708
Perceived behavioral control	PBC	0.722		
Optimism	OS	0.601	OS item 5	0.734
Innovation	INV	0.885		
Leadership	LE	0.933		
SEP	SEP	0.798		

Figure 2. Reliability Test

Source: Authors 2020

The Cronhach's Alpha values of all the question groups are greater than 0.7 except green attitudes and optimism groups. It can be said that these questions do not have a good internal consistency and not reliable.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.908
Bartlett's Test of Sphericity	Approx. Chi-Square	2845.931
	df	136
	Sig.	.000

Figure 3. KMO and Bartlett's Test

Source: Constructed 2020

According to the figure 3, outputs indicate that KMO sampling adequacy value is 0.908 where the KMO value for this study surpasses the suggested value of KMO, therefore the factor analysis was headed further. Following which it shows that the significant value of p is less than 0.05. Hence, it is presumed that a significant correlation exists between the variables.

	N	Mean	Std. Deviation	Variance
Social perception	210	3.4746	.70665	.499
opportunities	210	2.6780	.76183	.580
Training support	210	1.7714	.65002	.423
Analytical	210	4.0698	.92424	.854
Proactive	210	4.4214	.52488	.275
Teamwork	210	1.9722	1.32559	1.757
Government	210	2.9848	.76986	.593
Business environment	210	3.0369	.90757	.824
Gratitude	210	4.3876	.54994	.302
PB control	210	3.9571	.68361	.467
Optimism	210	4.1619	.57038	.325
Innovation	210	2.8000	1.29777	1.684
Leadership	210	2.8000	1.29777	1.684
Performance	210	3.4017	.65574	.430
Valid N (list wise)	210			

Figure 4. Descriptive Statistics of Variables

Source: Authors 2020

All the variables were highly important when considering the environment and psychological factors of women entrepreneurs. However, opportunities for green entrepreneurs, training support, teamwork, government support, innovation and leadership were at a lower level as shown on figure 4.

According to figure 5, it was found that almost all the connections were positive other than two relationships. Optimism was a positive but weak relationship. On the other hand, the correlation between the independent variable of training support with the dependent variable of SEP was not significant. Hence, a relationship between these variables was not identified.

Variable	Correlation coefficient	Significance level	Relationship
Social perception	0.527	0.000	Significant, positive, moderate level strength relationship
Opportunities for green entrepreneurship	0.145	0.036	Significant, no relationship
Training support	0.005	0.938	Not significant, no relationship
Analytical planning	0.836	0.000	Significant, very strong, positive
Pro activeness	0.691	0.000	Significant, positive, moderate level strength relationship
Teamwork	0.447	0.000	Significant, positive, moderate level strength relationship
Government support policy	0.521	0.000	Significant, positive, moderate level strength relationship
Business environment	0.787	0.000	Significant, strong, positive
Green attitudes	0.832	0.000	Significant, very strong, positive
Perceived behavior control	0.817	0.000	Significant, very strong, positive
Optimism	0.325	0.000	Significant, weak, positive
Innovation	0.788	0.000	Significant, strong, positive
Leadership	0.788	0.000	Significant, strong, positive

Figure 5. Correlations of Sub-Variables

Source: Authors 2020

Variable	Correlation coefficient	Relationship	Status of the hypothesis testing
Environmental factors	0.844	Significant very strong positive	Reject null hypothesis
Psychological factors	0.854	Significant very strong positive	Reject null hypothesis

Figure 6. Correlations of Main Variables

Source: Authors 2020

Figure 7. Regression Model

Source: Authors 2020

Model Summary ^a				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.834 ^a	.696	.694	.36245
2	.877 ^b	.770	.768	.31618
3	.899 ^c	.809	.806	.28864
4	.909 ^d	.826	.823	.27585
5	.915 ^e	.837	.833	.26774
6	.920 ^f	.846	.841	.26118

- a. Predictors: (Constant), analytical
- b. Predictors: (Constant), analytical, innovation
- c. Predictors: (Constant), analytical, innovation, PB control
- d. Predictors: (Constant), analytical, innovation, PB control, opportunities
- e. Predictors: (Constant), analytical, innovation, PB control, opportunities, business environment
- f. Predictors: (Constant), analytical, innovation, PB control, opportunities, business environment, social perception
- g. Dependent Variable: performance

The stepwise regression analysis has suggested six models which were significant as shown in the above figure. Sixth model has been selected out of these models because it gives the highest adjusted R2 value (.841). Accordingly, ANOVA table of the regression model is shown below. Since the p value of the model was less than 0.05, it can be said that this model is significant with 95% level of confidence.

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
6 Regression	76.022	6	12.670	185.740	.000 ^b
Residual	13.848	203	.068		
Total	89.870	209			

- a. Dependent Variable: performance
- b. Predictors: (Constant), analytical, innovation, PB control, opportunities, business environment, social perception

Figure 8. ANOVA Table of the Regression Model

Source: Authors 2020

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.315	.151		2.089	.038
analytical	.181	.040	.255	4.559	.000
innovation	.162	.021	.322	7.815	.000
PB control	.214	.044	.223	4.831	.000
opportunities	.118	.025	.137	4.648	.000
Business environment	.125	.037	.173	3.381	.001
Social perception	.102	.030	.110	3.373	.001

- a. Dependent Variable: performance

Figure 9. Coefficients

Source: Authors 2020

$$\text{Sustainable Entrepreneurial Performance} = 0.315 + 0.255 * X1 + 0.322 * X2 + 0.223 * X3 + 0.137 * X4 + 0.173 * X5 + 0.110 * X6$$

X1 – Analytical planning

X2 – Innovation

X3 – Personal behavior control

X4 – Opportunities for green entrepreneurship

X5 – Business environment

X6 – Social perception

Among thirteen variables, these six variables were identified as most influential, significant, and predictable factors of business performance.

Model	Unstandardized Coefficients		Beta	t	Sig.
	B	Std. Error			
2					
(Constant)	.034	.121		.282	.018
psychology	.448	.043	.511	10.377	.000
environment	.594	.066	.444	9.022	.000

a. Dependent Variable: performance

Figure 10. Coefficients

Source: Constructed 2020

According to above table the model is,

$$\text{Sustainable Entrepreneurial Performance} = 0.034 + 0.511 * X1 + 0.444 * X2$$

X1 – Psychological factors

X2 – Environmental factors

Accordingly, psychological factors and environmental factors were positively related, significant, and predictable factors to the sustainable entrepreneurial performance.

B. Discussion

In the light of all views, women and entrepreneurship can be perceived as an inseparable connection. Therefore, the authors subsequently worked on identifying the effect of environmental and psychological factors towards SEP. This study addresses the background of the aspects in concern and how to theorize the research problem and transform towards operationalization with the knowledge aggregated from the background study. The methodology was presented for the way to accomplish the research objectives. The data collection instrument was a self-administered, questionnaire conducted by telephone. The unit of analysis was women entrepreneur owned micro firm and the sample was drawn using a stratified and simple random sampling technique. Data were collected from 210 entrepreneurs with the help of Kandy district secretariat, and it is a non-contrived setting.

A pilot survey was done to ensure the reliability and validity of the study then proceeded to the final survey of the study. Data were collected from the 210 respondents achieving 92% of response rate over 20 divisional secretariats. Before commencing the analysis, data were screened for missing data and outliers as case and variable wise. Thereby 387 cases were selected to process, and analysis was

done in the four ways of univariate, bivariate, multivariate and qualitative analysis. Out of 13 sub-variables, opportunities for green entrepreneurship and training support had no relationship, while all the other independent variables had positive relationships with sustainable entrepreneurial performance. Regression analysis was carried out to find the most influencing and predictable variables on SEP. Furthermore, the findings of this study along with the former and foreign literature were discussed. Most of the relationships were similar to the literature other than opportunities for green entrepreneurship and training support with business performance.

IV. CONCLUSION

Female entrepreneurship has attracted increasing attention in recent years in the light of concrete evidence of its importance for economic growth and development. With the study whether the environmental and psychological factors of women entrepreneurs positively affect the SEP of micro firms or not; all the psychological factors were found to be positive other than the two variables in environmental factors as opportunities for green entrepreneurship and training support. Hence, it can be concluded that environmental and psychological factors of women entrepreneurs positively affect the SEP of women-owned micro firms in Kandy district Sri Lanka. When considering the environmental factors; social perception, proactiveness, teamwork, government support and business environment showed a moderately positive correlation while analytical planning had a high positive correlation with SEP, allowing conclusion that these mentioned variables positively affect the SEP. Since opportunities for green production and support from private organizations in Sri Lanka is lower, it can be concluded that these two variables have no relationship towards SEP. As for the psychological factors, green attitudes, PBC, innovation and leadership had a strong positive relationship while optimism had a weak positive relationship with SEP. In conclusion, among the thirteen variables (under the two main variables), six variables were identified as most influential, significant, and predictable factors of SEP; social perception, business environment, PBC, innovation and analytical planning. Hence, it can be concluded that SEP can be highly facilitated by increasing units of

those variables. The primary objective of this study being to identify and present an understanding of Sri Lankan women entrepreneurs in micro-enterprises between influencing factors and SEP while trying to give knowledge of women's entrepreneurship in a context of developing countries, especially Sri Lanka, is thereby fulfilled as in developing countries particularly Sri Lanka, there has been very little research into women's entrepreneurship and this study attempts to fill this gap in the literature.

A. *Limitations of the Study*

There are considerably a few limitations in this study which opens avenues for additional research. Due to the practical limitations to perform, the researchers have only considered women entrepreneurs who are above 18 years of age for the study with the limitation to the Kandy District, Sri-Lanka. This comprehensive study, though meticulously carried out, faced quite a few difficulties due to the inability of approaching the geographical area considered, as for the prevailing pandemic situation. This led to the collection of data to be carried out through self-administrated telephone questionnaires, which provided us with the essentials in order to ensure the objectives of the study were met and questions were answered yet would have been enhanced if for the ability of physical approach towards the geographical area of study.

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An Investigation on the Constraints Encountered by Lower Secondary Learners with Reference to the Bilingual Education Policy in Sri Lanka

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Abstract— The Bilingual Education Policy was implemented in Sri Lanka in 2001 through Amity School Programmes in which English is the medium of instruction in selected subjects from grade 6 to grade 11. This study aims to investigate the constraints encountered by lower secondary learners with reference to the Bilingual Education Policy in Sri Lanka. The secondary objective of the study is to identify the attitudes and perceptions of Sri Lankan lower secondary learners towards the Bilingual Education Programme in Sri Lanka. Thus, a group of fifty grade eight students of two local schools were selected as the sample of the study based on the purposive sampling method. The data collection was done by integrating a questionnaire and semi-structured interviews. The study was conducted using a mixed approach where the quantitative data were analysed using Microsoft Excel while the qualitative data were analysed using content analysis. The analysed data of the study elucidate three significant constraints encountered by the learners such as primary education being conducted in the learners' first language, extensive subject contents and terminologies as well as the unsatisfactory exam results and teaching methods. The majority of the selected sample appeared to possess positive attitudes and perceptions towards the Bilingual Education Programme in Sri Lanka.

Keywords— *bilingual education policy in Sri Lanka, constraints, lower secondary learners*

I. INTRODUCTION

Bilingualism can be defined as the expertise in two languages, where both languages are used in regular discourse. According to Kokturk et al. (2016) "Bilingualism is basically defined as having been brought up with two languages and being

more or less equally competent in using both languages" (p. 72). Madawattegedera (2015) states that "the concept of learning subject matter in a language that is not one's own in order to learn both the subject and another language can be traced back many centuries" (p. 40). Thus, according to Mahawattha (2012) Bilingual Education is an educational program, which uses any two languages in school, by teachers / students, or both, for a variety of social and pedagogical purposes. In 2001, Sri Lanka implemented the Developmental Bilingual Program through Amity school programs. Hence, according to the proposals of the National Education Commission (2003),

"Bilingualism should be promoted by using English as the medium of instruction in selected subjects such as Mathematics, Science and Technology including Computer Literacy, Social Sciences in secondary grades, year by year, from Grade 6, depending on the availability of teachers. It is expected that students will reach acceptable level of proficiency in English at the end of junior secondary education without jettisoning Sinhala and Tamil which will continue to be the medium of instruction in selected subjects" (Bilingual Education, Teacher Development Manual, 2007).

Therefore, the aforementioned Bilingual Education Policy in Sri Lanka signifies that English is the medium of instruction in selected subjects from grade 6 to grade 11 and several other subjects must be taught in the learner's native language to retain its value while adhering to the standards of a language policy. By introducing this initiative, it was presumed that all learners would have an analogous access to linguistic capital while expanding equality. Yet, many researchers including Madawattegedera (2015) state that the unresolved tensions regarding the Bilingual

Education Policy in Sri Lanka with reference to the demand and clamour for English induce far-reaching consequences in terms of socio-economic and pedagogical contingencies. As such, this study primarily investigates the constraints encountered by the lower secondary learners with reference to the Bilingual Education Policy in Sri Lanka. Additionally, the secondary objective of this study is to identify the attitudes and perceptions of Sri Lankan lower secondary learners towards the Bilingual Education Program in Sri Lanka. The scope of this study addresses the constraints confronted only by the lower secondary learners who represent two local schools of a selected Educational Zone. Moreover, the fact that no researcher has investigated the constraints encountered by lower secondary learners concerning the Bilingual Education Policy in Sri Lanka has been identified as the research gap of the study. Hence, this research gap led researchers to conduct a profound analysis of the asserted domain.

The overall design of the study took a qualitative and a quantitative data analysis, using a formal, objective, and systematic process where the gathered data was utilized to test the following research questions:

- What are the Constraints encountered by Lower Secondary Learners with reference to the Bilingual Education Policy in Sri Lanka?
- What are the attitudes and perceptions of Sri Lankan Lower Secondary Learners towards the Bilingual Education Program in Sri Lanka?

II. LITERATURE REVIEW

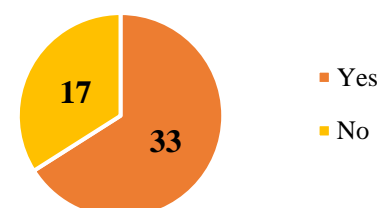
“Bilingual education reform has affirmative consequences for the educational and linguistic achievement of student” (Ozfidan & Aydin, 2017). Ensuing the aforementioned citation, the evidence can be found that L2 students have language difficulties throughout their learning process, and as a consequence, they may have lower academic performance (Lin & Lee, 2019). Sert (2008) explains that students may find difficulties in comprehending subject content clearly, which will eventually become a barrier for them to develop their critical thinking abilities. Lo & Lo (2014)

conducted a study using bilingual learners in Hong Kong and found that when compared with other countries, these learners’ failure of academic achievements was caused mainly due to their insufficient training and lack of teachers’ pedagogical skills. Calderón and Morilla (2014) explain that the affective factors such as attitude, motivation and anxiety can influence learners when studying in a second/foreign language. The motives of a learner to select bilingual education can also factor in the difficulties encountered by them. Huang (2013) expounds that “in parents’ opinion, they like their children to learn more than one language, as the children grow up with two languages, which is having more opportunities for career and maintain first language” (p. 1). However, in contrast to these, Yan and Xu (2015) detail that learners who underwent English Medium education have achieved higher scores in the content learnings and English proficiency tests. “It is now widely accepted that bilingual education can be a great advantage for the child, because the advantages outnumber the possible disadvantages” (Köktürk et al., 2016, p. 82). Köktürk et al. (2016) further clarify that “bilingual education causes misery or frustration” to the learner. Henceforth, it is a crucial aspect to investigate the constraints encountered by the lower secondary bilingual learners of Sri Lanka and their attitudes towards the Bilingual Education Policy.

III. METHODOLOGY

A. Population and Sampling

The participants of the study were Grade eight students who represent two local schools of a selected Educational Zone. Fifty students were selected as the sample of the study according to the purposive sampling method. The sample was determined on the basis of their school, medium of instruction. Therefore, five were respectively sample thirteen.



can be placed between University Test of English Language (UTEL) benchmark level 3 and 4. The aforementioned benchmark levels of the sample were determined by analyzing their grade seven English language end term test results.

B. Data Collection Tools

The study was primarily composed of two data collection tools including a questionnaire and semi-structured interviews. Hence, the questionnaire was designed with the incorporation of five demographic questions, six multiple choice questions, six dichotomous questions and two opinion-based questions. The semi-structured interviews were conducted by directing five opinion-based questions to the selected sample. The foremost objective of distributing a questionnaire and conducting semi-structured interviews for the selected sample of students is to gather the primary data for the study.

C. Data Collection Process

Firstly, the questionnaire was distributed personally to the selected sample of students where fifteen minutes had been allotted to fill the questionnaire. Subsequently, after collecting the required data from the questionnaire, semi-structured interviews were conducted to ten students who were selected according to the random sampling method. Ten minutes were allocated for each of the interview which was conducted by directing five opinion-based questions to the selected sample.

D. Data Analysis Procedure

The mixed approach has been used to analyze the data where the quantitative data analysis of the study was implemented by using Microsoft Excel. Thus, the collected data is represented using pie charts and a bar graph in order to analyze the findings of the questionnaire and the semi-structured interviews. Consequently, qualitative data analysis approach was executed by using content analysis to analyze the data which was gathered through semi-structured interviews.

IV. FINDINGS

A. Questionnaire and the Semi-structured Interviews.

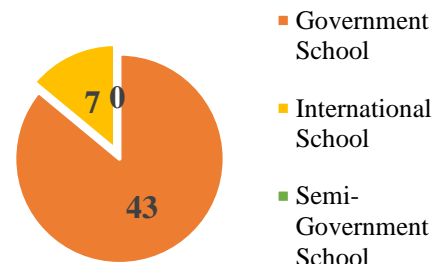


Figure 1. Question 06: I attended a ___ school from grade 1-5.

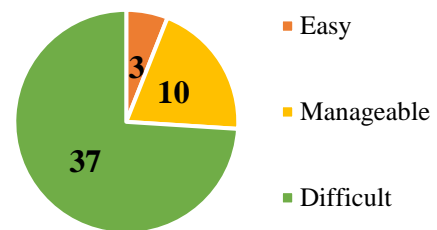


Figure 2. Question 08: How do you feel about learning the core subjects such as Mathematics, Sciences, Computer literacy (Information and Communication Technology (ICT)) and Social Sciences (Geography and Citizenship Education) in English?

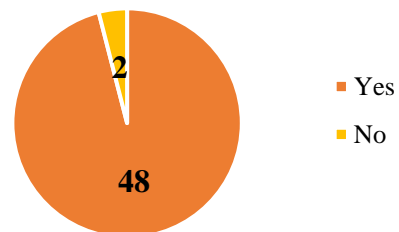


Figure 3. Question 16: Do you think that you have to put an extra effort in learning those subjects in English medium?

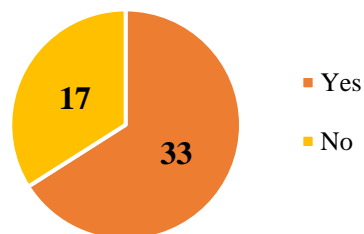


Figure 4. Question 17: Do you want other subjects such as Religion and History to be taught in English medium?

V. DISCUSSION

According to the statistical analysis of the findings of the questionnaire and the semi-structured interviews, it is apparent that majority of female students were more concerned about their studies in English medium than the male students. Crucially, the aforementioned gender disparity in the context of bilingual education may occur as a consequence of childhood training and experience, ability, motivation, parental resistance and the quality of secondary education. The gathered data from the semi-structured interviews indicate that the students who attended International schools for their primary education prefer the subjects such as, History and Religion; that are currently taught in their mother tongue to be taught in English can be identified as the first constraint. According to the perceptions of those students, the initial reason for this issue is the difficulties that they encounter in comprehending the terminologies which is incorporated in the lesson content of those two subjects and to switch between two languages; mother tongue and the second language, English. Concurrently, the fact that the students have identified the core subjects such as Science, Mathematics and ICT to be difficult due to the extensive subject content and the difficulties that may occur in comprehending those subjects can be demonstrated as the second constraint. Hence, it can be clearly evinced by the fact that 5 students out of the sample of 50 students attend tuition classes which are conducted in their mother tongue for the subjects that are taught in English medium. The foremost reason for this is, they believe that learning the same subject content in Sinhala medium will play a satisfactory role in mastering and comprehending English medium subjects. The third constraint is contingent on the unsatisfactory term test results and the teaching methods and the style integrated by the teachers in the bilingual classroom. Hence, the results of the questionnaire indicate that 12 students were unhappy about their decision to study in English medium as they did not score well in the previous term tests and they have encountered comprehension and linguistic difficulties as a consequence of the conventional teaching methods and the style exerted by the teachers in the bilingual classroom.

VI. CONCLUSION

The data analysis of the questionnaire and the semi-structured interviews vividly demonstrate the constraints confronted by lower secondary learners of two local schools in a selected Educational Zone with reference to the Bilingual Education Policy in Sri Lanka. Henceforth, it was evident that the foremost reason for these constraints is the fact that the majority of the students have attended a state school for their primary education, where the medium of instruction is Sinhala. Thus, in this context, the language diversity has affected the cognitive and metacognitive capacities of the students which can cause language, linguistic and comprehension complexities. Although, the majority of the students chose English as the medium of education merely due to the influence of their parents, they possess positive attitudes and perceptions towards the Bilingual Education Policy in Sri Lanka. Ultimately, it is noteworthy that, the syllabus and the policymakers in Sri Lanka should exert conscious efforts in eliminating the above discussed constraints. Additionally, as the participants mentioned, it can be recommended that extending the prevailing Bilingual Education Policy to the subjects which are currently taught in the mother tongue of the students can be beneficial. Ultimately, teachers should be trained using innovatory teaching methodologies, strategies and techniques to enhance the linguistic and comprehension skills as well as the academic performance of the bilingual learners in Sri Lanka.

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The Impact of the Socio-Political Tenacity on Language Usage in Sri Lankan English Journalistic Writings

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Abstract— Recently, Sri Lanka underwent major political upheavals, structural and constitutional amendments that attracted the attention of the international community. Formulation of dilemmatic interim government of fifty-two days, the legal debates about alleged political misdemeanours, presidential and general elections were the main discourses of the Sri Lankan society during the last couple of years. Thus, the substantive researchers voyage on a genre analysis in order to analytically explore the intricacies of English journalistic writings as to how they have been impacted by the socio-political tenacity prevalent in the nation. These socio-political milieus were reflected in the English Language in myriad forums and most importantly were visible in the mainstream media in the country, particularly in English newspapers and led to the creation of timely vocabulary of a brief duration. As an instance, coinage of novel terms with a vernacular tinge can be depicted. This new vocabulary that was developed owing to the political and social pressures were replete with political implications, sarcasm and highly pragmatic meaning. Thus, contentious political debates and occurrences seem to have impacted on the structural and semantic English Language used in newspapers in the period concerned. Content analysis method was used to interpret the textual data and the 'latent analysis' method was exploited to analyse the pragmatic meaning of the language used. Thematic analysis was utilized to itemize the findings in the discussion heeding semantic denotations. It was evinced that local English journalistic writings do amply make use of SLE and intertwined use of vernacular language components to relay their socio-politically driven messages to the readership judiciously exploiting code-switching and code-mixing strategies. Thus, artistic journalistic writings have come into being having been profusely fed by socio-political transformations over the years. It has been primarily researched how formulation of 'localized' English terms, affixation of English

terms with local flavour, and integration of vernacular expressions along with English wordings, have voiced out the intended messages from English journalistic writings vociferously.

Keywords— *structural language, genre analysis, semantic language, coinage, vernacular tinge*

I. INTRODUCTION

Language is the lifeblood of any society. Sri Lanka has two official languages as per the provisions of the constitution. Sinhala and Tamil are the two official languages whereas English serves as the link Language. English is being widely used across all social administrative, educational, media and commercial spectra. The English in Sri Lanka has been influenced by various factors particularly by the native vernacular languages which are Sinhala and Tamil and they have led to the creation of native variety of English, called Sri Lankan English [SLE] (Gunasekara, 2005). These influences are visible in terms of phonological, morphological, and syntactic features and many studies have been carried by the scholars in this regard. This paper is thus concerned with examining the impact of the socio-political nuances on English Language in recent times in Sri Lanka and the resultant impact on the English Language used in Sri Lankan English newspapers.

II. LITERATURE REVIEW

Fernando (2012) states that 'when a language is carried from its country of origin, the language adopts into a new variety in order to express the new geo-socio-cultural phenomena and concepts it encounters in its new environment' (p.160). Thereby, she states that a new set of vocabulary and new variety of English have been developed in Sri Lanka, in concurrence with the above view. She states that the creation of this new vocabulary passes through certain morphological processes which are namely affixation, compounds, new words, acronyms, abbreviations, borrowings and states that linguistic and social pressures and

counter pressures contributed to the development of SLE vocabulary. Fernando (2012) further testifies this argument in her study on SLE vocabulary where she states that

‘The mood in Sri Lanka had become more complex, as it passed through times of racial and class tensions, conflict, war, economic and social disparities, corruption, natural disasters, rehabilitation, peace and reconciliation etc. Words representing these changes in mood have been reflected in SLE vocabulary’ (Fernando,2012, p.165).

Canagarajah (1995) exemplifies the influence of Tamil on English Language through his study on the political economy of code switching in English Language used in Jaffna and he highlights how the necessity for code switching has been stimulated by the necessity to find a living and fulfil economic needs. Canagarajah further states that this kind of activity helps English to be ‘used in a more persuasive form than ever before’. This study sets out to examine the impact of socio-political dynamics on English vocabulary in the past year and the evolution of the English Language morphology and syntactic features based on the political implications.

III. METHODOLOGY

The study was conducted using a meticulous observation of randomly selected newspaper articles published in English newspapers in Sri Lanka over a period of two years from October 2018 to June 2021. Content analysis method was used to interpret the textual data and the ‘latent analysis’ method was exploited to analyse the pragmatic meaning of the language used. Articles were randomly selected from three newspapers for the study, namely ‘The Island’, ‘Daily Mirror’ and ‘Daily News’. Given the larger number of newspapers that are being published daily, a sample of 30 articles were reviewed.

Thematic analysis was utilized to itemize the findings in the discussion heeding semantic denotations.

IV. EMPIRICAL OBSERVATIONS, RESULTS AND DISCUSSION

Baugh (1935) states that the simplest way of the formulation of new words stems from adding of morphemes to the morphemes already existing in

the language. This appending familiar prefixes and affixes to formulate new words of SLE could be seen in recent times in newspapers owing to the political heat existed in the country. One such word is ‘pohottuwa’, it is the name for the symbol of a mega political party that was recently established in the country and its English equivalent is the lotus bud. The original Sinhala term ‘pohottuwa’ was added by the suffixes ‘ees’ and the term ‘pohottuwitees’ was mostly used by the English newspaper editorials to refer to the clan of people representing the respective political party. The most glaring feature of creating the vocabulary was, it is not even an English term, but an original Sinhala term written in English using English suffixation. It was used in plural contexts as follows by adding the plural inflection ‘-s’.

Example: ‘the crowds that press round Gotabhaya – pohottus, a shame to the real lotus bud!’ (22nd August, The Island)

‘Pohottu supporter’, ‘Pohottuwa candidate’ are some of other word compounds that were formulated by the journalists with the Sinhala term ‘pohottuwa’.

Furthermore, English words were suffixed to formulate verbs. These words have greater connotative meanings in the Sri Lankan political discourse; thus, given the excessive political implications of these words entail, they were affixed in order to make new words. One such term is the contentious word that appeared in the political debate ‘white van’. This is an English compound consisting of an adjective and a noun. This term is associated with alleged forcible abductions that were believed to have been carried out locally some time ago. The “white van abduction” referred to instigate fear psychosis associated with some political affiliation. This word has been later suffixed by the ‘ed’ to formulate the verb ‘white vanned’, being “white-vanned” had become a verb synonymous with being abducted — a tactic allegedly used by some unidentified local elements to deal with troublesome opponents.

Ex: He is believed to be white-vanned and murdered.

They will definitely van you! (Taken from a social media post).

The term ‘white van drivers’ emerged as a major propaganda used to vilify one of the main

an English noun as its pre-modifier. Thus, English adjectives have been replaced by corresponding Sinhala adjectives in English lettering with a view to make the text more reader-friendly to the local predominantly Sinhala readership. This could be perceived as a strategy employed by English newspaper journalists and editors to better market their journalistic feature and news articles. This can be further substantiated from the following extract:

‘Sirisena and his erstwhile *yahapalana chums* owe an explanation.’(The Island, 7 Apr 2021).

In the above extract, the phrase ‘yahapalana chums’ comprises the head noun ‘chums’ of which the pre-modifier is ‘yahapalana’ denoting the Sinhala equivalent for English adjective ‘good- governing’. This could be used as an inter-language code mixing technique.

Similarly, hybrid compounds have been created using the name of the other political counterpart term ‘Rajapaksa’, a heraldic nominal for a popular political legacy or familial generation. Some of these terms are ‘Rajapaksa cronies’, ‘Rajapaksa heavyweights’, and ‘Rajapaksa clan’. These terms appeared in meaningful sentences and referred to the respective political clans.

E.g.: The yahapalana government is desperate for funds, as was said previously, and also ready to do anything to be in the good books of the US and its allies (The Island, September 1).

‘Shangri-La and the government feel a special affinity for each other; it was the former that hosted the *Viyathmaga events* while the SLPP was struggling to topple the *yahapalana government*’ (The Island, 03 June 2021)

‘Viyathmaga’ is a cosmopolitan professional body whose English institutional title reads as ‘The Professionals’ Collective’. They pioneered the election victory of new government in 2019. Notwithstanding the fact that an English title is in existence for the respective organization, the editor has used the local vernacular dialect thinking that the readers would easily make note of it.

B. Coinage of Terms in consonance with Code-mixing

Coinage of words also could be seen in the longer run of the political discourse by the leading news agencies in the country.

E.g. - Gotanomics from the new President (Daily News, 18th Nov 2019).

The coined word where the two roots are combined from the words ‘gota’ and economics refer to the new economic policy measures adopted by the incumbent president H.E. Gotabaya Rajapaksha. According to Daily News definitions, “Gota-nomics”/ “Gota-ism” denote the characteristic way of thinking and way of performing things, mapping out principles and policies through which the new president is following to administrate the country as a whole. These new things which are related to economy, administration and management have been defined as “gota-nomics” whereas the changes that are related to political system and administration are called as “gota-ism”.

‘He has also impressed upon the other members of his government that he does not tolerate boru shows and expects them to do likewise’ (The Island, 30th November).

In the above example, we could see the characteristic of Sri Lankan English morphology where Sinhala root word ‘boru’ and English word ‘show’ have been combined and the hybrid compound ‘boru-show’ has been created to connote the idea of fake kind of pomp and glory that the current president of Sri Lanka detests of.

C. Vernacular Connotations

The researchers came across the following title in ‘The Island’ editorial dated 04.04.2021.

‘*Down the pallang* with no end in sight’

The uniqueness of the title is that it comprises two set phrases, one from Sinhala written in ‘Singlish’ and the other, an original English phrase, and both have been combined giving a code-mixing effect. The Sinhala phrase ‘Down the pallang’ means decadence in any process. The editor of the article has skilfully intertwined two notions from two distinct languages to make the message more appealing and eye-catching to the readership. He has used this strategy dramatically to make the text simpler and relay the message with economy of words, letting no any room for verbosity.

'There have been instances where heroin sent to the Government Analyst's Department for testing was turned into *kurakkan* flour!' (The Island, 06 Apr 2021)

'*Kurakkan* flour' is the flour made from finger millet and 'kurakkan' is the Sinhala term for the said grain. The word 'finger millet' could be alien to some Second Language (L2) Sri Lankan English users as well and the writer does not want to strive reader to push him/her to look up dictionary denotations of unfamiliar miscellaneous terms as his journalistic priority is to sarcastically criticize unscrupulous actions of some state entities. Thus, this is a way of safeguarding attention priorities of readership.

D. Formation of Localized Abbreviations/Acronyms

In addition, new words have been developed as acronyms in SLE as a result of the prevailing situation of the country; some of these key acronyms which have come into the fore are, 'JO' (Joint Opposition), 'FCID' (Financial Crimes Investigation Division), 'CIABOC' (Commission to Investigate Allegations of Bribery and Corruption), 'SG' (Secretary General Parliament), '19A' (Nineteenth Amendment to the Constitution), '20A' (Twentieth Amendment to the Constitution) and 'PSC' (Public Service Commission).

'Why wasn't Thursday's Cabinet meeting summoned to discuss 20A cancelled after the ministers, save a few, had vehemently opposed it, at Temple Trees?' (22nd September, The Island).

'PSC accused of letting down courageous public servants opposed to corruption' (20nd Nov, The Island).

MCC - The Cabinet has, after months of dillydallying, decided to sign the Millennium Challenge Corporation (MCC) grant agreement.

In addition, abbreviations such as (ETCA) Economic and Technological Cooperation Agreement, SOFA (Status of Forces Agreement) were created based on the political controversy that sprang around these terms.

Sri Lankan English language journalists are adept in creation of localized English abbreviations. In a way, this has cropped up to familiarise the readers to a longer term making it judiciously short, realizing economy of space.

E.g.: Interestingly, not even the *Presidential Commission of Inquiry (PCoI)*, which probed the Easter Sunday carnage, for months on end, was able to find the mastermind behind the savage terror attacks! (The Island, 08 Apr 2021).

'Presidential Commissions of Inquiry' are a commonality which is seen in Sri Lanka just after a new regime comes into power. Such are established to investigate into alleged misdemeanours or corruptive dealings alleged to have taken place in the preceding rule. Due to frequent occurrence of this term, English language journalists tend to replace the overarching term as PCoI.

It was a tragedy for this country that Venerable Madulwawe Sobitha Thera, who founded and led the *National Movement for Social Justice (NMSJ)*, died prematurely (The Island, 04 Apr 2021).

NMSJ is a localized abbreviation which refers to 'National Movement for Social Justice', a politically driven civil movement which was instrumental in toppling the 2005 - 2015 Sri Lankan ruling government. Since this movement was discussed in journalistic articles frequently, English newspaper writers and editors created an abbreviation citing its flexibility in use.

V. CONCLUSION

It is undebatable that journalistic writing is a greatly creative form of writing. The journalists deliberately try to convince their stance to the readership through persuasive writing style whilst criticizing some notions exploiting argumentative writing. Some resort to exposition writings when

it comes to mild topics like nature. Yet, in analysing socio-cultural and political developments, the local English newspaper editors and other journalists use a myriad of strategies to voice out their message powerfully; thus, employment of SLE and intertwined use of vernacular language components are conspicuously seen in such instances as they profusely aid journalists to realise their expectations; primarily, relaying the message with economy of words, letting no any room for verbosity. The socio-political developments unravelled in local contexts in recent times have been greatly influential and these occurrences have given rise to some novel strategies in English journalistic writings lately. In this milieu, this study is an attempt to explore the

socio-political tenacity under which the use of English in Sri Lankan English newspapers was influenced during the recent times.

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ABBREVIATIONS AND SPECIFIC SYMBOLS

SLE – Sri Lankan English

L2 – Second Language

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Despondency of English Language Teaching Departments: Factors Impinging upon the Struggle to Enhance English Language Skills of Undergraduates

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Abstract— In a context where the increasingly competitive labour market demands individuals to captivate significant skills in the English Language, the role played by the ELTDs in Universities is challenged. A university is a cross-section of a larger society that consists of undergraduates from diverse socio-economic backgrounds. Thus, English language skills possessed by this diverse group vary at the entry and exit. Even though the responsibility of propagating the English Language proficiency of undergraduates lies in the hands of ELTDs, relevant literature suggests that ELTDs of the Sri Lankan government universities are lagging behind in achieving the set goals. Besides, this study meticulously explored the factors behind this failure in order to recommend remedial measures to be taken. The sample consisted of 112 third-year students out of 226 of the Faculty of Science, University of Ruhuna. A convenient sampling method was used to determine the sample and a questionnaire comprising open-ended questions was administered to accumulate data. Moreover, to derive a better understanding of the phenomena, semi-structured interviews were conducted with 12 lecturers of the DELT. It was particularly evident that low proficiency of English at the entry, absenteeism, passive involvement in learning, ragging, and subculture, preconceived notions of students towards English, priority given to core-course units, lack of intrinsic motivation, compartmentalization, the mismatch between the lesson materials and students' desires, make teaching English a struggle at university. Thus, it is argued that the role of ELTDs should be re-conceptualized to equip the undergraduates with the required English language proficiency by introducing innovative teaching methods and incorporating technology, which will in return

help to create a conducive English language learning environment.

Keywords— *challenges, English language proficiency, ELTDs*

I. INTRODUCTION

In the modern world, the place and value held by English are unquestionable since it is considered to be the key that makes ones' life a success. Wijesekera (2012) citing Samarakkody (2000) highlights that, even in contemporary Sri Lanka, English is considered as a significant 'Basic Life Skill' than a second/foreign language. The English language has unleashed its power over tertiary level education in Sri Lanka playing a crucial role in the employability of undergraduates. Thus, it has become essential for the undergraduates, who are considered to be the power and spirit of future development, to capture a significant competency in the English language. Unfortunately, as Perera (2013) has stressed, inadequate knowledge in English is reckoned to be a significant issue that hampered university students from receiving the best out of their university life and it is a serious issue prevailing in almost all the Universities of Sri Lanka. Nevertheless, the ultimate result is a set of low-quality graduates who are incompetent to compete themselves with the international developments and standards (Atapaththu, 2013). It is also apparent that even though the ELTDs which comprise skilled academics have implemented a variety of programmes with the intention of enhancing the English Language skills of the undergraduates the achievement of language teaching outcomes in state universities in Sri Lanka, in general, remains unsuccessful (Wijesekera, 2012). Consequently, it has become a challenge for all most all the English Language Teaching Departments in Sri Lankan Universities to uplift the language proficiency of the undergraduates. The Editorial, Daily News, (Sri Lanka, Nov.6, 2010) claims that "the fault lies in the

system of teaching English language. It is impossible to accept the fact that the cream of the country's intelligentsia is unable to handle English properly. The university academics will have to accept a great share of the blame as they have failed to equip the students with the expected English language proficiency."

Nevertheless, as several factors have an impact on this struggle of English teaching and learning, the analysis intends to answer the following research questions;

- What are the factors affecting the failure of ELTDs in Sri Lankan State Universities?
- What are the possible strategies that ELTDs can implement to create an innovative teaching and learning atmosphere?

Dealing with the problem of the research it appears essential to address the constant failure experienced by ELTDs in case of inspiring students to learn English. When the students have less capacity to handle the language, the ELTD has to endure all the criticisms moderately or unreasonably. Considering the Faculty of Arts the majority of the students fail or remain in a low standard of language competence. Students rarely attend language classes (Chandradasa, 2015). Ultimately the students struggle just to pass their language paper, whereas the language teaching body of the university also struggles to convert those retrograde language learners into an enthusiastic group of students who can handle the language in passion and style (Wijesinghe, 2015).

Since there was no end to this struggle the research intended to address it with the objective of finding out the reasons behind this momentous decline of ELTDs which makes the English Language Teaching a struggle at a university and to suggest possible innovative teaching and learning strategies to change the existing negative atmosphere.

II. METHODOLOGY

As the study was qualitative in nature a descriptive model of analysis which followed an inductive approach was employed to open up a range of dimensions pertaining to the research problems. The sample consisted of 112 third-year students out of 226 of the Faculty of Science, the University of Ruhuna, selected by convenient sampling method, and a questionnaire comprised of 12 open-ended questions was administered to accumulate data. The

questionnaire included two questions to elicit information about their gender and locality and 10 questions designed by the researchers based on the existing literature related to the study. Further, to get a better insight, semi-structured interviews were conducted with 12 lecturers attached to the DELT of the University of Ruhuna. The results of the interviews were then coded and analyzed in detail. Further, to carry out a comprehensive analysis secondary data extracted from relevant literature was employed. Moreover, to arrive at the defined target, English language classrooms were observed for a period of 15 weeks during the class hours.

III. RESULTS AND DISCUSSION

A. *Low proficiency of English at Entry*

Poor knowledge of English at entry was a major obstacle confronted by the English language lecturers in teaching English. The majority who came from rural areas did not possess sufficient knowledge of English. Essentially, this fact was also identified by Ferooqui (2014) as he pointed out that students' low proficiency in English obstructs teachers from using English as the only medium of instruction. As it was revealed, the students intended to learn the language from the basics, which is difficult. Since the students found it problematic to deal only in English the teachers had to switch between the mother tongue and target language in language classes. Rasheed, Zeeshan & Zaidi were also on the view that teaching English is challenging when the students lack prior knowledge, resulting in excessive code-switching inside the classroom, which is considered to be ineffective.

B. *Absenteeism*

Low attendance and lack of enthusiasm of the students were recorded to be few other issues experienced by the faculty for an extended period. As discovered by the interviews, students, except the first-year students, hardly attend English language lectures, since 80% attendance is not a compulsory pre-requisite for them to sit for the final examination. This was found to be a usual practice, whereas the lecturers had to repeat the same lesson once they met a totally new set of students in each session. The lecturers were dissatisfied with the students' level of motivation to learn English and further stated that such practices of students have a negative impact on their efficiency as well. A similar idea was germinated from a study conducted by Faren (2010), who states that de-motivated language learners were one of the

major issues which blocked the language learning programmes in delivering the intended outcomes.

C. Passive Learners

Interviews shed light on the fact that teaching English has become one of the biggest challenges as the students did not respond and engage properly in learning activities inside the classroom, despite the strategies utilized by the lecturers. It was further revealed that the students remained to be passive listeners making the constant efforts of the language lecturers futile. Thus, the lecturers were in a persistent struggle to achieve the expected results from a lesson. Responses provided by the students divulged that they hardly speak owing to the fear of negative evaluation and incompetency of handling the language properly. Azeera, Nisla, and Kareema (2016) investigating the drawbacks encountered in learning English among the undergraduates of the Eastern Province emphasized that students learn English with the objective of passing the exam but are not determined at improving their language skills.

D. Influence of the Subculture

The Influence of ragging and university subculture were also some reasons which obstructed the smooth language learning and teaching atmosphere. Despite first-year students, it was found that others hardly attend classes during the rag season. As per the rules and orders of the second-year students, during the rag season, it was prohibited to use English inside the university for any purpose. As Rathnayake identified the students' politics also seemed to be vital because during the rag season almost all the students are brainwashed instigating a strong unnecessary dislike towards English. Many of the students have lost their passion for learning English due to such pessimism and lagged behind the expected goals of language learning. To console themselves they usually hung on false beliefs such as learning English is just passing the examinations and they can simply get through the exams even without attending classes (2013). The lecturers revealed that every year they experience a drastic change in the second-year students who were very friendly and active in the intensive period.

E. Lack of Uniformity of Proficiency Levels of the Students

Lack of uniformity of proficiency levels was identified as one of the prevalent issues that hindered the smoothness of the teaching and learning process. It was discovered as a fact that discouraged lecturers as

well as the students. As it was found there were students who were very good at English as well as who were less capable to use the language properly. Consequently, it has become a challenge for teachers in balancing a certain lesson in a way that it fits both parties. Even Perera (2010) has identified that teachers often face difficulties in teaching English when the students of the same class exhibit a diverse range of proficiency and experience.

F. English Being a Non-credit Course

It was perceptible that the students strived hard to obtain good grades for their major course units, neglecting the crucial role played by the English language in their lives. Their major objective was to complete the degree programme with a high GPA, thus the priority was given to degree subjects. English being a non-credit subject, less or no time was allocated to enhance English language skills. Many students were on the opinion that it is a waste to attend the English language lectures given the possibility of copying the note to pass the exam. Moreover, they believed that taking down notes would assist them in improving their English language skills without realizing the fallacy behind the rationale. Wijethunga (1989) also in his study has highlighted that the students still believe that they can learn English by taking down notes and simply memorizing things which is an erroneous notion because language learning differs from content learning since it is a skill that demands perpetual practice.

G. Preconceived Notions of the Students Towards English

Students' preconceived notions towards English were discerned as a hindrance to the smooth run of the teaching-learning process. It was revealed that English was considered as a requirement to obtain the degree than a life skill and still the colonial remnants of English have not been erased from the mindsets of the students. It cannot be forgotten that English embraces strong socio-linguistic clarifications when it comes to the Asian context. Being a colony of Britain for a long time, English is considered a weapon, an ornament that belongs to colonizers, a threat to Sri Lankan culture, and a jewel of the upper social class (Karunaratne, 2014). Within the university subculture, English is labelled as 'kaduawa' (Hemantha, 2005). Accordingly, English is something more than just learning a second language (Widyalankara, 2009). Thus in this regard, it was evident that the preconceived notions of students

regarding English had a negative impact on the English language learning approaches making it challenging for the lecturers to disseminate English language skills.

H. *Compartmentalization*

Compartmentalization was identified as another deterrent that obstructed the teaching and learning process. As disclosed by the interviews the interaction between the DELT and other faculties remained to be low resulting in having a blind eye to the requirements of the faculties. Thus, it was evident that this mismatch between the perceptions resulted in creating lesson materials that do not address the needs of the students.

IV. CONCLUSION

In conclusion, it could be mentioned that teaching English at the university has become a struggle than a challenge. It was fundamentally true even as Wijsekera (2012) pointed out that English Language Teaching in Sri Lanka is a failure. Low proficiency of English of the students at the entry, absenteeism, passive learners, university subculture, preconceived notions of students towards English, lack of intrinsic motivation of the students, lack of uniformity of language learners, and compartmentalization were identified as the major factors, which obstructed the learning-teaching process, eventually resulting in the English language proficiency of the students. As evident, in a context where English has become a deciding factor of the employability of the undergraduates, faults of the students, as well as the weaknesses of the strategies implemented by the ELTDs, make teaching English at the tertiary level a struggle. Thus it is high time for the ELTDs to reconceptualize and redefine their roles integrating novel approaches to the teaching-learning process. Further, an attitudinal change of the students is essential in order to achieve the set target of creating competent undergraduates, who possess English language skills. ELTDs should frequently communicate with the students and other faculties and identify their needs when designing the curriculum so that it would create a conducive learning environment for the students which will assist them in enhancing the English language skills demanded by the fast-moving world.

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An Investigation on the Implementation of the Right to Participation in the Teaching-Learning Process at the Senior Secondary School Level

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Abstract— The main objective of this study is to investigate the execution of the right to participation in the teaching-learning process in a few selected Senior Secondary schools in Sri Lanka. The study used a sequential descriptive survey design. The study was conducted with 692 students, 36 teachers, and 18 principals from the Western, North Central, and Central Provinces. Eighteen schools, representing 1AB, 1C, and Type 2 government schools located in the three selected provinces were in the sample. Several methods were employed for collecting data for the study, which included questionnaires for students and teachers, structured interviews for principals, observations of classrooms and focus group discussions with some selected students, and a documentary study. The study identified the extent to which the right to participation is implemented in the teaching-learning process in the selected senior secondary schools. The findings of this study indicated contradictory opinions. Students perceived that the implementation of the right to participate is not satisfactorily taking place in their schools whereas most of the teachers revealed that the implementation of the right to participation is functioning well within their classroom environment. The study concludes with a number of suggestions for principals and teachers to improve the right to participation of students during the teaching-learning process of Sri Lankan senior secondary schools.

Keywords— *implementation, right to participation, senior secondary level*

I. INTRODUCTION

Policies of childrens' rights have evolved over several decades. In 1924 (The Geneva Declaration on the Rights of the Child); 1959(the UN Declaration on the Rights of the Child); the United Nations promulgated the Declaration of the Rights of the Child are some of the significant achievements. UN General Assembly

adopted the Convention and opened it for signature on 20th November 1989 (UNCRC-Convention on the Rights of the child -1989 UNICEF). Sri Lanka ratified the UNCRC on 12th July 1990 and signed the Global Plan of Action for Children in April 1991. The signing of these international instruments cleared the way for the introduction of further improvements in the sphere of Child Rights in Sri Lanka. The Convention had provided a new and dynamic framework for developing laws and policies to further strengthen the concept of rights for children. Lansdown (1994) pointed out that the UNCRC focuses on three fundamental rights namely the right to protection, the right to life, and the right to participation.

The UNCRC has now provided a framework that gives special significance to the idea that children have a right to participate in all matters that affect their lives. The participation rights appear in Article 12, the right to express an opinion in Article 13, the right to freedom of expression in Article 14, the right to freedom of thought, conscience & religion in Article 15, the right to freedom of association in Article 16, the right to protection of privacy in Article 31, the right of children to leisure, play and participation in cultural and artistic activities in Article 40, and the right to administration of juvenile justice. It seems that the above-mentioned Articles read together, accept the position of the child as a separate individual who is entitled to enjoy participation rights hitherto limited only to adults.

Participation leads to full human development, which includes cognitive, social, political, and moral development (Patmor and McIntyre, 1999). Hart (1992) defines participation as a process of sharing decisions that affect one's life and the life of the community in which one lives.

Research has shown that student participation in decision-making has yielded immense benefits to the individual student, the school, and eventually, the community (Patmor and McIntyre, 1999; Walin,

2003 Whitty, and Wisby, 2007). Students who usually have the opportunity to participate in decision-making forums acquire skills for effective engagement with life issues become responsible and active with positive emotional well-being (Walin 2003). In addition, democratic participation offers students the opportunity to develop self-confidence thereby improving their conditions of learning and social life (Rudduck and Fielding 2006, Mncube, 2008).

In many countries around the world, some efforts are put in favor of children's participation; however, studies show that children's participation is not at the expected level. It has been observed that children do not participate adequately in the school environment and that school administrators do not provide children with adequate opportunities in making significant decisions related to school (Howe and Covell 2005). A classroom or a school culture in which children's right to participation is ensured is rarely observed across the world (Lansdowne, Jimerson, and Shashroozi, 2014).

Therefore, the aim of this study was to identify the extent of the expectation of a right to participation implemented in the teaching-learning process of the selected schools, to identify how far the teaching-learning process is implemented in the selected senior secondary classes, and to assess the suggestions of the teachers and principals that can be made to ensure students' right to participate in the teaching-learning process of the selected schools.

II. METHODOLOGY

A sequential descriptive survey design was conducted through questionnaires, observations, interviews, and Focus Group Discussions. The data collection instruments were developed by the researcher after conducting a thorough literature review and the opinion of two experts in the field of education was taken while performing the necessary revisions. The study sample consisted of 692 grade 10/11 students, 36 grade 10/11 class teachers, and 18 principals from the Western, North Central, and Central Provinces. Eighteen schools, representing 1AB, 1C, Type 2 government schools located in the three selected provinces. Data collection was conducted only on weekdays from 17th June 2019 to 31st July 2019 and again from 9th September to 24th September 2019. The descriptive statistical analyses were performed on the dataset using statistical procedures such as frequencies, means, and Kruskal-Wallis H test of Ranked. The qualitative data were

analyzed using thematic analysis. All descriptive statistical analyses were carried out using SPSS Ver. 20 (2018).

III. DISCUSSION AND ANALYSIS

The students' responses to the item related to the UNCRC Article 12 indicated that there was limited opportunity for expressing their ideas in the teaching-learning process (33.4%). However, teachers' responses indicate they have provided the opportunities to express students' ideas while teaching (63.9%). All the principals in the sample are of the opinion that the teachers should allow the student to express their ideas while teaching and the practice are taking place in the school (100%).

Eighteen-point four percent of the students had responded regarding the item related to UNCRC Article 13, that their ideas are not accepted, and they are not permitted to implement their decisions. The teachers' (61.1%) and principals' (100%) responses were higher than that of the students' ratings. Right to freedom of association, which is stated in UNCRC Article 15, received a low response from students (21.2%) and a high response rate received from teachers (55.6%) and principals (100%).

The frequency distribution of students' perceptions on the implementation of the right to participation during classroom activities in the schools is indicated in Table 01. According to the rating in the table, it is clear that students' ratings vary across the items and ratings fall from very low to a very high level.

Table 01: Students' Perceptions of Implementation of the Right to Participation in the Teaching-Learning Process

Item	Interpretation
Teachers do not respond to students' questions while teaching (79.0%).	The results indicated that the Article No. 12 of the UNCRC – Respect for the view of the child is not implemented in the in the classroom.
Teachers do not provide an opportunity for students to express ideas while teaching (57.9%). Teachers do not give students an opportunity to express their creative activities through arts, dramas, poems etc. (62.0%).	The students' responses reflect that Article No. 13 – Freedom of expression is not implant during teaching-learning process.

Teachers do not give students an opportunity to discuss ideas in the class (75.0%). Teachers do not appreciate students' ideas (83.5%).	Responses reflect that Article 14 – Freedom of thought is not implemented in the classroom.
Teachers promote students' participation in school development activities) (29.5%).	According to the responses, Article 15 – Freedom of association is poorly promoted by the teachers.
Teachers never ridicule or let down students (32.1%). Teachers motivate students about their achievement) (51.6%). Physically punishments are given (20.7%).	The students' responses imply that Article No. 16- Right to privacy is implemented in classroom situation satisfactorily.
Gives students health tips to lead a healthy life (41.9%).	Article No. 17- Access to information is implementing to a certain extent, however, need to be improved.

The findings of the student Focus Group Discussion on the teaching – learning process in the class indicated that the students agreed the statement *“When the teacher asks questions during a lesson or after a lesson, we answer. When we question about things unclear to us, teacher explains.”*

However, students in some of the 1AB schools have stated as follows:

“We can't ask questions all the time. Some teachers allow us to question and ask for clarification. Some scold us when we give answers” and “We speak during group activities. We resolve unclear things by asking questions from both the teachers and friends.” “In some subjects (like science) our ideas are not presented. We are scared to question about unclear areas in mathematics.”

Students in one Type 2 school stated the following:

“If our ideas are different from what teachers teach, we have opportunity to present our ideas to them.”

The students in one of the Type 1C – schools have noted that *“In relation to the teaching of a particular lesson, teachers ask whether we understood or not. When we have a doubt, we ask questions during the teaching. But not all the students ask questions. More than half do not speak.”*

The results of the Kruskal-Wallis H test results of the students' ratings on the implementation of the Right to participate in the teaching-learning process among the school types are presented in Table 02. According to the table, the items *‘Teacher responds to students' question while teaching’, ‘Teacher allows to discuss the students' ideas’, ‘Give students an opportunity to express their creative activities through arts, dramas, poems, etc’, and ‘Teacher responds to students' question while teaching’ vary significantly across the school types (p <= 0.05).*

Table 02: Kruskal-Wallis H test of Ranked Students' Responses in the Implementation of Right to Participation in the Teaching-learning among the School Types (N = 692)

Item	School type	N	Mean Rank
Teacher responds to students' question while teaching.	1AB	254	340.76a
	1C	236	340.22a
	Type 2	202	361.06a
Allows an opportunity for students to express ideas while teaching.	1AB	254	339.08a
	1C	236	338.13a
	Type 2	202	365.61a
Gives students an opportunity to discuss ideas in the classroom.	1AB	254	341.33a
	1C	236	330.76b
	Type 2	202	371.39a
Gives students an opportunity to express their creative activities through arts, dramas, poems etc.	1AB	254	344.02a
	1C	236	330.44a
	Type 2	202	368.38b
Appreciates students' ideas.	1AB	254	351.14a
	1C	236	350.41a
	Type 2	202	336.10a

The similar letters along the column indicate no any statistically significant difference at $p \leq 0.05$.

The teachers' responses to the items related to the implementation of the Right to Participation in the

teaching-learning process are presented in Table 03. The majority of the teachers positively (agree and strongly agree) responded to all the items indicating that implementation of the Right to Participation is functioning well within the school environment. The comparison of the students' ratings with teachers' responses reveals an inconsistency between the two response patterns. Further, the comparison of results indicates that teacher's responses are more or less consistent across the items.

Table 03: Teachers' Responses with respect to Implementation of the Right to participation in the Teaching-Learning Process

Item	Interpretation
Students were given opportunities to express ideas during teaching-learning process (63.9%). Allow the students to display their creative abilities through Art/ Drama/ Poems etc. (55.6%).	The teachers' responses reflect that Article No. 13 - Freedom of expression is implemented during teaching-learning process.
Appreciate students' ideas during teaching process (66.7%).	Responses reflect that Article 14 - Freedom of thought is implemented in the classroom.
Provide information for students' social, intellectual, mental, physical, and ethical development (52.8%).	Article No. 17- Access to information is implementing to a certain extent, however, need to be improved.

However, senior secondary students have stated that they have the opportunity to question the teacher about the problems related to the subject. Meanwhile, teachers who work in Grades 10 and 11 are attempting to deliver the theoretical knowledge to students during their lessons to fulfill the requirements of covering up the wider curriculum. Teachers have inquired and questioned the students only about subject-related facts while the majority of the students remain silent. For the teachers working in Grades 10/11, completion of the curriculum is a must and 94% of the teachers were seemed to be implementing a teacher-centered method.

The majority of interviewed principals made suggestions to improve teaching-learning in the classrooms to ensure senior secondary students'

right to participation. That is encouraging teachers to elicit ideas from students, motivating teachers towards student-centered teaching methodology, improving teachers' attitudes and skills, providing resources and facilities for student-centered education within the classroom, and along with teaching the subject, facilitating the teacher to recognize the students.

The majority of teachers made suggestions to improve teaching-learning in the classrooms to ensure senior secondary students' right to participation. They are giving active contribution or allowing the students to express their ideas, changing the teacher's attitudes, deviating from the traditional style and selecting a fresh attractive procedure, planning lessons properly to cater to student needs, conducting projects and practical work, maximizing group work discussing questions and answers with students, giving more and more opportunities for students for debating, working friendly and intimately with students following the concept of child-friendliness and giving students more opportunities to bear leaderships and responsibilities within the classroom.

As such it appears that still, the teaching-learning within the classroom is teacher-centered. Measures must be taken to implement a student-centered teaching-learning process in the senior secondary level in the Sri Lankan schools where the right to participation of students can be maximized.

The findings of the observations of the teaching-learning process in the 18 classrooms by the researcher also indicated that during teaching-learning in the classroom only the teacher talks (94.4%). Students listen (94.4%), students individually involved in decision making, collaboratively make decisions and divide responsibilities among themselves for making decisions (5.6%). Furthermore, the majority of observed classrooms (17) maintained teacher-centered education, with student expression and decision-making appearing to be quite low.

It was evident from the survey findings that the present education system is still teacher-centered and decisions are taken in most situations by principals and teachers (Rathnayaka, 2000). Most of the students at national schools nurture a very optimistic attitude towards student-centered education, some teachers do not follow the activity method even if the suggested activities are given in the teacher's guide, and teachers at provincial council

schools do not employ the student-centered teaching techniques in the teaching-learning process (Dahanayake, 2006). According to a study conducted by Udayakumari (2021), school-teachers should prepare their lesson plans meaningfully by using active teaching methods, appropriate teaching strategies, and teaching aids as well as mentoring and supporting students for academic success and student-centered education.

IV. CONCLUSION

The students' responses provide clear evidence that the implementation of the right to participate is not satisfactorily taking place in the teaching-learning process. Furthermore, depending on the school type the implementation of right to participation in the teaching-learning process at the senior secondary school level there was no evidence of significance. However, the majority of the teachers and the principals indicated that implementation of the Right to Participation is functioning well within their school environment.

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Perception of Teacher Trainees Regarding the Implementation of Continuous Assessment in National Colleges of Education in Sri Lanka

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Abstract— Assessment is considered the process of making judgments about a student's performance on a particular task. It consists of a wide range of methods for evaluating student's performances and attainments including formal testing and examinations, practical and authentic assessments, and classroom-based assessments conduct by teachers. This study examined the perceptions of teacher trainees on the implementation of continuous assessments in National Colleges of Education in Sri Lanka. The selected population of the study was the batch of teacher trainees in the selected National College of Education and the sample for the study was 200 teacher trainees randomly selected from five National Colleges of Education. A questionnaire and interviews were applied to gather data from selected teacher trainees. Quantitative data were analyzed and described using frequency and percentage descriptive statistical tools, and interviews were analyzed qualitatively. The findings of the study have revealed that there is an effective perception of continuous assessment as they have an awareness that continuous assessment develops the knowledge, attitudes, and skills of the teacher trainees. It was recommended that the Academic section of the National College of Education should systematically regulate focusing on whether lecturers implement proper training on continuous assessment methods for teacher trainees in each subject and that sources such as books, magazines, and researches should be provided to study the information needed to write assignments, and the library should be open on weekends as there is no sufficient time on weekdays to use it.

Keywords— *continuous assessment, perception, teacher trainee, national college of education*

I. INTRODUCTION

The National Diploma Teaching course is one of the most popular and highly demanding professional courses conducted by the National College of Education of Sri Lanka for teacher trainees. It

develops their professional skills and competencies. Annually 8000 teacher trainees are recruited to 19 National College of Education, in all three mediums namely Sinhala, Tamil, and English by the Ministry of Education. According to the New Education and Training Policy, the practicality of implementing the new curriculum at the school level requires Continuous assessment as part of the evaluation of the curriculum. This shows that enough attention is given to the implementation of Continuous assessments in the education process. Continuous assessments are used in National Teaching Diploma and paid much attention to the practice it.

Continuous assessment was introduced to the Sri Lankan education system in 1998. The introduction of continuous assessment occurred with the revision of school curricula from grade 1 - 11 The goal of introducing continuous assessment is to assess a broad range of educational objectives, including affective objectives which are to be assessed through assessments and group work. Continuous assessment was introduced for National Colleges of Education in parallel with schools. The following are some of the methods introduced for this purpose.

1. Assignments
2. Open book tests
3. Surveys
4. Listening tests
5. Observations
6. Speeches
7. Field trips
8. Group activities
9. Structured essays
10. Double entry journal
11. Creative work

12. Wall papers
13. Practical work
14. Quizzes
15. Compendium of creations
16. Question and answer books
17. Concept maps
18. Debates
19. Projects
20. Panel Discussion
21. Explorations
22. Seminars
23. Exhibitions/Presentations
24. Prompt speeches
25. Short written tests
26. Role-plays

According to the assessment procedure (Evaluation Procedure-2001) which has been in operation since 2007, the number of continuous assessments varies according to the number of hours covered by subjects in the internal period. The maximum number of assessments per subject should be implemented by the lecturers who teach the subject as a continuous assessment of 25 hours of teaching. All continuous assessments marks are very important for teacher trainees to sit the final examination. Accordingly, 60% of the overall Continuous Assessment Mark is considered for the calculation of the final evaluation marks.

The process of continuous assessing of teacher trainees' performances and progression of learning level is a difficult task. Lecturers have to continuously assess students to identify whether their students have mastered the required skills of the respected course. Smith & Malec (1995) noted that student achievement assessment is subjected to several challenging and emerging socio-economic factors around the world and that these challenges strongly affect the quality of assessment practice. This study wishes to identify the perception of the teacher trainees' in the implementation of the continuous assessment component.

educational institutions have implemented continuous assessments to evaluate learners. According to Arends (1997) assessment is the full

range of information gathered and synthesized by teachers for making decisions about their students. Anderson (2003) also says assessment is the process of gathering information to make informed decisions. According to Earl (1996), he pointed out that assessment must satisfy many goals such as providing feedback to students, offering diagnostic information for the teacher to use, provide summary information for record-keeping, proffering evidence for reports, and directing efforts in curriculum and instructional adaptations. Therefore, assessment can be explained as a process of gathering measurements individually and in groups for decision-making purposes.

A tendency in assessment is the recognition of knowledge and skills should not be assessed in isolation. Knowledge and skills should be assessed together rather than assessed separately. Obemeata and Alause (2006) state that teachers should be able to measure the learners affective and psychomotor attributes such as attitudes, motives, interests, values etc. Continuous assessment is the process of paying close attention to students, observing how students are engaged in learning activities, how they relate to the material and trying to understand what they understand. Faleyalo (1986) point out that a Continuous Assessment of learners' progress could also be explained as a mechanism whereby the final grading of learners in the cognitive; affective and psychomotor domains of learning systematically take account of all the performances during the given period of learning.

Studies have been found the problems faced by teachers and students in implementing continuous assessments. According to Quansah (2005), the current continuous assessment system includes class tests, exercises, and homework, and that problems with implementing continuous assessment include a lack of focus on projects, which are the most important learning strategies available to students, active part of their learning. A study by Kapambwe (2010) found that large class size, shortage of funds to fulfil essential resources, teachers still feel that the continuous assessments take a lot of time for teachers with a lack of adequate training teachers are factors that challenge continuous assessment implementation. A study conducted by Abera et. al. (2017) also revealed that the most challenging of continuous assessment was plagiarism, lack of feedback, large class size, shortage of time and, lack of facilities. The study conducted by Jayathilake (1997) to identify the strengths and weaknesses of

the Continuous Assessment System of the Post Graduate Diploma in Education program of Open University of Sri Lanka, who recommended the needs of the redefining the objectives of using Continuous Assessment as a method of evaluating students' achievements and restructuring the format of assignments. Also, Navaratne and Silva (2013) conducted A Study on The Effectiveness of Continuous Assessment as a Learning Tool. They recommended that it is needed to educate students on how to effectively use Continuous Assessment as a learning tool, especially at the commencement of the program.

The main objective of the study was to examine the perception of teacher trainees regarding the continuous assessment that is being implemented in the National Colleges of Education. Its specific objectives were to:

1. To find teacher trainees' perception of Continuous Assessment methods used in the National Diploma Teaching course.
2. To identify the challenges faced by teacher trainees to complete the Continuous Assessment components of the National Diploma Teaching course.

II. METHODOLOGY

A descriptive survey design has been adopted in this study. The population of the study consisted of all teacher trainees of the National Colleges of Education in Sri Lanka. The sample consisted of two hundred (200) teacher trainees randomly selected from five (5) National College of Education in Sri Lanka. I used a questionnaire to collect information from teacher trainees and mainly contained close-ended items. Depending on the types of questions, choices and rating scales were used in the questionnaire. The interview was one of the tools employed in this study to acquire qualitative data. Then the next step has been analyzing the collected data qualitatively and quantitatively. The close-ended questions and answers obtained from teacher trainees were analyzed quantitatively and interviews were analyzed qualitatively, finally, the major findings of the study were reported and realistic and feasible recommendations were forwarded.

III. DISCUSSION AND ANALYSIS

This part presents analyzed and interpreted data and major findings of the study.

A) Teacher trainees' perception of Continuous Assessment methods

Table 1 shows the responses of teacher trainees to the questionnaire provided to reveal teacher trainees' perceptions regarding continuous assessment.

Table I: Teacher trainees' perception regarding Continuous Assessment methods

Item	Agree		Undecided		Disagree	
	F	%	F	%	F	%
Continuous assessment encourages reading books related to the subject.	158	79	26	13	16	08
Continuous assessment motivates to explore new and updated knowledge.	186	93	14	07	00	00
Continuous assessment Increases our presentation and leadership skills.	140	70	48	24	12	06
Continuous assessment helps to share our knowledge with others.	200	100	00	00	00	00
Continuous assessment helps to do collaborative learning.	135	67.5	65	32.5	00	00
Continuous assessment provides a practical approach to the theory we learned and opportunities to apply theory into practice.	171	85.5	10	05	19	9.5

According to table1, the Majority of teacher trainees (158, 79%) mentioned that continuous assessment encourages them to read books related to the

relevant subject. There is a perception of continuous assessment by reading books to explore information related to continuous assessment. 186, 93% acknowledge that continuous assessment motivates them to explore new and updated knowledge. 7% of teacher trainee hadn't decided that continuous assessment motivates to explore their knowledge. Most of the teacher trainees (140, 70%) responded that continuous assessment enhances teacher trainee presentation and leadership skills. It's said that the Majority of teacher trainees are engaged in continuous assessment and that there is a good understanding of continuous assessment. It is revealed that teacher trainees are accepted as a tool for sharing knowledge by everyone (200, 100%) acknowledging that continuous assessment helps to share knowledge with others. While the majority of teacher trainees (135, 67.5) acknowledge that continuous assessment helps in collaborative learning and that not a single student disagrees with the above statement, continuous assessment tests revealed that there is an understanding continuous assessment helps to create a collaborative learning environment among teacher trainees. From the below table Many teacher trainees have recognized that continuous assessment gives them a practical approach to the theory they have learned and the opportunity to put the theory into practice. It is revealed that teacher trainees have a perception that continuous assessment can be used in practice situations with the theoretical facts which have been learned before, which means the theory comes to practice.

In addition to the questionnaire, an interview was conducted to reveal the perception of the continuous assessment. A summary of the responses given by the teacher trainees is included in Table 2.

Table 2: Responses of teacher trainees on continuous assessment

Responses of teacher trainees
Continuous assessment extends learning.
Continuous assessment means continuous testing.
The amount of continuous assessment tests to be done varies according to the time allotted to each subject.
Continuous assessment tests should be conducted for each subject.
Tools of continuous assessment include assignments, presentations, short written tests, group activities, projects, Field trips, Wall Papers and observations

The above findings from the questionnaire and interview confirmed that teacher trainees have a good perception of continuous assessment. The continuous assessment methods used by the lecturers were given for teacher trainees to choose from the list provided and the responses received are given in Table 3.

Table 3: Continuous assessment methods used by Lecturers

Continuous Assessment methods	Agree		Disagree	
	F	%	F	%
Assignments	200	100	00	00
Group activities	200	100	00	00
Field trips	200	100	00	00
Projects	200	100	00	00
Wallpapers	200	100	00	00
Creative work	193	96.5	07	03.5
Short written tests	186	93	14	07
Exhibitions/Presentations	181	90.5	19	09.5
Structured essays	167	83.5	33	16.5
Roleplays	158	79	42	21
Practical work	149	74.5	51	25.5
Observations	125	62.5	75	37.5
Listening tests	104	52	96	48
Explorations	101	50.5	99	49.5
Compendium of creations	98	49	102	51
Concept maps	85	42.5	115	57.5
Speeches	72	36	128	64
Panel Discussion	70	35	130	65
Question and answer books	45	22.5	155	77.5
Debates	19	9.5	181	90.5
Open book tests	00	00	200	100
Prompt speeches	00	00	200	100
Quizzes	00	00	200	100
Surveys	00	00	200	100
Double-entry journal	00	00	200	100
Seminars	00	00	200	100

According to Table 3, all teacher trainees (200, 100%) are selected to carry out continuous assessment methods such as assignments, group activities, field trips, projects, and wallpapers, revealing that these methods are frequently used by lecturers. In addition, more than 50% of respondents said they do creative work (193, 96.5), short written tests (186, 93%), presentations (181, 90.5), structured essays (167, 83.5), role-playing (158, 79%), practical work (149, 74.5%), observations

(125, 62.5%), Listening tests (104, 52%) and exploration tests (101, 50.5%). Compendium of creations (98, 49%), concept maps (85, 42.5%), Speeches (72, 36%), panel discussions (70, 35%), Question and answer books (45, 22.5%), debates (19, 9.5%) Were also found to be functional to some extent. However, on responses of teacher trainees Open book tests, Prompt speeches, quizzes, surveys, Double-entry journals, and Seminars do not implement by lecturers and it's revealed that lecturers do not provide teacher trainees with training on all continuous assessment methods.

B) The challenges faced by teacher trainees to complete the Continuous Assessment Component

Table 4 shows the challenges faced by the teacher trainees in completing the continuous assessment from the questionnaire.

Table 4: Responses of teacher trainees' regarding the challenges in completing the continuous assessment

Item	Agree		Undecided		Disagree	
	F	%	F	%	F	%
Time management is not difficult due to the continuous assessment tests provided for each subject.	18	09	44	22	138	69
Library facilities are sufficient to search for information for continuous assessment tests.	82	41	43	21.5	75	37.5
The time allotted for using the library to search for information for continuous assessment tests is sufficient.	11	5.5	49	24.5	140	70
Permission is granted to use the computer lab to perform continuous assessment tests.	00	00	00	00	200	100
There is free internet access to search information for continuous assessment tests.	00	00	00	00	200	100

National College of Education has the facilities to print and bind written assignments.	20	10	00	00	180	90
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Table 4 revealed that the majority of teacher trainees (138, 69%) do not agree with the statement that time management is not difficult due to the continuous assessment tests that must be completed for each subject. The National Diploma in teaching course is a residential vocational training course which runs from 5 am to 6 pm. The above statement may not be consistent with the amount of activity that needs to be done during that time. 41% agree with the statement that library facilities are sufficient to search for information for continuous assessment while 37.5% disagree. Also, 21.5% gave a moderate response to the above statement. According to those responses, the teacher trainees may have responded in such a way as they have adequate library facilities in their national college of education. The majority of teacher trainees (140, 70%) responded that the time allotted for using the library to search for information for continuous assessment tests was insufficient. Library facilities are available to some extent, but due to the daily schedule, the time allotted for its use may not be sufficient. The response of the entire sample (200, 100%) to the fact that it does not permit the use of the computer lab for continuous assessment testing reveals that it does not permit the use of computer laboratories for purposes other than teaching and learning and outside of the specific teaching and learning period. Also, the entire sample (200, 100%) has responded that there is no free internet facility in the national college of education to search for information for continuous assessment tests. It is revealed that free internet facilities are not provided for the use of teacher trainees in the learning and teaching process and this is a problem encountered in completing continuous assessment tests. Assignments and a Compendium of creations given by lecturers should be submitted creatively. The necessary facilities for that should be available from the national college of education. The vast majority of teacher trainees (180, 90%) disagreed with the statement made in this regard, revealing that such facilities do not exist in colleges.

In addition to the questionnaire, information was also collected from the interview. The responses received are shown in Table 5.

Table 5: Challenges faced by teacher trainees to Complete the continuous assessment Component

Challenges mentioned by teacher trainees
Assignments to be completed by studying various sources should be completed and submitted within a short period
Failure to provide clear guidelines on how to complete continuous assessment tests
Lack of adequate books and new publications in the library
Lack of facilities to type, print out, photocopy and bind assignments given
Some lecturers conduct personal evaluations some lecturers take a long time to give marks to teacher trainees or do not give marks.
Lack of adequate time for continuous activity assessment trials
Not everyone has the opportunity to do some presentations
Some members of the team did not contribute

The responses from the interview sample summarized above confirm the findings of the questionnaire and also revealed that teacher trainees face other problems.

IV. CONCLUSION

In general, it can be concluded that the overall implementation of continuous assessment in the National College of Education was good. Also, it can be concluded that there is a good perception of continuous assessment as they have an understanding that continuous assessment develops the knowledge, attitude, and skills of the teacher trainees. Moreover, it can be concluded that the lecturers of the National Colleges of Education do not implement all the continuous assessment methods and provide complete training to the teacher trainees in this regard. Furthermore, it can be concluded that teacher trainees face problems due to a lack of adequate facilities in the National Colleges of Education in completing continuous assessment components.

Based on the findings of this study, the following recommendations were made:

1. Academic section of National College of Education should systematically regulate whether lecturers implement proper training on continuous assessment methods for teacher trainees in each subject.

2. Other facilities such as library facilities and internet facilities required to complete the continuous assessment examinations should be increased in the National Colleges of Education.
3. Sources such as books, magazines, and researches should be provided to study the information needed to write assignments, and the library should be open on weekends as there is not enough time on weekdays to use it.
4. Lecturers should be informed about the marks (grades) obtained by the teacher trainees for each continuous assessment test.

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Attitudes of Tertiary-Level English Learners in Sri Lanka Towards Online Learning: A Study Conducted During the COVID-19 Pandemic

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Abstract— The global COVID-19 pandemic has become a hindrance to the education system. To secure both student lives and the continuation of studies, the traditional education system has been compelled to shift to virtual classroom mode which links both teachers and students online. In order to investigate the student attitudes towards the new virtual classroom concept, an online questionnaire was shared among a sample of hundred tertiary level ESL students from state universities across Sri Lanka. The research followed a mixed method. The questionnaire was structured employing varied types of questions and a Likert Scale to collect data. The key findings reveal that the majority of students face varied issues as a consequence of the abrupt change to online learning. In addition to that are issues such as acceptability struggle, ESL classrooms with different teaching/learning approaches, the struggle of merging them with the online learning concept, inability to develop language skills, students being unaccustomed to online tests and being distracted by external barriers. Moreover, learners from developing countries like Sri Lanka face various challenges such as signal strength and technological affordability.

Keywords— *online learning, ESL learner attitudes, COVID-19 pandemic*

1. INTRODUCTION

The global Covid-19 pandemic caused tremendous changes to the human lifestyle in such a way that within a period of fewer than two years, every activity has come to halt due to travel restrictions and lockdowns. Consequently, in daily functions, many public sectors were forced to shut down disrupting many lives along with their economies. Owing to 21st-century technological developments and innovations, people started exploring new ways to resume their daily work. Amongst them, the education sector took a major leap by shifting the traditional classrooms to virtual classrooms. Online

learning/E-learning/web-based learning any name deems came to light during this era.

Online learning is a classroom where a group of students and their teacher connect via an online platform with the help of electronic devices. Online learning has to come to the spotlight with the benefits it offers such as flexibility, convenience and most of all security.

A. Literature Review

A considerable number of studies have been done on virtual learning related to the Covid-19 pandemic. Agung et al (2020) conducted a study on English majoring Indonesian students who revealed connection issues, inability to access resource materials and assignments. Similarly, Febrianto et al (2020) conducted an attitudinal research on some college students that revealed similar issues with internet access, lack of financial support to afford devices and internet packages thus, contributing to negative attitudes. Additionally, Agormedah et al's (2020) study on Ghanian university students revealed that the students had a positive attitude toward online learning. However, they stated some issues the students had with regards to affordability of devices, internet access, and unawareness that hindered their online learning process.

As the above studies reveal, common issues such as accessibility to the internet, connectivity and device affordability are the most common issues with regards to online learning.

B. Statement of the Problem and Research Questions

Despite the benefits of online learning, a shift from one method to another on such short notice has its downsides on the victim. Human mindset functions in a manner to establish themselves in a long-term habit. Thus, adapting to a sudden change causes inconvenience. Amidst these psychological issues lies the practical issues such as lack of awareness, employment of strategies, resource collection and its dissemination.

Moreover, the sudden shift from traditional classrooms to online classrooms has left both students and teachers in a difficult situation especially, language learning due to its different requirements such as interaction and active engagement in classroom activities. Therefore, the researchers intend to explore criteria such as; affordability of internet access and devices, language skills development in physical vs online settings. Thereby aiming to answer the questions;

- i. What are the attitudes of undergraduate ESL students in Sri Lanka towards online learning?
- ii. Do they feel online learning is effective for a language class?

C. Significance of the Study

This study signifies to perceive the efficacy of online learning with issues such as affordability and connectivity, and to the extent language skills could be developed in a virtual environment. In collecting this data, the researchers aim to propose possible solutions to the underlying issues.

II. METHODOLOGY

A. General Goal

This study aims to measure tertiary level ESL students' attitude in Sri Lanka towards online learning during the Covid 19 pandemic. Additionally, the research observes how the students' self-analysis of the development of their second language speaking and writing skills during the virtual learning period has affected their overall attitude towards online learning.

B. Research Type Population and Sample of the Study

A mixed-method was employed in the analyses of this study. The quantitative data was analysed statistically. For the qualitative analysis, patterns and common points were sought in the gathered data and analyzed descriptively. The sample used in this research is represented by undergraduate students of state universities in Sri Lanka. The questionnaire was distributed amongst the Eleven (11) major state universities in Sri Lanka. A sample of 100 respondents was selected for the study.

C. Instrument of Data Collection

This research study was conducted through a questionnaire developed through careful analysis of literature. Following the standard ethical protocols, the questionnaire was self-administered and the

respondents' consent was taken before proceeding with the questionnaire. Overall, the questionnaire included twenty-two (22) questions. The chosen analyzing model for the questionnaire consisted of four types of questions: ten (10) yes/no, three (3) multiple-choice, five (5) Likert-scale, and one (1) open-ended question. The four types of questions were organized under four (4) major themes: learner background, technological access related information, learner personality, and self-assessment on academic improvement.

D. Validity and reliability of the research instrument

Participants being tertiary-level students were assumed to have no major problems in processing an online questionnaire. Moreover, based on their proficiency level in academics, it was assumed that they have the capability of assessing their language improvement at the most basic level. Furthermore, the questionnaire was provided under the two mediums: Sinhala and English to ensure the respondent's understanding of the questions.

E. Data Collection and Analysis

The primary data collection tool for the study was the questionnaire designed using an online survey tool. It was distributed using social media platforms and was opened for responses for five (5) days. Initially, the collected data were categorized and summarized to obtain a better classification. Numerical data were analyzed through spreadsheet tools, and charts were designed to acquire a better projection. Considering qualitative data, identification of the common themes and relationship between data was built through visible repeated patterns in the responses. As the final summarizing, links between the findings, the research aim and hypotheticals were built up descriptively.

III. Results

The statistical data collected through the questionnaire are listed below. Fifty-one per cent of the participants revealed that they are familiar with online learning while 49% revealed that they are not familiar with the online learning method. Eighty-seven per cent of the participants claimed that they face network issues when joining classes. Sixty-five per cent ranged their income from 25 000 to 35 000. Four per cent of the participants mentioned that their income is below Rs.25 000. Twenty per cent, 5% and 6% of the participants have ranged their family income from Rs.35 000 to Rs.45 000, Rs.45 000 to Rs. 55 000, and over Rs.55 000 respectively. Seventy-one

per cent of the participants chose mobile phone as the main device for online lessons while 29% chose laptop or desktop computer. The majority (76%) of the participants agreed to the fact that their English language classroom is different from their other classes.

IV. DISCUSSION

The results obtained can be discussed section-wise in the following manner.

A. The effect of the participants' economic background on their attitudes towards online learning.

According to the cost of living index 2021, the estimated average living cost of a family of four is Rs.404,51 and the estimated monthly living cost per person is Rs.10 112. Per the data, the family income of the majority of the participants is in between Rs. 25 000- Rs. 35 000 and below 25 000 (69% of the participants).

Compared to the cost of living index, the majority of the participants have an average or below the average income. Correspondingly, the majority accepted that they face financial problems regarding data packages (65% of the participants). Furthermore, the majority of them (71%) claimed that they use mobile phones for online lessons while 29% of them claimed that they use laptops or desktop computers. The majority of them commented that the data cost and device cost are unaffordable while the rest mentioned that they have no issues except for the low network bandwidth. Therefore, the economic background of the learners directly influences their attitudes towards online learning.

Table 1. Co-relation between the economic background of the participants and their attitude towards online learning

Question	Family income	Which device do you use to join classes?	Do you face monetary issues concerning data packages?
	Below 25 000- 4% 4 participants out of 100	Mobile phone- 71% 71 participants out of 100	Yes- 69%- 69 participants out of 100

Responses for each trait	25 000- 35 000- 65%- 65 participants out of 100	Laptop/ desktop- 29%- 29 participants out of 100	No- 21% 21 participants out of 100
	35 000- 45 000- 20%- 20 participants out of 100		
	45 000- 55 000- 5%- 5 participants out of 100		
	Above 55 000- 6%- 6 participants out of 100		

B. The English Language Classroom And Online Learning

The majority (76%) of the participants agreed with the fact that their English language classroom is different from their other classes. They reach the agreement that English language sessions are more interactive, engaging and student-centred, however, network/ internet connection issues often hinder these kinds of interactive sessions.

C. Attitudes Towards Developing Speaking Skills

The majority (61%) of the participants agreed with the fact that their speaking skills are developed because of online sessions. As the comments reveal, the shy and introverted students that do not speak much in physical classrooms tend to speak more in the online sessions. For them, online learning has become a motivational factor. Therefore, online learning has a positive effect on the learners' speaking skills. However, as the majority mentions, the speakers often get disconnected from the sessions due to network issues and it takes a lot of time to reconnect.

D. Attitudes Towards Developing Listening Skills

The participants mentioned that during listening activities they often encounter hearing problems due to network issues (87%). Some participants have mentioned that during their recent listening activities they could not hear anything at all. Therefore, on the topic of developing listening skills through online lessons, the majority of the participants bear negative attitudes.

E. Attitudes Towards Developing Writing Skills

The majority accepted that their writing skills do not develop through online lessons. According to their comments, when typing in word processing software, they know that the software would detect the spelling errors so that they can immediately correct them. As a result, they would not pay attention to spelling at all. Moreover, there is no room for one-to-one feedback sessions. Therefore, unless compulsory they do not do many writing activities and even skip sessions that are focused on developing writing skills.

F. Attitudes Towards Developing Reading Skills

According to the data collection, the participants have a neutral attitude towards the effect of online learning on reading skills. On a Likert scale scaled from 1- 5, the majority has selected the 3rd scale. All in all online learning has a positive impact on developing speaking skills but a negative impact on the other three language skills.

G. Attitudes Towards Online Tests

The majority (67%) of the participants do not like the concept of online tests. As they comment, the majority is not fast enough to type and submit the answers within the given time. Some students comment that online tests do not feel like tests. Therefore, they cannot do their best in the tests. Some have also mentioned that they get easily distracted during online tests because they are at home and cannot take the tests seriously. Thirty-three per cent mentioned that they prefer online tests because most of the time the tests are open-book and they feel more comfortable at home and can concentrate well on the test.

H. Acceptability/ Adaptability Struggle

As the data reveal, 49% of the participants are not familiar with the online mode of learning. According to Volkow (2012), the human brain takes 66- 254 days to become fully familiar with a new routine. Similarly, as the university students are used to the in-class learning background it will take a while for them to become fully familiar with the virtual class and online test concepts. Some of the participants' comments regarding online lessons are quoted (as it is) below.

"It is not 100% comfortable and success than in class learning",

"Lecturing in lecture hall is much better",

"Physical lectures have more impact on education than online learning",

"It's not real"

"Hard to concentrate"

"I can't learn properly"

"Environment matters when learning"

The above comments reveal that the students are still not ready to accept the change in learning background and are passing through a period of acceptability (adaptability) struggle which directly influences their attitudes towards online learning.

I. Frustration and Anxiety Issues

According to the responses, there is less space for collaborative group projects and pair work. In cases where the teachers ask individual questions, they feel as if they are targeted or threatened because of the physical absence of their peers. Accordingly, the majority feels as if they are deprived of social interaction that might lead to increased stress, frustration, anxiety, avoidance of lessons and notable behavioural changes.

In addition, there was no correlation between gender and attitudes towards online learning. There is no correlation between the seniority level of the students and technological awareness and attitudes towards online learning either. Overall, the network issues and the financial situation play a major role in the participants' negative attitudes.

V. CONCLUSION

In conclusion, it can arrive at that the traditional/physical classrooms still hold a higher preference among the learners based on the issues related to internet access, connectivity, affordability of devices and lack of the achievement of learner outcomes. Therefore, the researchers suggest that the authority should take necessary steps to provide required data packages and ensure the students are well-equipped to attend online classes, strengthen signal locators to minimize connectivity issues and enlighten the educationists to take the maximum advantage out of the online platforms and the tools it has to offer. Additionally, the students should be provided with the required psychological guidance to beat the anxiety and frustration. If these primary issues are resolved, the attitudes of students towards online learning may change.

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Assessing the e-Learner Autonomy among ESL (English as a Second Language) Learners in Higher Education Institutes, Sri Lanka

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Abstract— Learner autonomy (LA) is defined as the readiness to assume responsibility for learning in the service of one's needs and purposes. LA entails one's capacity and willingness to act independently and cooperate with others as a socially responsible person. There is a dearth of studies conducted on e-learner autonomy among ESL (English as a Second Language) learners in Sri Lanka. Hence, this cross-sectional study aimed to assess the e-Learning Autonomy (e-LA) of ESL learners in higher education institutes in Sri Lanka. An online questionnaire that consisted of two sections, i.e. the socio-demographic data and e-learning autonomy scale, were shared in social media for two weeks and responses were received. Data were analysed using SPSS 23.0 version. Shapiro-Wilk test revealed that the data are not normally distributed on the e-LA score. The descriptive statistics (frequency, percentage, mean and standard deviation), Mann-Whitney U test, Kruskal-Wallis test were performed to find the associations. During the given two weeks, 154 participants responded to the study, and the majority were females (62.3%). The mean e-LA score of the study sample was 31.10 ± 2.78 , which was lower than the original study. There was a statistically significant association between the level of e-LA and the academic stream ($p < 0.05$). However, e-LA had no statistically significant associations with gender difference, academic years, and satisfaction with internet facilities or satisfaction with the instructor/lecturer support ($p > 0.05$). The lecturers' necessary interventions and the students' commitment are crucial in improving e-LA among ESL learners in Sri Lanka.

Keywords— *e-learner autonomy, English as a Second Language, ESL learners*

I. INTRODUCTION

There has been a clear paradigm shift in language pedagogy, shifting from teacher-centred pedagogy to a learner-centred approach. In the modern context,

professional teachers admire independent learners and encourage Learner Autonomy (LA) as the primary goal, where learners are self-directed, taking responsibilities for their learning (Harmer, 2007). Holec first introduced the LA approach to language teaching through his work 'Autonomy and foreign language learning', published by the Council of Europe in 1979 (Holec, 1979).

E-learning plays a vital role in promoting LA and generally defined as the acquisition and usage of science that is dispersed and enabled by electronic media (Warni et al., 2018). The commonly used mediums that facilitate e-learning are mobile devices, laptops, tablets, personal computers and personal digital assistants (PADs) (Georgiev et al., 2004). In addition, the high levels of flexibility of space and time provided by the e-learning enable each student to have better management in their studies based on their own needs (Goulão and Menedez, 2015).

Distance education is based on the concept that the students will learn on their own unrestrained by temporal and spatial boundaries (Firat, 2016). Hence, it is evident that one of the crucial competencies required for the success of distance learning is learner autonomy. Therefore, learner autonomy is a core aspect in gaining success via distance learning (Lynch and Dembo, 2004), and an autonomous learner is a lifelong learner with a high level of independence (Betts, 2004).

The core idea of being autonomous is when the learner becomes responsible for his or her success in learning. Moreover, Holec has also pointed out that autonomous learning can also be identified as self-directed learning. It frequently occurs with the type of learning done with technology or Computer Assisted Language Learning (CALL), distance education, and personal access learning (Holec, 1979). Being autonomous means achieving the success of self-learning both theoretically and

practically (Smith, 2008), and when it comes to the autonomy of ESL learners, they can control and monitor their learning process without being enforced. Freedom of choice plays a dominant role in developing autonomy (Andrade and Bunker, 2009). In a standard classroom setting, the general practice is that the students heavily depend upon the input of their lecturers rather than depending on the choices of their own. The core necessity for a learner in his or her decision on selecting the style or the mode of learning is not about being governed by the instructors as the decision-makers, but when he or she is nurtured with the supportive guidance to discover the choice on his own (Andrade and Bunker, 2009). The capacity owned by the ESL learners in practising autonomous language learning is a key to successful learning (Muhammad, 2020).

Benson (2011) stated that to encourage learner autonomy, there should be proper control of three dimensions. Initially, there has to be a control of learning management which means that the learner is aware of when, where, how to learn the targeted language (Huang et al., 2019). Secondly, it is vital to control the materials used in learning, which means that rather than heavily depending on the materials recommended and given by the lecturers, the students attempt to explore new sources of knowledge. Thirdly, there has to be a control over the cognitive process. It will facilitate the learners to better control their psychological aspects (i.e. their belief, emotions, and motivation) that determine the success of their learning (Benson, 2011). For the learners to have better control in their learning, it is necessary to reason and create reflections on their language learning (Little, 2009).

LA has represented an answer to the challenges facing 21st century education (Blidi, 2016) and is a significant learning outcome of higher education across many nations globally (Henri et al., 2018). Indeed, LA has been considered a vital element in English language teaching and learning for approximately forty years, with an increasing number of publications on LA (Ahmed et al., 2011; Benson, 2009; Chuying, 2017; Little, 2020). Moreover, research has shown that LA is the key to vocabulary development (Almusharraf, 2018).

LA may have particular relevance in developing countries, where a dissonance often exists between what formal education offers and what many learners want or need (Smith et al., 2018). Nevertheless, there is a likelihood that in Sri Lanka, it is not a familiar concept, and thus, several studies are

conducted on LA among English language learners (Alfred, 2015, 2015; Dayananda and Yapar, 2020; Premawardhena, 2008). However, there is a dearth of studies conducted on e-learning autonomy on ESL learners in Sri Lanka. Therefore, this study aimed to assess the e-Learning Autonomy of ESL (English as a Second Language) learners in higher education institutes in Sri Lanka.

II. LITERATURE REVIEW

A study conducted among the students from Indonesia and Queensland has proven that e-media played an influential role in improving the language ability of the students (Hoven, 2001). Further, learning English via distance education can increase the students' motivation to be more autonomous. The students are allowed to use their personal computers and other electronic equipment at home when learning English. Liaw (2010) has carried out a cross-cultural e-mail project with bilingual or ESL pre-service teachers in the United States (Liaw, 2003).

Another study conducted by Sung, Chang, and Yang (2015) claims that mobile phones can increase learners' autonomy in learning a language (Sung et al., 2015). When the students get engaged in language learning via mobile devices, they can control their learning. For example, they can decide the convenient time, pace and place. Moreover, this enhances the students' motivation to interact and engage in cooperative learning with their lecturer and peers. In addition, the students can investigate more knowledge from the internet while they learn via electronic devices. Further, the researchers have highlighted the importance of the guidance given by the teachers and lecturers in improving the e-LA in language learning. The main reason behind this is that there is a high tendency among students to get distracted when they use electronic sources (Muhammad, 2020).

A qualitative study was carried out at the English Education Department of State Islamic University Mataram concerning twenty-five students in a Discourse Analysis class. The study's findings revealed that many shy and backwards students in the face-to-face language classes had become very expressive and confident in the online classes. This has proven that distance education has improved the students' confidence and has become autonomous learners. Further, in that study, the students were given the freedom to choose the most convenient mode for learning (Muhammad, 2020).

Murray, 2014 revealed that collaborative learning and the students' interaction help develop autonomy in learning (Murray, 2014). Another significant factor that leads to increased learner autonomy when learning English via distance education is the freedom given to the students to choose the best mechanism of learning based on their preferences. They can use any electronic device that they prefer to modify and adjust their English language learning (Sung et al., 2015). When the students become independent in their decision making, they gain the ability to accomplish autonomously in their language learning (Huang et al., 2019).

A research study was conducted in Turkey to assess the perceptions of learner autonomy among students following a Massive Open Online Language Course (MOOLC). The findings of the study revealed that the English MOOLC students had high levels of autonomy. They were also willing to be more accountable for their learning. Further, there was an optimistic inclination among the students regarding autonomy. The mixed-method was used to assess the perception of the study population regarding learner autonomy. Moreover, a Learner Autonomy Questionnaire developed by Joshi (2011) was used as a data collection tool (Joshi, 2011). The Autonomous Learning Activity Scale (ALAS), comprised of seven dimensions, was used to analyze the data (Misir et al., 2018).

A study was carried out in Bangladesh to examine the teachers' usage of learner autonomy in English Language teaching. It was designed as an exploratory study grounded on a mixed-method model. The quantitative data and the qualitative data were collected using a self-report Likert scale questionnaire and semi-structured telephone interviews, respectively. The results of the study revealed that there is a deficiency of learner autonomy among the students. Therefore, the study has revealed that the teachers have not fully implemented learner autonomy. Further, the study has suggested conducting further investigations through research on this field and facilitating the teachers' necessary guidance to implement the learner autonomy in English language classes at the tertiary level (Jamila, 2013).

Research carried out in Indonesia to assess the students' perceptions of using technology to learn English outside the classroom concerning the development of students' autonomy capacity in learning English. The study sample comprised of students of a private Senior High School in South

Tangerang. The quantitative data and the qualitative data were collected using questionnaire and semi-structured interviews, respectively. The study has revealed that technology usage in learning the English Language has become an encouraging source in developing learner autonomy among the students. Further, it has strengthened the process of learning, level of enthusiasm, metacognitive awareness, self-esteem and social skills among the students.

III. METHODOLOGY

The data collection was carried out during the outbreak of the COVID-19 pandemic. An online questionnaire developed in English was shared on the social media networks (i.e., Facebook, WhatsApp, Viber) for two weeks to receive the completed questionnaires. The study sample comprises ESL learners of higher education institutes in Sri Lanka who study via distance education. The informed consent for attending the study was also taken online from the participants, once the purpose and the objectives were explained through an online statement before the questionnaire. The questionnaires did not consist of any sensitive questions that would create psychological embarrassment/ trauma. Furthermore, the participants were informed that they could leave the study at any time, and departure from the study does not affect academic activities.

Moreover, all participants were informed that their participation is voluntary, and there are no incentives or rewards for their contribution to the study. Furthermore, the participants were empowered to ask the queries on the questionnaire by providing them with the contact details of the researchers. The researchers assured the participants that all personal information gathered from the participants would be kept confidential and will not be released in public under any circumstance. The soft copies of all the data were stored and protected with a unique password, and hard copies generated were stored and kept locked in a secure place. After five years, all the data will be deleted to secure the participants' privacy and confidentiality.

The questionnaire consisted of two sections (Section A and B). Section A composed of questions regarding demographic information and distance education. A pilot study was conducted on section A among ten ESL learners to determine the difficulty level of the items, ease of understanding of concepts in the items, any discomfort when responding, and the

appropriate length of the questions before the data collection. The students who participated in the pilot study were not allowed to participate in the main study. Section B consisted of the e-Learning Autonomy Scale (e-LAS), which measures the e-Learning Autonomy of Distance Education Students. Cronbach's α coefficient was found to be $\alpha = 0.952$, proving that the scale is very reliable (Firat, 2016). In addition, the response to each item was scaled on a Likert scale of one to five (1- Strongly Disagree, 2- Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree). The written permission to adopt and use the scale was obtained from its developer (Firat, 2016).

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 23.0 to obtain descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics. As the distribution of the e- LA score were not normal in Shapiro Wilk test, non-parametric tests were used to study the relationships between the socio-demographic variables and the e-LA score. The Mann-Whitney U test for two independent samples was used to compare variables like gender with e-LA. The Kruskal-Wallis test was used with pairwise comparison like academic year and the academic stream. Statistical significance was established at the 0.05 level.

IV. Results

A. Socio-Demographic Data

During the given two weeks, 154 participants had responded to the study. According to the data, the participants' mean (\pm SD) age was 22.43 (\pm 3.68). The majority of the participants were females (62.3%, n=96), and 67.5% of the study population were from the Law stream. When considering the academic years, 41.6%, 22.7%, 16.2%, 19.5% were from the first, second, third and fourth academic years. Furthermore, 66.2% stated that distance education is a good way of acquiring knowledge as a university undergraduate, and 69.5% were satisfied with the support given by the instructors/lecturers in distance education. On the other hand, 50.6% were not satisfied with the internet facilities available to them for distance education, and only 20.8% preferred distance education over face-to-face learning (Table 1).

Table 01. Socio Demographic data

Demographic characteristics	Frequency	Percentage (%)
Age	Mean=22.43 SD \pm 3.68 Range = 18 -39 years	
Gender	Female 96 Male 58	62.3 37.7
Academic stream	Law 104 Computing 23 Engineering 14 Medicine 7 Management 4 Social Science & Humanities 2	67.5 14.9 9.1 4.5 2.6 1.3
Academic year	1st year 64 2nd year 35 3rd year 25 4th year 30	41.6 22.7 16.2 19.5
Distance education is a good way of acquiring knowledge as a university undergraduate	Yes 52 No 102	33.8 66.2
Satisfied with the support given by the lecturers in distance education	Yes 107 No 47	69.5 30.5
Satisfied with the internet facilities available for distance education	Yes 76 No 78	49.4 50.6
Prefer distance education over face-to-face learning	Yes 32 No 122	20.8 79.2

Sample (n= 154)

B. e-Learner Autonomy

The mean e-LA score of the study sample was 31.10 ± 2.78 , and the majority of the participants (59.1%) had a low level of e-LA. The e-LA had no statistically significant association between the two genders, and among academic years ($p > 0.05$). Further, the satisfaction to internet facilities or satisfaction on the instructor/lecturer support had no significant associations with e-LA ($p > 0.05$). However, e-LA had a statistically significant difference between the academic stream ($p < 0.05$). (Table 2).

Table 2: Association between socio-demographic data and level of e-LA.

Variables	P value
Gender	0.951
Academic stream	0.035
Academic year	0.223
Distance education is a good way of acquiring knowledge as a university undergraduate	0.058
Satisfied with the support given by the instructors/ lecturers in distance education	0.227
Satisfied with the internet facilities available to you for distance education	0.093
Prefer distance education over face-to-face learning	0.533

V. DISCUSSION

This study was conducted to assess the e-LA of ESL learners in Higher education institutes in Sri Lanka. The mean e-LA score was 31.10 ± 2.78 and it was lower than the study (37.97 ± 8.54) conducted among the students from Anadolu University, Turkey by the developer of the scale (Firat, 2016). This shows that Sri Lankan ESL learner has a comparatively lower e-LA than the previous study conducted on the same scale. Therefore, necessary measures should be taken to increase the e-LA among ESL learners in Higher educational institutes, Sri Lanka.

The e-LA had no statistically significant association with gender in the current study, similar to the study conducted in Turkey (Firat, 2016). Further, the level of satisfaction on the internet facilities had no significant association with the e-LA score. However, a similar study conducted by the developer on the e-LA Scale found out that e-LA score is directly proportional to the level of ICT use (Firat, 2016).

Moreover, another similar study has noted that using e-media from mobile learning is quite effective in enhancing learners' autonomy in language learning (Sung et al., 2015). Furthermore, in the current study, LA had no significant association with satisfaction and the instructors/lecturers' support received in distance education. In a similar study, it was suggested that the teacher role in guiding and assisting students to use the appropriate mobile platform is essential to gain better autonomy since the mobile platform is the only machine or software that does not automatically improve autonomy; thus, the students will be distracted with unrelated sources (Sung et al., 2015).

VI. CONCLUSION

The majority of the ESL learners in the study population were having comparatively low e-LA than the previous study conducted on e-LA using the same scale. Hence, the necessary interventions and commitment on both parties: teachers' and students', are crucial in enhancing the e-LA among ESL learners. Further, curriculum updates should address the e-LA of the ESL learners engaged in distance education.

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Adopting Synchronous Teaching Technologies in Online ELT Classrooms During the COVID-19 Pandemic at Technological Education Institutes

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Abstract— During the global pandemic, the entire education process has evolved significantly over the online platform by integrating technologies. Thus, the teaching/learning process has raised new challenges and opportunities. In the traditional classroom, the learning environment is much more effective due to the inherent synchronous method. However, the online teaching approaches are also enriched by adopting different synchronous approaches such as online teaching over video conferencing, use of instant messages during the class, and Zoom breakout rooms and Google Docs for online activities to deliver sessions same as a physical classroom. The research question is about approaches to adopt synchronous teaching methods effectively, which is based on the hypothesis, whether the technologies are effectively adopted to deliver the true experience of synchronous teaching for the learner. In methodology, the literature is the priority consideration to understand the present use of technologies, then a group of English lecturers from Sri Lanka Institutes of Advanced Technological Institute (SLIATE) selected based on the purposive sampling for a semi structured interview, and their shared experiences were recorded and then analysed based on thematic analysis. Secondly, to understand the learning experience via the online platform, the online structured questionnaire was delivered to the students at the same technological institute who learn English as a Second Language using different technologies, and those quantitative responses were analysed descriptively to understand their trends. The findings over the mixed method are incorporated to describe the scenarios in detail, then the recommendations are raised for effective implementation of synchronous approaches for online classroom assuring similar experience as in the physical classroom. The theoretical framework

is the outcome of this study to assure a better teaching-learning process.

Keywords— *English language teaching, synchronous technologies, online teaching approaches*

I. INTRODUCTION

The ongoing global COVID-19 pandemic which started in early 2020 influenced the disruption of physical face to face classrooms at every level of education in most countries around the world (Bozkurt A et al., 2020), Due to the large scale of social restrictions of the governments to reduce the spreading of this pandemic, various institutions boost the teaching/learning process via online platform to reduce people's movement in education institutions. As per Talebian et al., (2014) to engage with the online class, any suitable platform should be utilized by both teachers and learners. And to promote learning activities, E-learning should be raised the use of information and technology (Zhou et al., 2020). So, numerous educational institutions adopt information and technology applications in virtual learning classrooms (Al-Mubireek, 2019). English language teachers in all disciplines had to tolerate the situation to find alternative modes of teaching to keep interacting with their learners' synchronous manner.

In the technological education system, Sri Lanka, the examples of the most popular applications functioning these days for teaching online are Zoom, Google Meet, Microsoft Teams, Google classroom, Google forms, Google documents, YouTube so on. Some of these applications are for live teaching sessions, some for homework and assignment submissions, creating quizzes, and creating interesting PowerPoints.

According to the idea of Verawardina et al. (2020), the E- learning class provides two alternative models, such as synchronous and asynchronous. Synchronous mode is a kind of virtual learning that

facilitates user to conduct whole learning activities through an online class. Conversely, asynchronous learning happens virtually through prepared resources, in the offline process without a real-time teacher. With the technological advancements at present, teachers are eager to applying different synchronous features for their online sessions through video-conference software as Peachey (2017). However, teaching synchronously via online platform has become an additional challenge for teachers since it requires specific skills including the facility to teach and communicate content across a screen, occupy educators with two-dimensional images, keep interaction with students in the digital classroom and attend for students' emotional needs across the distance by maintaining an intellectual relationship and troubleshoot technical errors (Rehn et al., 2018). At the same time the use of multimodal actions such as facial expressions, gestures, eye contact etc. to maintain the interaction between teacher and students in the physical classrooms, can function differently in a synchronous virtual classroom since it depends on the access and the position of cameras and participants screen size and the technological knowledge of both teacher and the learner to use other different aspects such as the use of instant messages during the class and Zoom breakout rooms and Google documents for online activities. The present study is an investigation of the efficacy of adopting technologies in online synchronous English Language Teaching (ELT) classroom at the technological education system during the pandemic situation.

As per the understanding of the literature and the infrastructure facilities available at SLIATE, this research focuses on approaches to adopt synchronous teaching methods effectively in ELT classroom during COVID-19 pandemic situation, which is based on the hypothesis of the study "whether the technologies are effectively adopted to deliver the true experience of synchronous teaching for the learner"? The present study is limited on the SLIATE as a part of technological education system to investigate Zoom platform and freely available Google platform despite many other technologies are available to use for

synchronous teaching implementation.

This paper streamlines with 5 sections; section II describes the methodology and research design focusing the approaches of this research. Then, section III is allocated for results and discussion analysing the primary data collected via interviews

and questionnaire. In section IV, the recommendation is made with the theoretical framework to consider for synchronous technologies for adopting for online ELT classes. Finally, section V concludes the research in the SLIATE and focuses the future work as well.

II. METHODOLOGY AND RESEARCH DESIGN

The study is defined first focusing on the synchronous ELT classroom and the research design is introduced based on the methodology. Two research tools were utilised for the study namely interviews and questionnaire for the data collection. Creswell, (2020) has mentioned this type of design which uses different approaches to examine the equal matter is called a triangulation mixed-method design. In addition, applying multiple approaches in a research design would also deliver a clear picture and address many different features of phenomena. (Silverman, 2000)

A. Methodology

Semi-structured interviews were chosen for interviewing process due to the easiness of purposive samples and space to generate questions. So, five ELT lecturers in the technological educational stream were interviewed and recorded the data with their consent then all the recordings were converted to text scripts for analysing qualitative data via thematic analysis. Secondly, a structured questionnaire was shared among 150 students in ELT classrooms via Google forms by considering the students' responses upon their interest. next, all the quantitative data was analysed using the descriptive approach.

B. Research Design

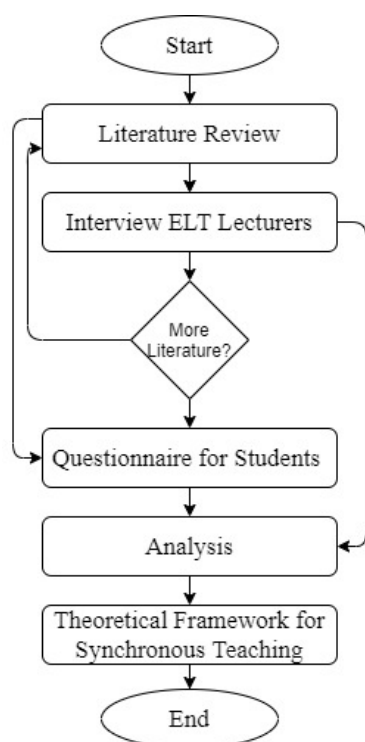


Figure 1: Research Design

As per the methodology, Figure 1 illustrates the flowchart of the research design. The outcome of the research is to introduce a theoretical framework for synchronous teaching.

III. RESULTS AND DISCUSSION

This study uses a mixed-mode technique that uses both quantitative and qualitative questions to get both lecturers' and students' perspective information regarding online teaching and learning experience by adopting the synchronous teaching methods in ELT classrooms. The quantitative information was acquired using Likert-scale questions developed to obtain the students' online learning experience. As per the data, the following findings can be listed down as follows.

A. Technological competencies of stakeholders

Walsh (2013) expressed that teacher, perceive interaction as a prominent aspect to have an effective synchronous online classroom. To make the environment comfortable for both students and teachers their technological competencies should be at least at a satisfactory level. The data analysis reveals that the level of technological knowledge is above satisfied level among both the lecturers and the students to manage with online sessions. However, the technical knowledge of the lecturers is not adequate for synchronously delivering the online sessions. The following statements of the ELT lecturers illustrate the situation very clearly.

"I do not have much knowledge in Technology. It is in average level to deliver lectures via, but I prefer to learn these technologies" (ELT Lecturer 2)

This is common among most lecturers since they are not having an elementary knowledge of using technology. They used to practice in a traditional classroom with conventional methods for teaching scenario. So that by adopting different technologies to have a real-time learning experience is a real challenge for most of the lecturers who teach English as a second language. However, they have an actual interest to learn and practice the new technologies to enhance their quality of teaching. This is common among most lecturers since they are not having an elementary knowledge of using technology. They used to practice in a traditional classroom with conventional methods for teaching scenario. So that by adopting different technologies to have a real-time learning experience is a real challenge for most of the lecturers who teach English as a second language. However, they have an actual interest to learn and practice the new technologies to enhance their quality of teaching.

"To a certain extent, I think I am capable to handle the online sessions via Zoom" (ELT Lecturer 5)

As per the statement of the fifth interviewee, it can clearly understand that although the lecturers having some knowledge of practicing technologies, the present knowledge is not sufficient so far to improve the quality of teaching via different online platforms. They should learn about modern technology to deliver an interactional environment in the online ELT classrooms.

B. Infrastructure for online delivery

The lecturers are provided official Zoom accounts via LEARN, and those accounts are not charged for data as the sessions are hosted over whitelisted LEARN servers. As a result, students are motivated to attend the sessions despite there are many challenges for them to attend.

1) *Connectivity of the Internet:* as per the findings of the survey, 78.1% of the students have connectivity to the Internet. It is a good sign for delivering the online classes with strong participation of students. However, there are some comments on the survey from students' side by complaining the insufficient coverage problems at all. Due to the connectivity issues, some students are struggled to engage the lecturer in the session actively.

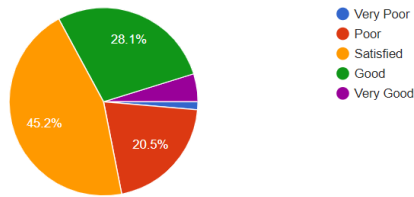


Figure 2: Accessibility to the Internet

2) *Devices to connect online lectures:* the device is an essential element for connectivity with the classes and all the students have either a mobile phone or laptop for attending classes. The following statement is quoted from the interview which talks about the several matters to connect online.

“Many students have the issue with the device to connect with the classes”. (ELT Lecturer 1)

Owing to the poor internet connectivity to attend the lectures is a major concern of students some are from very rural areas. On the other hand, most of the students do not have a laptop /desktop/tab device to join with the ongoing online lectures due to different economic status in their families. Many students are using mobile phones to connect with the lectures as their parents’ affordability for purchasing a device.

Since the majority is connecting to the lecture via mobile phones, they are having limited contribution for the online session rather than using a laptop especially when they are engaging with writing activities, doing collaborative activities with the inability of sharing the screen with the teacher or group members. So, it increases distress to the online synchronous classrooms (OSC). The following extract of an interviewee can be considered as proof of the fact.

“While doing some essay type questions in the classroom, in the discussion time it is really hard for them to share their screen with the class since most of them are using the mobile phone to join with the lecture”. (ELT Lecturer 3)

Despite the use of mobile phone and tab fulfil the minimum requirement for connecting with the lecturer, it is adequate to accommodate the synchronous teaching approaches effectively due to the inherent limitation to interact with those devices. The following graph has illustrated the devices, use for joining online sessions.

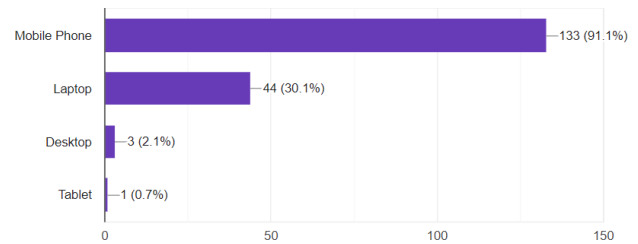


Figure 3: Use of Devices

C. Interaction during the online lecture

For language learning in the OSC, the interaction among the teacher and students is utterly important. The teacher can be reached to the students via speaking, video conferencing and instant messages through the chat box. Whereas, due to the lack of physical proximity and poor connectivity facilitating and utilising the interaction has become an immersive challenge in ELT Synchronous classrooms.

1) *The students’ interaction:* When comparing the three approaches in figure 4, most of the students speak up in the lecture and using instant messages to maintain the interaction with the teacher during the online session rather than having the video conferencing. Through the purposive sample, a considerable amount (40%+) is never video conferencing during the lecture sessions. It is confirmed by considering the following quote of an interviewee.

“It is difficult to have face to face interaction via video conferencing in most of the times since students rarely contribute due to different issues” (ELT Lecturer 4)

Some reasons such as students’ connectivity problems, technical problems with the device and lack of physical preparedness for attending the lecture sessions can be caused for the absence of video conferences.

The students' frequency of Speaking up with the lecturer by unmuting themselves is another issue for the lecturers while they are conducting online sessions since most of the times students are not properly contributing to the tasks. Most of the students keep silent at all during the lectures and selected a few students are incorporating with the lecturer. It is mentioned in the following extract.

“They rarely talk. I have to repeat the same questions many times and only a few students are dominated to provide the answer.” (ELT Lecturer 1)

This condition is not a good sign while considering the efficacy of OSC since video and audio conferencing are doing a great job in OSC. As the next aspect exchanging instant messages via zoom chat box has become the alternative option for students to connect with their lecture to deal with their subjective matters, answer questions during the lecture if they are unable to speak up. Through the interviews of purposive sampling, most lecturers had a positive comment of their students' contribution to the lecture via messaging box. For instance, the following extract can be quoted out.

"Students usually place messages in Chat Box with regards to their connectivity issues, to make an excuse for some matters and other than students raise problems regards to the lesson." (ELT Lecturer 3)

When students are communicating via chat box in online lectures, sometimes it is a kind of disturbance for the lecturers as they must pay attention very often to the chat box. However, on the students' side, the message box has become a relatively good option rather than others to create a real-time classroom. Finally, audio, video and instant messages can be considered as the most significant aspects to have productive OSC.

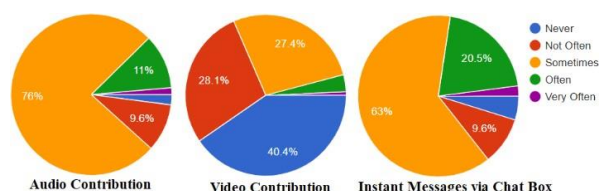


Figure 4: Students' interaction during the lecture

2) *Collaborative activities:* Collaborative activities are the most important approaches to engage, improve, and direct student learning. in SOC. Via Zoom Breakout Rooms and Google Docs facilitate a stage for collaborative activities. In the purposive sample data, students are having satisfactory level for both approaches in SOC meanwhile, few lecturers' perceptions on technology for collaborative work can be discussed as follows.

"I don't use it regularly, but I have used it once at the beginning of my Zoom classes. I used it to provide an opportunity to have a group discussion, but students' contribution was not at a satisfactory level. In my experience, it was not so productive and thereafter I didn't use it rather asking direct questions from the

students and get responses directly to keep the interaction with them." (ELT Lecturer 4)

Due to the less active participation in the task, the above lecturer has discouraged working with the Zoom breakout room. However, considering the students' perception via the questionnaire they are having good interest to do group activities via zoom. Although the lecturer applies this technique to the collaborative activities during the session, several issues can be occurred due to the students' connectivity problem. One of the interviewees is revealing the circumstance as follows.

"In Zoom Breakout Rooms, due to the students' poor connectivity, they leave from the group very often and rejoin. once they come to the main session since they cannot remember their exact group, I have to assign them different groups in many more times. Once this happens frequently it is very difficult cope up with the task" (ELT Lecturer 5)

This is a common scenario for most of the lecturers are facing while doing the collaborative work online using Zoom Breakout Rooms. Once conducting a session for a large number of students more than 100 this condition happens very frequently and due to this the expected productivity of students to the task is comparatively decreased since they come to the main session, they are not ready to present the task.

Google doc is another instrument for collaborative works online. Students can work together collaboratively since the tool Google docs come from the ability to share, edit and work collaboratively in one virtual workspace. In other words, using Google docs documents, presentations, folders can be created and shared by multiple users at once. The collected data is revealed that students are applying the Google doc tool at a satisfactory level and few amounts never use Google docs for collaborative works in the online classrooms.

Conversely, as per the sampling data, the lecturers' awareness of the Google doc is comparatively poor since their inadequate competency about technology. It can be cleared by Referring following example.

"I have never tried with Google docs during the classroom for group activities as I have a lack of knowledge on it." (ELT Lecturer 2)

Despite, students are familiar with Google docs due to the poor awareness of the lecturers, it is not productively used during the classroom. Figure 5 is illustrated the use of collaborative approaches in the SOC.

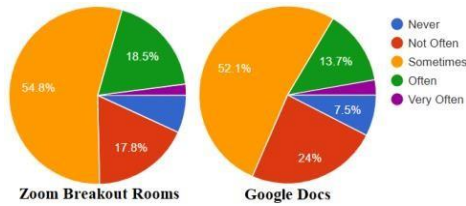


Figure 5: Use of collaborative approaches in the SOC

3) *Physical classroom vs Online classroom:* In a comparison of physical classrooms with online classroom, the study reveals that both students and the lecturers are eager to have the traditional classroom rather than the online aspect. As per figure 6, it can be seen as a percentage more than 66% of students have shown their interest in responding to the options on good and very good rather than participating in online classes via the Zoom platform. In the meantime, a few more utterances grasped from the interviews of lecturers can be quoted as follows.

"It is difficult to monitor students' behaviours while the session is going on. No eye contact with the students" (ELT Lecturer 2)

In the conventional classroom, the lecturer can observe the students work and monitor their behaviours. Both parties can make the interactive environment using eye contact, and via verbal and non-verbal communication. Whereas, in the virtual classroom, the student-lecturer intellectual relationship is hardly found at all.

As per the extract of one of the interviewees,

"Unlike the physical classrooms, the background disturbances usually occur in the online classroom" (ELT Lecturer 3)

When the participants' microphones are in unmute mode background disturbances can happen during the lecture. Sometimes this condition is interrupted by the attention of the lecturer and the audience. If the lecturer could ask all the students to mute themselves and unmute them where they want to talk can be taken to overcome such disturbances.

In online mode, lack of visual feedback is a common challenge for the lecturers. When the lecturers are delivering the lectures in the physical classroom, depending on students' visual feedback they are capable to adopt different methods to make the session more interactive. Whereas in the online mode the interaction is based on the students'

responses. Most of the time getting students' response is also a challenge. Through the following exact

"Although the activities are the same in both modes, we cannot get a realistic outcome in online mode since there is no measurement to know whether the students engage the activities genuinely" (ELT Lecturer 5)

while there are several difficulties in online methods, both methods can be applied to achieve the same goal. Whereas According to the data shown in figure 6, the majority is willing to engage with the physical classroom rather than attending to the online mode.

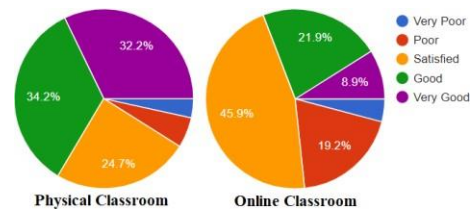


Figure 6: Students' ranking of physical mode vs online mode

IV. RECOMMENDATION

As per the collected data and related analysis, in the Figure 7, the theoretical framework has been introduced to incorporate synchronous teaching during the online class representing SLIATE as one of the main technological education systems across the country.

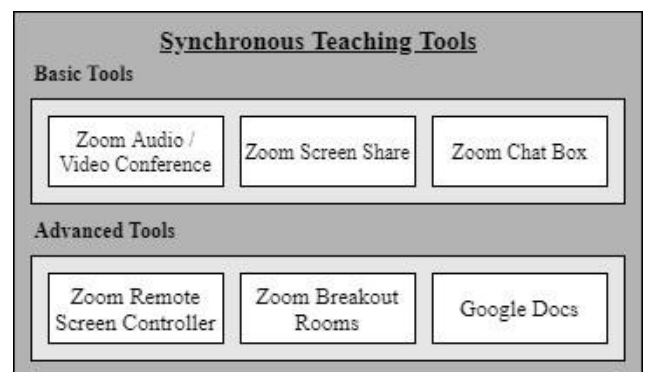


Figure 7: Theoretical Framework

In the framework, the advanced synchronous tools are not commonly used during the online class at present due to the poor understanding of the importance of collaboration by the lecturers. As a result, the true synchronous teaching / learning

process of the physical classroom cannot be accommodated in the online classroom.

Further, it is observed that the use of technology is not adequate among ELT lecturers to deliver online classes synchronously, instead, they manage to conduct the sessions by using basic tools as required, and it fulfills the requirement of online teaching as well. However, it is essential to conduct training and awareness sessions for all the lecturers to provide some knowledge about the use of advanced tools, available at present for SLIATE staff. Nevertheless, students should also be educated on those advanced tools, and the lecturers should be the responsible persons for delivering the required knowledge for students. Moreover, it is essential to consider those involved in the evaluation process. Eventually, lecturers should utilise the available synchronous technologies for their online classrooms to facilitate students similar experiences as in the physical classroom.

V. CONCLUSION

This paper attempts to investigate the efficiency of online teaching by adopting synchronous technologies to ELT classrooms. Throughout the paper, it is described and discussed the utilization of video conferencing, audio conferencing and Instant message via chat box, Zoom Breakout Rooms and Google Docs among the Advanced Technological institutes to create online synchronous ELT learning environments. These technologies can connect lecturers and learners in a different context by providing the flexibility that cannot expect through conventional classrooms. The present study has revealed that teachers need to have technological competencies in the fair stage, and they have to improve their competencies to conduct a synchronous learning environment rather than being traditional. By considering all the analysed data via thematic approach and descriptive approach, the efficacy can be seen a satisfactory level of OSC by utilizing available technologies appropriately.

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ABBREVIATIONS AND SPECIFIC SYMBOLS

SLIATE – Sri Lanka Institute of Advanced Technological Education

ELT – English Language Teaching OSC – Online Synchronous Classroom

ACKNOWLEDGMENT

As Assistant Lecturer of SLIATE, my institute always encourages to contribute for research, and I conduct

this research upon their requirement to find out the ways for improving online classroom teaching in synchronous manner.

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Preliminary Findings of an Analysis of the COVID-19 English Terminology Used in Electronic News Media in Sri Lanka

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Abstract— COVID-19 outbreak has brought several language changes mainly in terminology. Some existing analyses on English lexicon usage during the pandemic highlight the frequent use of words which were infrequent before the pandemic and also new coinage. We used a corpus approach to conduct a preliminary analysis of COVID-19 related vocabulary used in electronic news media in Sri Lanka and identified that some health-related terminology used in many other contexts can also be seen in the Sri Lankan context. Apart from that, some localized COVID-19 related terminology has been found in the corpus. The collocation analysis of the words Coronavirus and COVID-19 shows that Coronavirus is used as a noun and a noun modifier while COVID-19 is mostly used as a noun modifier in the corpus.

Keywords— *COVID-19, coronavirus, corpus, collocations, frequency*

I. INTRODUCTION

COVID-19 pandemic has brought changes to almost all sectors in the world and introduced new norms, regulations and procedures. Changes that occurred in language use is second to none. COVID-19 has been a special situation where new vocabulary emerged rapidly and they became common words in society within a very short time. On 11 February 2020, Oxford English Dictionary added the word 'Covid-19' as a new entry and recognized it as a noun (OED, 2020). Since then, the world came across several COVID-19 terms in English and equivalents in other languages. When it comes to English vocabulary that emerged during the pandemic, it is possible to recognize two groups of words: ones which had already been there, but not commonly used in public and newly coined words. Most words used during the pandemic seem to belong to the former group and a very few to the latter group.

There have been several studies on the emergence and use of English vocabulary during the pandemic in several countries; however, to our knowledge, no

study has investigated pandemic related new English terminology used in Sri Lanka, and apparently no such study has so far been undertaken on pandemic related Sinhala (native language of the majority in Sri Lanka) terminology either.

The aim of the overall study is to analyse the COVID-19 terminology that emerged in Sri Lanka in both English and Sinhala in various news media and social media. In this paper, we discuss only the preliminary findings of this ongoing study and present the frequencies of some commonly used words in English news media in Sri Lanka within the first wave of the pandemic, that is from March 2020 to October 2020. We also discuss some frequent collocations that emerged in the corpus.

II. LITERATURE REVIEW

Language change takes place over centuries and as a result language structures and vocabulary change. There can be new borrowings, coinage, meaning changes and structural changes and this evolution is a natural process that any language undergoes. Language change can also occur over short spans of time, which has been identified as *current change* (Aarts, et al., 2013). Current change also refers to changes that took place in a language in the recent past.

COVID-19 has affected the whole world and there has been no similar situation in the recent history that has affected the world in the same way. With the spreading of COVID-19, the world also came across a large number of new terms; some are medical terms which were already there but uncommon and some terms have been coined. These terms became viral mainly due to social media and entered the linguistic systems of almost all languages. For examples, words such as *coronavirus, social distancing, flattening the curve, self-isolation, quarantine, lockdown, hotspots* and *travel restrictions* are some such words and phrases that have been regularly used in media for the past one and half years. As Upadhyay and Maroof

(2020) highlight, some of these words have been in the linguistic systems for centuries although they may not have been in public use. They also emphasize that these terms became widespread due to the more technologically connected world that exists at present.

Ezzarrouki (2020) compiled the health care terminology used during COVID-19 pandemic and identifies that coronavirus is a word that has been overwhelmingly used since the outbreak. Several collocates of coronavirus such as *Coronavirus outbreak*, *novel Coronavirus*, *spread of Coronavirus* and *fight the Coronavirus* emerged simultaneously. *Infodemic* has also been identified as a common term used during the pandemic. Newly emerged immunity lexicon includes words and phrases such as *healthy life style*, *normal hygiene* and *physical distancing* and words and phrases such as *social distancing*, *front-line health care workers*, *working from home* and *social distancing* have also been recognized as new terminology that emerged (ibid). Ezzarrouki (2020) recognizes *confirmed cases*, *viral shedding*, *the viral load*, *the virus incubation period*, *quarantine*, *self-quarantine*, *self-isolation*, *home-isolation*, *lockdown* and *stay-home* as some of the quarantine lexicon.

There have been some analyses on how COVID-19 terminology is used in electronic news media, social media and on the Internet. Xue et al. (2020) identified 11 emerging themes in their analysis of 1.9 million Tweets written in English, and *health emergency*, *corona virus*, *fake news*, *self-isolate*, *covid 19*, *number people*, *breaking news*, and *health officials* were some of the words that emerged in most number of Tweets. Valentin et al.'s (2020) corpus study of news analysis identified a shift of vocabulary used from early stages of the pandemic to later stages: words related to *pneumonia symptoms* and *mystery illness* were common in the early stage, but vocabulary related to *virus family* and *specific COVID-19 acronyms* have been common in the later stages. Bowker (2020) studied French vocabulary used during the pandemic in Canada and Europe and emphasises that the terminology considerably overlaps; however, there is also localization in order to ensure effective communication of important information to target populations.

Not only the emerging vocabulary, but also the message conveyed through COVID-19 terminology has been the focus of some of the studies. For example, Fan et al. (2020) analysed over 3 million Twitter posts at early stages of the pandemic in order to understand social stigmatization on China and

Chinese people. They found out that while social media plays an important role in raising public awareness in a crisis situation like the pandemic, it also substantially spread terminology associated with hate speech during the pandemic. In another study, Karami and Anderson (2020) identified 11 topics relating to quarantine related issues in their analysis of 80,000 Tweets with anti-quarantine comments.

These existing studies highlight that research on COVID-19 vocabulary takes two paths: one is on the new terms emerging and the other is a deeper analysis of terminology used to convey messages during the pandemic. While recognizing the importance of both strands, the current study has been designed to (1) analyse the English terminology that emerged in Sri Lankan news media and social media and to (2) analyse how such terms have been used to convey meaning. In this paper, we present some preliminary findings related to the above number (1) in which we analysed the terminology used in electronic news media in Sri Lanka during the first wave of the pandemic. We attempt to answer the following research question.

What are the frequently occurred COVID-19 pandemic related English words in electronic news media in Sri Lanka during the first wave of the pandemic?

III. METHODOLOGY

A. Procedure

We used a corpus approach in this analysis and created a corpus of all English electronic news media reports in Sri Lanka published on the internet between 1 March 2020 and 30 September 2020. *Sketchengine*, an online corpus tool dedicated for educational purposes, was used to build the corpus and also to analyse the data. When building the corpus, we used key words *Covid* or *Coronavirus* and *Sri Lanka* in order to choose and categorize the news items available on the Internet. We manually removed news items that were not published in Sri Lanka (e.g., the key words may have been used, but the news item was published elsewhere and not aimed at an audience in Sri Lanka). The corpus contains 61986 words in total.

IV. Analysis

For this preliminary analysis, we computed the frequency of occurrence of all the words in the corpus and also collocations that go with the words, *Covid-19* and *Coronavirus*. Word categories such as prepositions, articles, and auxiliary verbs were

excluded in the analysis. In the next section, the findings are presented with a discussion of the different types of words that emerged.

V. RESULTS AND DISCUSSION

A. Word Frequencies

Table 1 presents the most common 25 words in the corpus with frequencies. As can be seen, *COVID-19* and *Coronavirus* are the two most common words that occurred in the corpus. It is understandable as those words were used as key words in the search. What is important is the frequencies of other words. It is possible to categorise all these words as health-related terminology (*COVID-19, Coronavirus, case, patient, health, virus, pandemic, outbreak, death*), administration or pandemic management related terminology (*country, government, people, Colombo, quarantine, travel, area, president*) and economic activities related terminology (*tourism, industry, sector, service*). It is possible to assume that *March* and *April* were referred to the months of the first wave of the pandemic in Sri Lanka.

It is unsurprising that health related vocabulary dominates the corpus. As Ezzarrouki (2020) also highlights, *coronavirus* is a very frequent word used in the Sri Lankan context as well. However, apart from *quarantine*, this set of words is not compatible with the frequent vocabulary identified in other contexts. This could be due to the fact that the first wave of the pandemic in Sri Lanka did not see a large number of cases and deaths and as such certain terms such as *self-isolation* and *flattening the curve* were not very relevant during this period.

The administration or pandemic management related vocabulary highlights government involvement in pandemic management. Economy related vocabulary seems to indicate the impact of COVID-19 on various sectors in Sri Lanka including tourism which is one of the prominent income generators of the country and probably the worst hit.

Two words on the list below stand out, which are *curfew* and *police*. In none of the previous studies, these words have been associated with COVID-19 vocabulary. This is an example of localization of COVID-19 terminology because *lockdown* was termed as *quarantine curfew* in Sri Lanka, and it was imposed by the *Police*.

Table 1: Common words with frequencies

Word	Frequency
COVID-19	495
case	273
Coronavirus	270
country	263
government	200
patient	182
people	173
March	170
tourism	165
health	143
virus	140
Colombo	138
pandemic	134
Police	129
day	124
curfew	118
quarantine	116
April	109
outbreak	107
travel	98
industry	93
area	91
death	91
president	84
sector	83

B. Collocations

As highlighted in our analysis above as well as in other contexts, *Coronavirus* and *COVID-19* are frequently used words in the current English lexicon. It seems several collocations based on these two words have also emerged. For example, Ezzarrouki (2020) identifies *Coronavirus outbreak, novel Coronavirus, spread of Coronavirus* and *fight the Coronavirus* as some collocations of *Coronavirus*.

We also analysed the collocations of *Coronavirus* in the corpus and identified four frequent categories: (1) the word *Coronavirus* was modified by adjectives

and nouns, (2) other nouns were modified by the word *Coronavirus*, (3) verbs were used with *Coronavirus* as object and (4) as subject. Table 2 summarizes the findings.

Table 2. Collocations of *Coronavirus*

Category	Collocations
<i>Coronavirus</i> is modified by adjectives and nouns	<i>novel coronavirus, wide-spreading coronavirus, fast-spreading coronavirus, acute respiratory syndrome coronavirus, deadly coronavirus, human coronavirus, Sri Lanka coronavirus</i>
other nouns are modified by <i>Coronavirus</i>	<i>the coronavirus pandemic, the coronavirus outbreak, coronavirus cases, coronavirus fears, coronavirus patients, coronavirus infections, coronavirus disease, coronavirus statistics, coronavirus emergency, coronavirus pandemic coverage, coronavirus testing kits, coronavirus vaccine, coronavirus cases surge, coronavirus symptoms, coronavirus bodies, coronavirus threat, coronavirus victims, coronavirus death toll, coronavirus test</i>
verbs are used with <i>Coronavirus</i> as object	<i>overburden the coronavirus discovered coronavirus, combat coronavirus, contain the coronavirus, coronavirus is destroyed, labelled the coronavirus, fight the coronavirus, tackle the coronavirus, treat coronavirus</i>
verbs are used with <i>Coronavirus</i> as subject	<i>coronavirus hit, coronavirus attended, coronavirus spread, caused by coronavirus, affected by coronavirus, coronavirus including, coronavirus was..., coronavirus has...</i>

Collocations of *COVID-19* in the corpus can be categorized into three groups mentioned above, except the first, that is, *COVID-19* is modified by

adjectives and nouns. We did not find any examples of this category in the corpus. The *COVID-19* collocations are presented in Table 3.

Table 3. Collocations of *COVID-19*

Category	Collocations
other nouns modified by <i>COVID-19</i>	<i>COVID-19 cases, COVID-19 pandemic, COVID-19 death, COVID-19 outbreak, COVID-19 virus, COVID-19 health care, COVID-19 victims, COVID-19 clusters, COVID-19 impact, COVID-19 complications, COVID-19 test results, COVID-19 crisis, COVID-19 risk, COVID-19 Emergency Fund, COVID-19 infections, COVID-19 test</i>
verbs used with <i>COVID-19</i> as object	<i>tested positive COVID-19, confirmed COVID-19, the virus that causes COVID-19, catch COVID-19, combat COVID-19</i>
verbs used with <i>COVID-19</i> as subject	<i>COVID-19 spreading, COVID-19 coughs, COVID-19 is...</i>

The collocation analysis highlights that *Coronavirus* is used as a noun and a noun modifier in the corpus; however, *COVID-19* is mostly used as a noun modifier. More analysis and inclusion of more sources to the corpus may yield different results; therefore, this result should be interpreted with caution.

VI. CONCLUSION

This preliminary analysis of the corpus of electronic news reports published in English in Sri Lanka on the Internet highlights that some common internationally used *COVID-19* related vocabulary is frequently used in Sri Lanka as well. In addition, some localized vocabulary can also be seen emerging. The terms *Coronavirus* and *COVID-19* collocate with other words: *Coronavirus* is used as a noun and a noun modifier while *COVID-19* is mostly used as a noun modifier. Since this is a preliminary analysis, we recommend more in-depth analysis based on a larger corpus to confirm the findings.

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A Participatory Survey on Effective Utilization of Teacher-Student and Student-Peer Interaction on Online Platforms in Second Language Teaching Pedagogy

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Abstract— Education today has moved from direct interaction with students to distant learning as a means of adapting to the restrictions caused by the pandemic. The traditional classroom has been replaced by synchronous e-learning platforms introducing a novel experience to the teachers and students alike. In this light, the present study investigated the effective use of interaction in the virtual second language classroom at undergraduate level. The data was collected through a self-administered questionnaire distributed among a group of 116 undergraduate participants representing the first and the second years of three BSc degree programs. In addition, focus group discussions were also employed to obtain the learners' perception on virtual language learning. The findings revealed that while the learners were benefitted from online learning activities, interaction takes place best in the traditional physical classroom. Further, the responses to the questionnaire indicated that even though communication with peers was an effective approach towards language development, the learners prefer the involvement of the teacher during interactive activities. However, as per the outcomes of the study, it was evident that the participants were satisfied with online language learning as they viewed it as an innovative experience and a productive approach in second language acquisition.

Keywords— *interaction, online platforms, second language pedagogy*

I. INTRODUCTION

The COVID-19 pandemic has made a significant impact on the everyday lives of people and education has not been spared. As face-to-face interaction with the students is restricted, educators around the world have been required to adopt alternative methods of teaching. Against this backdrop, e-learning has become commonplace practice over the

past year. Today, online synchronous learning platforms have replaced the traditional classroom allowing the teachers and students to interact via a virtual environment. According to Dhawan (as cited in Maican and Cocorada, 2021), with the rise of the global pandemic, online learning has been reckoned as the panacea of the period, no longer an option, but a necessity.

In the Sri Lankan university context, ZOOM, Microsoft Teams and Google classrooms have become the popular online learning applications during the pandemic especially among language learners and educators. Based on a study by Guzacheva (2020), virtual learning has enabled innovative learning opportunities to the students through its "widespread of methods, activities and tools of Computer Assisted Language Learning." (p.458). According to Zhang (2020), online classes have become "the new norm among students and educators" as the universities have been required to adopt distance learning techniques in response to the pandemic. (p.2). However, the challenges and difficulties involved in using these language teaching applications has not been sufficiently explored in recent studies. Therefore, this study is an attempt to investigate the effective use of teacher-student and student-peer interaction in the online classrooms during second language learning. Since interaction plays a prominent role in language acquisition, it is a key determinant in evaluating the efficacy of language learning through virtual platforms. Accordingly, a self-administered questionnaire was distributed and focus group discussions were carried among the voluntary participated groups of first and second year BSc students to explore their opinion on interaction in the virtual language learning environment. The collected data was descriptively analyzed and the findings are presented using graphs.

A. Research Objectives

I.To investigate the undergraduates' perspective on teacher-student interaction in the virtual language classroom.

II.To investigate the undergraduates' perspective on student-peer interaction in the virtual language classroom.

III.To determine the effectiveness of interaction on virtual language learning platforms.

B. Research Questions

I.What are the preferred online interactive language learning activities of the undergraduates?

II.What is their opinion regarding communication between peers and with the teacher during online language teaching and learning?

III.Does virtual learning facilitate student interaction in the language classroom?

IV.Are the learners satisfied with their virtual language learning experience in relation to its impact on interaction ?

II. RESEARCH DESIGN AND METHODOLOGY

This study was conducted in a Sri Lankan defence university setting where English Language is delivered as a NGPA module basically in the modes of EAP, ESP and ESL interchangeably. The content of the course modules consists of functional grammar, academic writing, communication skills and skills pertaining to reading and listening. The research instrument is mainly dealt with students' perceptions of and engagement in an online interactive English language learning platform for language development and how interaction mechanisms have an effect on the overall acquisition of the language.

A. Design of the Research

The primordial research instrument, the questionnaire demands responses which entail both qualitative and quantitative inputs. Qualitative data are instrumental to derive some postulations on behavioral changes and implications that can be observed in students engaged in teaching – learning process (Almekhlafi, 2006). Yang (2016) is of the view that employment of a mixed approach in language learning research garners rich details aiding cropping up of new vistas of thinking in relation to the subject being researched. Thus, this

notion could well be applicable in studying about interactive language learning landscape in online domain. The primary concern deliberated in this study is how effective interaction mechanisms aid fruitful realization of ESL language pedagogy and how the stakeholders impinge on materializing healthy language related affiliations in L2 (second language) contexts.

According to Duffy & Jonassen (2013), learners are inclined to construct their inherently specific knowledge seasoned by the experience with the surroundings and corresponding reflections. This gives rise to the basis of mediated nature of language learning. The present study has been carried out in a university academic context, where learner interaction is perceived to be manifold as they are apparent amongst different cultural inputs, academicians, and learners, as well as peer learners in the process of learning. Thus, it can be postulated that ESL learning in an interactive context could be referred to as the epistemology of the substantive study. Sociocultural theories such as the concept of Zone of Proximal Development (ZPD), social interaction, scaffolding, etc. need to be meticulously paid attention to in analysing the degree of success in interaction mechanisms in pedagogical scenarios (Warschauer & Healey, 2009).

B. Context of the Research

The research site of this study is a campus affiliated to a local national defence university which offers degrees in the disciplines of Architecture, Surveying Sciences, Information Technology (IT) and Information Systems (IS). The online platforms (primarily ZOOM) utilized in content delivery of English for Specific Purposes (ESP) and English for Academic Purposes (EAP), have been considered as the review medium of this study. A variety of lecturer-made interactive activities has been prepared and is being administered in the teaching – learning process. English language lecturers always strive to devise lessons in such a way that they relate to pragmatic professional and day-to-day routine contexts; the majority are based on real-life contexts and themes. Intermingling of multimedia teaching – learning aids/materials such as texts, scripts, images, audio clips, and video clips is amply found in English second language lessons. The rationale for employment of varied approaches coupled with pluralistic cultural affiliations, is that it would serve the purpose of facilitation of second language acquisition in a mixed-ability heterogenous student milieu. This aids the scaffolded learning process as

well. Information and Communication Technology (ICT) is employed as a vehicle to couple interaction and communication, making second language (L2) learning accessible to student folks. Online ICT platforms facilitate both synchronous communication (real time video chats, text chats) and asynchronous communication (leaving messages and voice clips). Technological language learning aids greatly in enhancing learner independence and raising student awareness on psychosocial cultural domain (Schwienhorst, 2003). Learner-centrism and interactivity are perceived as prominent traits of online learning processes found in second language English pedagogy.

C. Participants in the Research

A set of 116 first- and second-year undergraduates made up the participants of this research study including 60 females and 56 male participants within the age range of 20-23. They study English as a NGPA module, and they need to secure passes for this module in their first four semesters of study to be eligible for the conferment of the degree. All of them are English L2 users and have a sound proficiency in online learning modes. They responded to research instrument voluntarily.

D. Collection of Data

Collection of data was basically done through a comprehensive questionnaire which included a series of questions aimed at gathering particulars on learners' inclination towards engagement in different skills-based activities in teaching – learning process, their views on various modalities of interaction in online L2 leaning context and their subjective preferences on online learning situations. Moreover, focus group discussions were conducted with randomly selected undergraduates and their perceptions on interactions in online ESL classroom were recorded.

III. DATA ANALYSIS AND RESULTS

The self- administrative questionnaire along with the focus group discussions with voluntary participants paved way to come up with the following results. Accordingly, most of the students (61.2%) prefer the online teacher-centered approach in which the teacher becomes autonomous in the interaction process other than the student. (Figure 1)

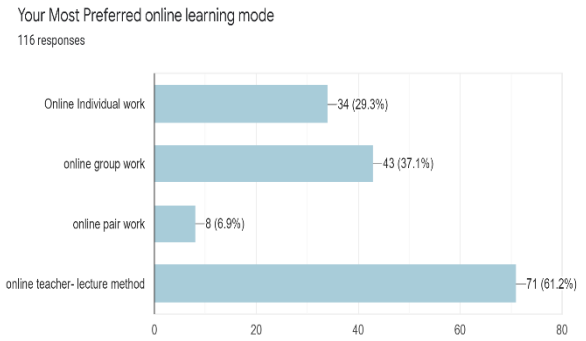
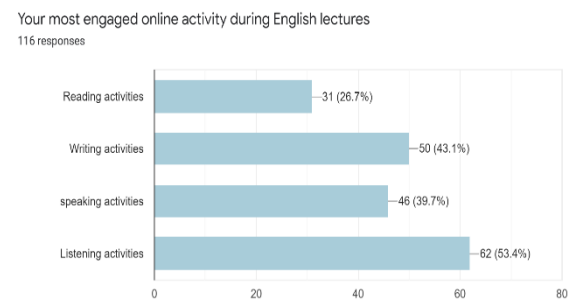


Figure1. Most preferred online learning mode of undergraduates

The study further focuses on the teacher- student, student-student interaction levels on behalf of the four skills of second language pedagogy. As per the responses of the students, it can be seen that the students most interactively engaged in listening skills related activities. (Figure 2) 43.1% of students are interested in learning through activities



pertaining to writing skills.

Figure 2. Most engaged online activity of the undergraduates

When considering the aspect of peer-peer interaction on online platforms, the most preferred online learning activity type of the participants was group discussions. The number of undergraduates, those who prefer to work individually without any kind of peer interaction was also relatively at a higher level. (Figure.3)

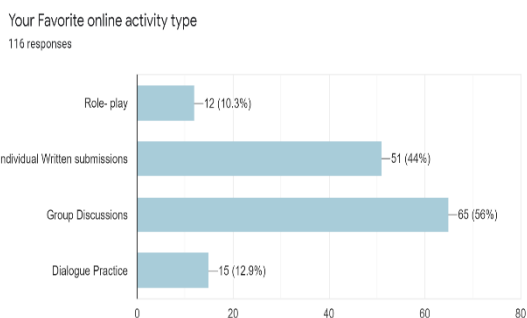


Figure 3. Most favorite online activity type of the undergraduates

Moreover, the questionnaire that has been circulated among the students consists of a Likert scale series of questions and hereby the students are supposed to express their opinion on the levels of interactions in their online second language learning classroom. Accordingly, 72% of participants state that English language can be best learned by counterfeiting in activities with their peers. The gathered data further indicated that when selecting activities in an online platform, the lesson should contain both group and individual activities.

The participants affirm that they prefer teacher talk in online platforms rather than the learner talk and 22.4% of participants insists that the teacher should always participate in the language teaching activity with students. When further examining upon the extent of interactions among the undergraduates with their peers and with their teacher, the participants state that they are not always conversing with their teacher and with their colleagues on online platforms. (Figure.4 and Figure.5)

In the language classroom, how often do you communicate with your teacher? 116 responses

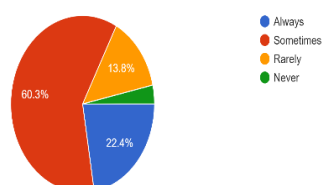


Figure 4. communication with teacher

In the language classroom, how often do you communicate with your colleagues? 116 responses

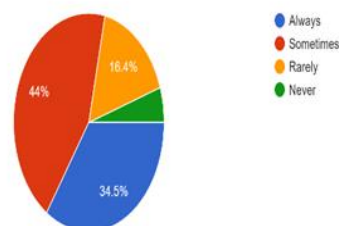


Figure 5. communication with colleagues

Overall, the participants of the study have stated that they are actively collaborating to the ultimate output of the second language learning process via online platforms. However, it has been evident that they mostly prefer their teacher’s active interaction during the learning process with them. They are more intimidated to be active learners who are always engaging in classroom activities while interacting with their teacher and peers. As in the physical classroom, the majority of students prefer teacher- centered method of learning.

When comparing and contrasting the percentages of interactions in online platforms vs physical platform of learning and teaching, although the majority of participants are in a mediate point of view, they have acclaimed the fact that language learning better do take place in authentic environment where the teacher and the students are closer to each other. The following statements of the students explicitly depict this stand point.

“sometimes it get bored cause the relationship between teachers and us is so low and also it’s not like attending in a class and learning.”

“I actually think doing physical conducting lectures is the best way of learning anything than online learning.”

However, the participants have acclaimed that the strength of online language teaching depends on the levels of interactions among the teacher, student and the peer and their active participation and interaction would lead to foster a sound output and they further indicate the fact that , both the students and the teachers should get adapted to the condition of ‘ New Normal’ under the pandemic.

"I am satisfied with learning English language in online, in my point of view I think as it is our lecturers' active participation."

"because of this prevailing situation I think that online education is the most suitable method for learning languages also."

IV.SUGGESTIONS AND IMPLICATIONS

As stated by Pegrum (2009), the evolution of the web and its applications has been crucial for changes especially for L2 learning environments because it has determined a shift from information retrieval and rote trainings to learner autonomy and to the emergence of multiliteracies tightly connected to the hypertextual content users generate in collaboration with other people. Therefore, it is evident that the current Internet scenario seems to meet the needs of language learners and enable them with all the opportunities to become active members of online environments. Therefore, learners should be encouraged to utilize the virtual facilities that are available for them on online platforms in a productive manner.

Moreover, since Student-to-student interaction is vital to building community in an online environment, which supports productive and satisfying learning, and helps students develop problem-solving and critical thinking skills (Kolloff, 2011), peer- peer level of interactions in language learning should be enhanced in a proper manner. Hereby, socially-focused exchanges such as guided introductions, exchanges of personal information, and participation in activities designed to increase social rapport can be utilized. As suggested by Beaudoin (2001), Students in an online course with a high level of interaction achieved higher performance than students in the same online course with only a moderate level of interaction. Therefore, instructional activities and the technologies appropriate for the course goals should be utilized in an effective manner.

V. CONCLUSION

This research study was conducted to investigate the effective use of teacher-student and student-peer interaction patterns in knowledge-construction and knowledge-sharing via online classroom learning. The analysis of data depicted undergraduates' preference to teacher-learner interaction being the greatest motivation for their learning success. In addition, level of peer interaction in the discussion process as a language learning activity is taken for

granted, depicting their willingness to maintain group cohesion through collaboration and expression of ideas amongst each other. Thus, such depictions would be useful as prerequisites for teachers to become reflective practitioners and to develop more learning-centered interactive activities in the process of teaching. As opposed to the findings of Weiner (2003) as cited in Zhang (2020), in which students portrayed more inclination towards student-centered autonomous learning, the results of this study emphasized undergraduates' preference for more teacher-centered learning. Hence, this research finding was indicative of teacher's pedagogical role as a facilitator being a positive predictor in student satisfaction.

Murphy& Rodriguez-Manzanares, (2009) as cited in Zhang (2020) has indicated the importance of scaffolding as a positive factor impacting on student motivation. Moreover, under pedagogical teaching practices, Coppola et al., (2002) postulate that more individualized and engaging learning activities should be designed to match both asynchronous and synchronous sessions, ensuring a high student interaction with course content. Liu et al. (2005) has conceptualized the pedagogical role of online teachers through four facets; as a course designer, profession-inspirer, feedback giver and an interaction facilitator. Therefore, it is required that a teacher take on these multiple facets and diverse responsibilities for a fruitful interaction based teaching.

Taking into consideration the demonstrated importance of interaction in online English language learning as depicted by this research, following implications can be recommended for future research avenues. For further studies, perceptions on interaction in English language learning should be taken in to account from undergraduates of different areas of disciplines. Studies could also be conducted to test to what extent specific teaching patterns of lecturers can stimulate different types of interaction among learners. Furthermore, it would be worthwhile to determine lecturers' perception on their interactive teaching mechanisms in online classroom contexts.

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EAP English for Academic Purposes

ESL English as a Second Language

ESP English for Specific Purposes

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HR Tharanga, currently attached to the ELTU of Southern Campus - KDU, has been engaged in numerous researches allied to TESL, TESOL, language translation, linguistics, second language teacher education, and semiotics. He is currently working on a study on the implications of bilingual language modalities in content delivery in Built Environment and Spatial Sciences degree disciplines.

ABBREVIATIONS

NGPA Non Grade Point Average



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Does Working from Home Affect Work-Life Balance? A Look into the Factors that Affect Work-Life Balance

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Abstract— The COVID-19 pandemic has triggered major social, political, and economic ramifications around the world. Amidst social mobility measures imposed to combat the spread of the virus, this pandemic was a major challenge for people in meeting their daily needs and demands of employers. These transformed work habits, moving from physical to a virtual setting, which had mixed effects on employees' lives. The objective of this research was to determine which factors affect the most regrading work-life during the working from the home period. A research gap exists as a result of the lack of studies on this subject in the Sri Lankan context. This study collected data from 270 respondents who were working from home through an online self-developed questionnaire. A factor analysis model was used for data analysis. Both the working and non-working environment factors were identified as having substantial effects during the working from the home period. The unique outcomes associated with working environment factors (Working days during working from home and working time), non-working environment factors (Gender and number of children), and work-life balance factors (Depression and distress and future psychological problems), make it explicit that employers need to concentrate on providing proper prerequisites to maximize the productivity during work from home period to improve employees' quality of life. Employers need to pay particular attention to female workers with children, skilled workers, and others who can adapt to virtual platforms. It is recommended that employers should revamp their attendance policies and produce family-friendly flexible schedules and policies. Further, conducting training programs, providing facilities to enhance employee engagement, and build strong and transparent communication channels by supporting a healthy work environment with various activities are also recommended.

Keywords— *work-life balance, work from home, COVID-19*

I. INTRODUCTION

Employees are the key asset that can influence a company's success and efficiency. As such, it is critical to optimise the capacity and efficiency of people management by proactively identifying and solving staff matters. From a strategic perspective, working from home is critical for both the company and its workers. Human beings play multiple roles; they are members of their communities and as employees, contribute to the services of organisations. People prefer to adjust their job schedules so that they can devote sufficient time to daily activities to achieve work-life balance.

In the contemporary world, no one can predict the timing and the magnitude of the next crisis, which burst with radical challenges. The coronavirus (COVID-19) epidemic which developed to a pandemic within a short time, is by far the most recent economic shock on the global economy as well as the severe hit on the country's economy. The pandemic massively disrupted the region's activities, as it did the entire world. COVID-19 has had an adverse influence on the majority of the community adversely affecting their day to day lives, at the time of writing this paper.

Just about every company was forced to shut down, either fully or partially, and some permanently. As retail markets collapsed, operating income avenues shrunk, businesses were forced to trim downsize and operate with fewer resources and facilities. This condition caused difficulties for companies to stay afloat and survive. Mobility restrictions imposed hindered operating in the physical conventional work environment. As for coping mechanisms for business continuity, certain large corporations and some already with technology-driven processes, resumed their activities in a digital environment. To better deal with this situation, such companies

shifted a significant portion of their vital processes and activities- from a manual system to a virtual platform. Organisations adopted digital equipment by offering various forms of appropriate resources for remote working, also known as work from home (WFH).

Thorstensson (2020) points out some of the criteria cause mixed outcomes on employee productivity when working from home, while the impact of other factors is dependent on employees' traits and attitudes as well as conditions. To investigate the relationship between the work-family interface, job satisfaction, and life satisfaction research studies were conducted. Accordingly, findings revealed that the components associated with the work interface influenced life satisfaction, job satisfaction, and work engagement directly and indirectly (de Simone et al., 2013).

Noteworthy that new business options, goods, service markets etc., emerged and developed through e-commerce throughout this period, further proving the effectiveness of online virtual platforms. Telework and virtual offices are solely described as the use of telecommunications technology in business (Mokhtarian, 1991). In 2014, Jenny Sok (2014) conducted a study using a factor model and identified that majority of the variation in positive work-home interaction and strain-based negative work-home interference was explained by a strong environment. Flexible work home solutions fully moderated the associations between a collaborative climate and positive and strain-based negative work home interfering.

Flexible work home solutions fully moderated the associations between a collaborative climate and positive and strain-based negative work home interfering (Rupietta, 2016). As a result, in addition to the COVID-19 crisis, as noted previously, certain organisations commonly adopted WFH in Sri Lanka. Many reasons were in favour of WFH as it had beneficial and detrimental effects on individuals' lifestyles, relying on their home situation. The pandemic can be assumed as a recent occurrence and virtual offices too. This short period means that research evidence is also limited and empirical gaps are likely in this subject. Employees in virtual offices have limited attention in research. Unlike in a physical office, confidence and effective discussions among staff at all levels are essential for work to be productive in a virtual office setting. During a pandemic of this nature, communication is paramount. On the other side, those with the

appropriate infrastructure for a virtual platform, as well as organisations which provide such resources, may manage this or a similar incident rather than it being a major problem. On the work-life balance, the virtual office environment involves some benefits as well as drawbacks. Even so, research indicates that virtual office platforms also have benefits and disadvantages on WFH; these aspects have had a major impact on those families whose working environment transformed as a result of the modern virtual work processes. However, there are discrepancies in certain findings. The current research focusses on the effect of the virtual office platform on work-life balance in Sri Lanka.

However, neither of these studies precisely considered the following characteristics that influence work-life balance while working from home. Especially in the context of Sri Lanka, there is no record of a comprehensive study or link to measure the primary components that influence work-life balance. The current study is unusual in that it examines both the attributes and the determined main variables in a combined scenario. As noted previously, there is a limited body of literature concerning this subject area and no contribution according to our knowledge and information available from the local community. The primary goal of this research is that findings, through systematic analysis and utilising various analytical methodologies, pave the way for new insights results to contribute to the research gaps listed above.

II. METHODOLOGY

A. Data

The main purpose of this article is to identify the main factors which affect work-life balance during working from the home period. The quantitative approach was used for this study. Data gathered from people who work from home (WFH) during this Covid-19 pandemic situation through a random sampling method. This sampling technique aided in the collection of non-biased data and collected data using the online platform (via email and social media). Kandy and Colombo districts were selected for the study with 270 participants, where employees were keen to continue working from home during this pandemic period. When preparing the Likert scale self-developed questionnaire, researchers identified the main factors that affect work from home and family-life balance. Researchers classified the work from home variable, into two major sections as the working environment (homeworking

space, number of persons in the house, working days, responsibility and time duration) and non-working environment (gender and number of children). Work-life balance is also segregated into 09 factors to cover all aspects for a comprehensive approach.

B. Methodology

Descriptive statistics (measures of central inclination, measures of dispersion, and frequencies of individual levels) testing the reliability among identified factors and principal components based factor analysis model (de simone et al., 2013; Jenny Sok, 2014) used to achieve the study aim to find out the factors which affect the work from home period. This research study involves data reduction and analysis methodology that helps us understand various outcome correlations as the product of one or more underlying explanations, or factors. The method entails data reduction since it helps represent a set of variables with a fewer variables. Gender represented different levels of duty and responsibilities in their homes and workplaces. As a result, the study gathered sufficient information to comprehend the behaviour of participants in the study.

III. DISCUSSION AND ANALYSIS

The conceptual structure is critical to define the areas and variables covered in a deductive reasoning study. The researcher used two independent variables in this study: the working environment and the non-working environment to determine the factors that affect working from home period, hence the dependent variable was work-life balance. Following previous literature, the following conceptual model was presented.

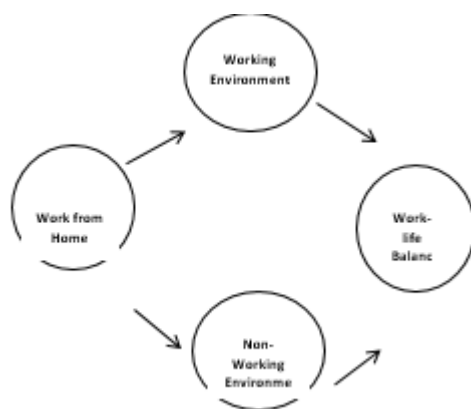


Figure 1. Conceptual framework
Source: Authors' illustrations

To achieve the study objective of determining which factors affect during working from home period, descriptive statistics (measures of central tendency, measures of dispersion, and frequencies of individual levels) were used. For employees' families and workplaces, gender represented different levels of duty and responsibilities. As a whole, the author was able to gain insights into the behavior of the respondents (total 270 no's). In addition, Factor analysis is a statistical method to describe variability between associated variables in terms of a smaller number of unobserved variables known as factors. For example, it's likely that changes in six observed variables are primarily due to changes in two unobserved variables. Table 1 also provides a general overview of the demographic profile of respondents.

Table 1. Descriptive statistics table

Demographic and Work from home Characteristics		(%)
Age	20-25 Years	12.6
	26 – 30 years	39.3
	31 – 40 years	37.8
	41 – 50 years	10.4
Gender	Male	48.1
	Female	51.9
Education Level	GCE A/L	3.3
	Diploma	14.1
	Degree	51.5
	Under Graduate	27.4
Monthly Income	Post Graduate	3.7
	Below 50,000	8.5
	50,000 – 100,000	62.6
	100,000 – 150,000	24.8
Civil status	Above 150,000	4.1
	Single	43.3
	Married	56.7
	If married, does the spouse do a job	Yes
No		30.0
Not answered		26.3
No's of children	Yes	48.1
	No	25.6
	Not answered	26.3
Working platform	Virtual office platform	39.6
	Traditional office platform	0
	Both platforms	60.4
	virtual office hours longer	Yes, most of the time
No, Never		5.6

than your regular working hours	Yes, rarely	48.1
Working on weekends	Yes, most of the time	48.9
	No, Never	4.8
	Yes, rarely	46.3
Spending worth time with family	Yes	83.3
	No	1.9
	Sometimes	14.8
Total (N) =270		100.0

Source: Authors' calculations

The males accounted for 48.1% of the 270 respondents, whereas the females accounted for 51.9%. Based on the current results, the majority of people between the ages of 26 and 30 are between the ages of 26 and 30, with 37.8% being between the ages of 26 and 30. In addition, 51.5% of the participants in the study were with a university degree.

Mohajan (2017) suggest that Cronbach's alpha values range from 0 to 1, with a value greater than 0.7 considered an appropriate level of data reliability. Reliability was checked in this study and results indicate that Cronbach's alpha was 0.852, implying high internal consistence of the data. This enables a generation of consistent data. The Kaiser-Meyer-Olkin (KMO) value was 0.770 in the exploratory factor analysis (EFA) result, as shown in Table 3, which is considered suitable.

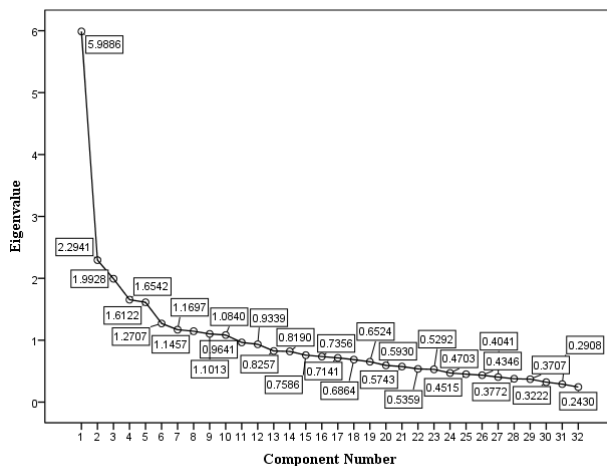


Figure 2. Screen plot

Source: Authors' illustrations

Rotated Component Matrix ^a			
Component			
	1	2	3
A9	0.753		
A11	0.723		
A13	0.478		
A15	0.434		
A17	0.431		
A18	0.618		
B1		0.758	
B2		0.564	
B3		0.722	
B5		0.661	
C1			0.694
C4			0.547
C6			0.729
C9			0.733

Extraction method: Principal Component Analysis
Rotation Method: varimax with Kaiser Normalization

a. Rotation converged in 19 iterations.

Note : A9= Usually, I do not exceed the normal working hours even during work from the home period; A11= I spend the weekend with my family even I have all facilities to work from home during the weekend ; A13= Now I can take more responsibility for my family due to the working from home; A15= I can adjust any family requirement as I wish due to the working from home; A17= The amount of time spent for working for home may have a positive effect on my family life; A18= The time spent working from home is less compared to the traditional office; B1= Gender has an impact on working platforms(Virtual office and traditional platform); B2= There is an impact on working from home and the work-life balance according to gender; B3= The number of children in the family mainly affects the work-life balance; B5= The number of children in the family mainly affects the work-life balance; C1= There is an impact of working from home on family satisfaction; C4= For me, social undermining can happen if I move to the working from home; C6= There is an impact on depression and distress due to working from home; C9= Working from home may lead to psychological problems in the future

Source: Authors' calculations

Table 2. Factor scores of the factor analysis

Figure 2 shows the findings of the Principal Component-based Factor Analysis performed with SPSS. First 10 components are over 1 eigenvalues. A

single factor was found to account for 60.354% of the overall variance in the 10 factors. The factor loadings for more than 06 items are higher than the 0.3 thresholds. As a result, the construct validity of the conversation is justified.

Table 2 includes an explanation of 13 variables in the rotating Component Matrix used in the analysis. (Factors not selected with an absolute value below 0.40). The analysis yielded three components (Factor 1 =Working Environment Factor- A9, A11, A13, A15, A17, and A18), Factor 2=Non-Working Environment Factor -B1, B2, B3, and B5), and Factor 3=Work-Life Balance Factors -C1, C4, C6, and C9). The findings under Factor 1 revealed that working days and time duration factors have the greatest impact on work-life balance throughout the work environment. Similarly, non-working environment factors revealed both gender and the number of children in the family had an impact on family life when working from home. Moreover, the first element identified by the investigation (family satisfaction, social undermining, depression and distress, and psychological disorders) is mostly afflicted by working from home.

As per Table 2, factor 1 explained 18.714 and is the best factor with the highest percentage. Moreover, factor 2 explained with 7.169 percentages, and finally, factor 3 with 6.227 percentages covered total of 32.111 percentages.

Factor 1 is commonly loaded with working environment factors. This factor 6 group attributes are related to working environment towards work-life balance. Assurance with working days during working from home has the highest loading factors (loading 0.753 and 0.723), followed by the time duration during working from home (loading 0.618 and 0.431) and responsibility through working from the home period (loading 0.478 and 0.434). As per the prior theoretical experimental data, these factors mainly affect work-life balance when in working from home situations. The findings are in line with those of previous studies. Greenhaus and Beutell (1985) are of the view that factors like working days, time duration allocated for working from home, and several people in the house can influence to restore work-life balance. According to Fischlmayr and Kollinger (2010), occupational conflict (while working from home) with the family has a larger effect on the well-being of the expatriate's family.

Factor 2 mainly associate with a non-working environment consisting of 4 main factors. The

highest loading factor is associated with gender (Loading 0.758 and 0.564). The factor called no of children shows the loading of 0.722 and 0.661. These outputs are in line with research conducted in 1992. To evaluate work-life conflict and perceived quality of life discovered that the living level was inversely linked to all indicators of work-not-work conflict (Rice, Frone, & McFarlin, 1992). The findings revealed that non-work factors, mainly gender and children have a strong influence on the conventional workplace, while work factors have a stronger influence on the quality of life. Even though several pieces of research suggest that gender and the number of children available affect virtual performances. Another study in Singapore found that the majority of female computer professionals in Singapore choose to telework only 1-3 days a week, and only when necessary, such as when they have small children (Yap & Tng, 1990). No gender disparities in family interfering with job duties because the amount of time spent on the family affects the degree to which women face conflict. Men spend more time working than women, and the amount of time women devote to their own families in contrast to men (relatively lower than men) is the primary cause of gender issues in work-family responsibilities (Calvo-Salguero, Salinas, & Aguilar-Luzón, 2011).

Factor 3 mainly covers work-life balance factors. The highest loading factors indicated that work from home mainly affects depression and distress and future psychological problems (loading 0.733 and 0.729). Results comply with past studies. A study affirms that if workers are overstrained with job duties, they are also obsessed with the same issue during leisure time, and they cannot maintain a work-life balance (Bellmann & Hübler, 2020). Moreover, results indicated with the loading of 0.694 working from home must affect family satisfaction. Work from home that interrupts domestic life seems to have an adverse influence on both job and life satisfaction. The sum of the direct and indirect effects indicates a significant and negative relationship with life satisfaction between works interfering with family (Adams, King, & King, 1996).

The objective of this article is to identify factors that affect work-life in Sri Lanka during working from home time. Many types of research have been conducted on this subject as well. Analysis of data depicted that the working environment (working days, responsibility, and time duration) along with non-working environment factors (gender and

children) have the greatest impact on the work-life balance (family satisfaction, social undermining, depression, and distress and psychological problems).

Although a variety of models are being used to examine diverse facets of working from home and their effect on work-life balance, only a few empirical research in the context of Sri Lanka has been conducted. Apart from that, the working home platform was restricted in the Sri Lankan working climate (pre-pandemic) until the pandemic forced companies to revise their traditional work habits to remain afloat. With the resultant economic fallout and the uncertainties posing threats to job security, the rapid expansion of the gig economy is noteworthy. In light of the above, this study provides a benchmark to determine the main factors that affect work-life while working from home. Work-life balance is mainly affected by work from home and this can be mainly classified into working and non-working conditions, according to the study's quantitative findings. It is important to consider both work place and non-work place factors when determining the effect of working from home platforms on employee work-life balance.

IV. CONCLUSION

Based on the results, working from home has a significant effect on work-life balance. Both the management and the staff must carefully consider factors when dealing with issues concerning working from home. This Sri Lankan case will reveal unique aspects to minimise the negative effects of teleworking. Findings show that non-working environment factors and working environment have a significant impact on working from home, particularly in developing economies such as Sri Lanka. As mentioned earlier, the gig economy is rapidly expanding, and its income levels are generally strong. Furthermore, the virtual platform has allowed more female employees to enter the workforce through teleworking, as well as for those who have been temporarily away from the workforce (due to marriage, raising children, household commitments etc.) to return. To maintain growth and revival of the Sri Lankan economy, virtual networks and teleworking need considering from a strategic perspective rather than just a fast fix.

In future studies, broadening the reach of the analysis to include factors related to these will help uncover insights specific to Sri Lanka and better

discuss the problems in this field. Apart from this, management must ensure that all employees are equipped with the minimum of tools (tech devices such as laptops, internet access, etc.), a decent work atmosphere (such as space, free of noise and interruptions at home, etc.), and a 'family friendly' culture to reap the benefits of work from remote working.

Since findings represent an organisation's attempts to assist employees in juggling work and family commitments while enhancing job satisfaction and satisfying organisational involvement, working from home can be referred to as a family-responsive programme. Employers also noticed a significant increase in the number of female workers including skilled workers in the virtual platform. Flexible work structures must be considered to meet better demands from the non-work domain. Working from home platform is a flexible work structure that allows people to manage work and non-work responsibilities (for employees), as well as an appropriate option that can help businesses recruit and retain valuable workers (for employers). Working remotely has many advantages, especially if the challenges of enforcing such a work arrangement are duly examined. Working from home has considerable potential for helping companies deal with the contemporary human resource issues of employee retention and recruitment in tight labour markets.

The attitude and policies of the working from home affect the personal lives of their workers as well as their productivity. Employees tend to be more effective if they feel their employer trusts and cares for them. Especially if employers provide them with adequate resources on planning, project management, and support to timely execute their duties. Working from home saves time, money, energy or exhaustion on transportation between work and home, thereby increases employee productivity. Nevertheless, apart from these, the management must ensure that staff has the bare minimum conditions as well reasonable working and non-working environment to work from home.

However, major limitations are organisational cultures, authority and red tapes, and rigid processes considered as mandatory for some firms (specially highly regulatory sectors like the banking sector) in firms. For managers who enjoy power zones within the physical work environment with the lack of know-how on online processes, thus, a sudden shift to virtual office can pose threats to them. Besides,

trust-based culture, transparency, strong communication channels and employee recognition cannot be built overnight.

Despite the limitations of the report, the author has addressed critical and often neglected concerns concerning main factors which impact family life while working from the home platform. In addition, to define the consequences of work-life balance, the research demonstrated the importance of comprehending working environment and non-working environment of work-life balance.

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In a Home with No Home Feeling: Psycho-Social Encounters of Female Children Living under Institutional Care

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Abstract— Most of the literal history witnesses that the institutional care is best only as the last resort of child care due to adverse impacts institutionalization causes on child's life. Yet, it is visible that the number of alternative care providing institutions remain high in Sri Lanka. In this backdrop, this study aimed at examining the psycho-social experiences of Female Children living under institutional care. The objectives were understanding the conditions of the institutional environment that impacts on the psycho-social experiences and their consequences on female children in particular. A sample of twenty females between 13 -16 years and five of the care taking staff were purposively selected from a female children's home located in the heart of an urban area. Data collected through in-depth interviews and observation were analyzed using narrative analysis method. According to the findings, it was evident that the institutional structure including location, infrastructural facilities, institutional procedure, need-response mechanism and nature of social relationships within and out of the institutions have resulted in a number of negative psycho-social experiences of female children. Emotional complications were mainly found to be common in pervasiveness and variety in character. Outbursts, withdrawal, reluctance to seek support and loneliness are the most prevailing emotional encounters of female children while lack of self-regulation, maladjustment, poor social interactions, poor attachments and conduct problems along with low well-being and disorganized life patterns are socially defied experiences they face. A culture in which such aggressive, emotionally reserved behaviours of boys are normalized in terms of masculinity, such behaviours in girls are strongly condemned. It would lead them to face negative social responses challenging their reintegration to society.

Therefore, while admiring progressive steps already taken in the institutional setting, the study posits that the female children under institutional care are in a dire need of a gender-sensitive professional intervention that would empower them with a strength based resilient approach.

Keywords— *institutional care, psycho-social encounters, social work intervention*

I. INTRODUCTION

Sri Lanka is one of the signatories of United Nations Child Rights Convention (UNCRC) and thus, it is a prime responsibility of the government to ensure the most appropriate type of care to all the children in the Sri Lanka. UNCRC states that it's every child's right to grow physically and emotionally under the care of their biological / natural family. Article 9 of UNCRC mentions the child has the right to live with his or her parents unless it is not deemed to be in his or her best interests; the child has the right to maintain contact with both parents if separated from one or both (United Nations Children's Fund UK (UNICEF UK), 1989). Yet, institutional care has become inevitable due to many dynamics including socio- economic reasons, legal and policy related factors. Under such circumstances article 20 of the convention emphasises that the State has an obligation to provide special protection for children without families and to ensure that appropriate alternative family care or institutional placement is made available to them, considering the child's cultural background (UNICEF UK, 1989).

According to a situational analysis done by National Institute of Social Development in 2013, the types of Child Care Institutions which come under the purview of the Department of Probation and Child Care Services in Sri Lanka include approved schools, certified schools, detention centres, group homes, national training and counselling centres, remand homes, receiving homes, safe houses, and voluntary children's homes. Statistics unveiled by the DPCCS,

there are 13,214 children in institutionalized care in 341 registered voluntary children's homes in Sri Lanka (DPCCS, 2010). This statistics exposes an ironic increase of almost a 50% between 2002 and 2010. By 2018, as per the latest statistics, both registered and unregistered voluntary homes represent the considerable majority which is 331 out of 374 children homes (DPCCS, 2018).

Above incredible numbers show that there is a seriously alarming requirement of a proper directive and monitoring mechanism to ensure the psycho-social wellbeing of the children under institutional care mainly in a milieu where the vast majority of the institutions are run by voluntary organizations with different profiles and mandates. Children in alternative care homes can be considered as those whose right ensured by article 01 of UNCRC is already violated at the immediate action of institutionalization. Their victimization of being in disorganized families, abuse or harassment, toxic home environment where domestic violence, alcoholism or poverty prevails, sudden demise of family care due to natural disasters or war situations, delinquency etc. can lead a child to end up in an alternative care institution.

When looking at the sex ratio of institutionalized children, it can be argued that the aforementioned vulnerabilities are further broadened by the factor of gender. Sex ratio holds an utter importance as it illustrates a strong element of vulnerability of girl children in a society. According to the survey findings of National Institute of Social Development (2013), out of the total number of children residing in institutions at the time of the survey, 8,538 were females (60.2 per cent) and 5,641 were males (39.8 per cent) indicating an overall sex ratio of 153.4 girls for every 100 boys. The survey further reveals that although the children are referred to child care institutions for a maximum period of three years, the majority of the children, both boys (40 per cent) and girls (37 per cent), have stayed on an average of 2-5 years in the child care institutions. Nevertheless, the survey brings up an important finding that more girls than boys have stayed longer periods of up to 10-15 years in institutions. This emphasizes the importance of this study of exploring psycho-social encounters of female children living under institutional care. The age group considered in the study is also supported by the survey as it is reported that the number of girls among the orphans were higher in the age group of 14-18 years.

World is now moving fast towards deinstitutionalization by replacing the institutional care mechanism with community care, group homes, family like care mechanisms. Specially with intervention of professionals like social workers and human right and child rights activists. Yet, Sri Lanka is far behind in establishing such care mechanism in the background where aforementioned professions are still being established while right based activism is looked down as an anti-governmental, westernized movement. Therefore, it is important to provide better conditions while attempting to reach globally accepted standards in providing institutional child care. Apparently, considering all above, it is supposed that the understanding the conditions of the institutional environment that impact on the psycho-social experiences and the consequences of them on female children in particular will uphold a greater importance in an area that has not been closely explored sufficiently.

II. METHODOLOGY

The study was exploratory in nature. The setting of the conducted study is located in an urban area and this home is governed by a faith based voluntary body. It accommodates only female children in it other than the infants section.

The sample was selected purposively and the sample consisted of twenty five (25) participants altogether. Twenty (20) of them were female children and the other five (05) were the adult staff members who are working at different capacities as the care takers of the institutionalized children. The inclusion criteria for participation for institutionalized children was that they should be female children and has been under institutional care for a minimum period of one year and that they were in the age range of 13 to 16 years. Female children in the same age span who has been institutionalized for less than one year period and those who had siblings living under same institutional care were excluded as their psycho social encounters can vary compared to the majority of the study population.

Qualitative data was collected by deploying in-depth interview method. Interview guideline was scheduled focusing more to the questions on what the respondents see as challenging in managing their emotions and psychological wellbeing due to the experiences of institutionalization. Further probing technique was used to explore how such experiences lead to challenges of the social life of respondents. In addition observation was used as a method of data

collection as the behavioural patterns of the respective sample generates a significant eminence in validating data. Collected data was analysed through narrative analysis method based on the suitability fact of the nature of data that was obtained from the respondents at this age.

III. DISCUSSION AND ANALYSIS

Institutional care for children is a group living arrangement in which care is provided by remunerated adults who would not be regarded as traditional carers within the wider society” (Tolfree, 2007). When child care is provided out of natural care setting, it should be well planned and handled cautiously as children whose personality growth is still in process are keen observers and quick absorbers of things happening around them and to reacting accordingly.

The institutional environment has a considerable impact on the psychological wellbeing of the care givers which in return has created a strong impact on the psycho-social wellbeing of children. Institutional care, by default, creates a power relationship between children and the staff. It’s not a parental relationship but, by definition, meant to be a professional relationship maintained by those who offer a paid service. Nevertheless, the nature of service requires the care taking staff to provide emotional care which is difficult to be appraised for a wage. This blurred demarcation between professionalism and involvement of emotions has put the care givers in a dilemma about the nature of relationship they should build up with children.

“Laws are very strict that even an affectionate touch can go wrong. Maintaining distance won’t create such shameful issues At the end of the day, this is just the job of us! What can we do for their karma ..?”(a caregiver, field data).

“We really cannot picture where we should draw boundaries when dealing with girls. Specially, being girls, they might prefer us to be so motherly. But, if we get too close to them, neither we can safeguard the job nor can we run the home (niwāse)” (a caregiver, field data).

This is a common impasse most of the care taking professionals are facing. The coping mechanism with the dilemma is justifying the negative encounters of institutionalized children in terms of cultural or religious beliefs such as merits & sins (*pin-paw*) / karma (*Karume*). This is an aspect of the victim blame approach in which the victim is made responsible or

looked down to the institutionalization instead of the system blaming for not having appropriate structural and policy mechanisms to prevent or manage such issues. This leads to the denial of child rights and justify maltreatments to them. This results in reluctance of children to seek emotional support from the care giving staff. Further, this devaluation the life of the child creating personalities with low self-esteem and dignity. In most of the cases, victims who are institutionalized due to sexual harrassments, abuses are more likely to be further marginalized.

“Girls sent to us due to sex related cases are very dangerous. We rarely maintain a close relationship with such girls. Their single statement can make us jobless. As they have experienced sex, they tend to interpret affection also in terms of sex. We have had one employee who once had given a head massage to a girl who said she is not well. Someone has complaint against her saying that she was touching the girl. She lost her job. That girl didn’t stand for her.... Job is the second thing. Think of the shame....” (a caregiver, field data).

The general perception about the victims of sexual crimes are prevailing within institutions too. The belief that the girls should know how to protect themselves or the common idea that the mother is responsible for such issues girls face is strongly held along with the idea that such girl victims should be kept away from others or else they are more likely persuade other girls to be engaged in unaccepted behaviours. This kind of stigmatized norms that are internalized in our culture about females and sexuality related matters are seriously affecting the nature of interaction care takers encourage within institution.

Due to such challenges, further stating, children often feel that they have been institutionalised due to their own fault and are thus at risk of suffering from guilt and rejection. This offended mentality has been further extended during their stay at the institutions, as they become victimized of scapegoating of the staff under stressful circumstances. This scenario creates a second victimization of those who have already faced a negative expiring of losing their right to natural growth.

It was stated that the institutionalized children more often remain emotionally withdrawn. Female children who are schooling at neighbour schools to which the children from community attends remain emotionally reserved and continue to interact with peer groups consists only with children from their

own home. This is articulated as the fear of being rejected and experiences of stigmatization as orphans (*anāthayo*) in the external settings as well. Even within the institutional setting they continue to be isolated. Emotional loneliness has become an addiction of the children which makes them less expressive. It was revealed that the children are more inclined to emotional outbursts within the institution and in schools as well. The long pressed emotional loneliness can outburst in aggressive expressions which alarm their poor psychological wellbeing. This has resulted in poor intimate relationships in their social life while developing situational collectiveness among the children with similar background.

"We are called as 'girls from orphanage' (anatha niwase kello/ niwase kello) by many. Some call us so and some introduce us so when we are not around. But we have heard. Therefore, when external students are fighting with us, we remain as a group no matter what fights we have inside the institution" (a child, field data).

"Children from outside (eliye lamai) in good terms flip their tongue so quickly if a minor mistake happens from girls from the home (niwāse kello). In such situations, they used tell that they remain to be friends as we are pity. I don't need a friend for the sake of sympathy...." (a child, field data).

Such experiences have made them to uphold poor attachment and low trust in their social circle. Unceasing refusal starting from family and mistreatment within and out of the institution has adversely affected their skills and willingness of social interaction.

Moreover, the emotional outbursts have been interpreted as lack of self-regulation or self-control as a part of their personality in the institution and in the schools too. In addition to this, institutionalized female children are blamed for disorganized routines and life patterns. Mostly, they are scolded for not keeping the dormitory clean. Care givers often complaint about cleanliness and careless handling of the books, clothes and other belongings given

to them. Also, the resistance of meals by not attending the meal sessions, throwing food or spitting are some of the observed aggressive reactions of the children. Such behaviours are strictly sanctioned by the administration of the institution to prevent such misconducts.

"Some of them are not girls but cursed spirits. They don't live like human beings. Girls must know how to

keep their surrounding clean. These girls are so unclean and untidy. What they get for the sake of kindness of theirs are not handle properly. Their dormitory and wardrobes are none other than a hell" (a caregiver, field data).

Such behaviours, rather than interpreting as a conduct problem, can be analysed as the discontentment of the inmates. But mostly, the girls are blamed and predicted that their future will never be a successful one as women if they continue to behave so. The stereotyped expectations of gender roles have conveyed to the girl children in a way that they are made hopeless about a future in a household spending a good life. But the girls' explanation to this complaint portrays a different aspect of their institutionalized life.

"We cannot wear what we want. If we wear a short dress or a tight one, we are criticized publicly and are always forced to wear saggy long dresses. We never get a chance to eat what we like or to dress as other girls. We have had to live our life according to their wishes" (a child, field data).

The voices of the girls have not been heard or participation in decision making on their own life has been neglected for a long period of time. They are deprived from self autonomy which has converted their personalities so antagonized to the system within the institution.

In addition to that, the monotonous institutional routines that is to ease the administration has made the situation worse as it takes the children further away from having a normal and independent living. These issues have been discussed for a long time by many human service professionals. For instance one of the most classical work of Goffman (1972), elaborates and criticize the severe impacts of the scheduled everyday routines of asylums on inmate as it neglects the basic dynamic nature of human beings. With the rise of more human rights based professions like social work, institutional mechanisms and institutionalization itself has been challenged by many arguing that it deprives the humanity of inmates. Wolfensberger (1972) has presented an essential principle that can be practiced in institutional settings which is termed as 'Normalization'. This normalization principle emphasises the need of ensuring the right to participation of inmates in decision making and the right to make choices and having space for personal growth.

Furthermore, institutionalized children show a greater tendency of maladjustment to social life. This is resulted due to many causes such as the physical location of the institution, infrastructural facilities available and the need- response mechanism too. This home, as most of the homes in Sri Lanka, is located away from community. Surprisingly, even in the heart of an urban area, buildings remains hidden from the sight of people. The children are exposed only to those who visit the institution for donations apart from those who are in the school. The fear of administration that the girls will misbehave before visitors has restricted their interactions with visitors too. The gates are always kept closed and remain under the supervision of an adult all the time. They hardly get a chance to go to a supermarket, or a retail shop to purchase something of their choice. Goffman (1972) explains this physical structures of institutions as 'total institutions' which makes inmates totally fail to cope with the demands of a normal social environment.

In the exploration of conditions of the institutional environment that impact on the psycho-social experiences and the consequences of them on female children in particular, overall findings show that the administration has happened to divert their attention from the spectrum of holistic care taking while striving to accommodate basic needs under limited human and infrastructural resources. A study of John & Mendis (2017) in a similar setting also supports the idea stating that within the context of the current child welfare system in Sri Lanka, institutions do have their own challenges and often resulting in causing poor quality care for children.

Furthermore, the psycho-social needs of institutional children have been responded sluggishly or ignored completely as the job role of care takers is stuffed with so many administrative and documentation tasks. They frequently complain that they are weighed down with work due to shortage of staff. Poor job satisfaction of staff has developed a poor care based need-response mechanism within the institutions which poses a serious question about the reintegration of these children.

IV. CONCLUSION

Concluding the finding and discussion of the study, it is obvious that the psycho-social experience of institutionalized children poses a critical problem about their future after leaving care. They are not either socially or psychologically ready to be reintegrated to the open society due to many

negative encounters they come across in institutional settings. Therefore, the institutional settings, from their physical structure itself, should begin to be child friendly. In this process, the staff employed with institutionalized children uphold and utter prominence as they will be dealing with psycho-social needs of children on daily basis. It is the prime responsibility of relevant authorities to make sure the staff is capable enough to comprehend that being emotionally viable is a part of their profession. Also, care taking is not a duty that can be performed by those who come with altruistic motives to serve the humanity. It is a profession involved with human rights and principles of social justice of those who receive the service. The findings show that the care taking officials have not understood this in professional terms. Typically, being employed in a institutions is perceived as a service that they do for the children who are helpless. The culture bound mentality of people in helping the helpless has moulded the care taking services and profession largely. In this case, the involvement of professional social workers can be seen as a timely involvement in institutional settings.

Social work is a practice-based profession of helping. Yet it takes a collaborative approach where the social worker is exercising a contracted power by the service user which ultimately aims at empowering the service users. Though Sri Lanka has a long way to go in establishing community based care mechanism as a progressive step towards deinstitutionalization, the current situation can be efficiently managed by adopting social work approach in ensuring psycho-social wellbeing of children. Prominently, the adaptation of strength perspective in social work is much more promising approach in bringing resilience to the current tensions. Instead of focusing the weaknesses and problems, the profession is solution oriented which views the service users as individuals full of potentials and resources within them.

Further, it is suggested to monitor both registered and unregistered voluntary children' homes as well as the registered state care institutions thoroughly. Specially, clearly demarcated job roles and service oriented trainings can increase the effective psycho-social upbringing of children under institutional care. More importantly, girls who are at the sexually active age span under institutional care should be treated more sensitively as their psycho- social wellbeing is highly fragile due to psychological and physical conditions at that age which is absolutely normal as well as important.

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Replanting Tea Lands of Smallholding Sector in Sri Lanka: A Case Study in Galle District

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Abstract— Replanting and also rehabilitation of tea determine both the productivity and sustainability of the tea industry. To achieve the accepted norm of increasing annual replanting rate up to 2%, replantation should be performed in existing old tea lands. However, considering the farmers' perspective, most of them are reluctant to replace their old tea lands with new tea plantations. Therefore, this research study was carried out with the main intention of analysing the factors behind the lesser interest of farmers in replanting old tea lands in Galle district. The cluster sampling method was used and all tea smallholders in Galle district were divided into small clusters according to the GN divisions. Hiniduma west GN division was selected as the proposed cluster where the highest number of small holders presented and the sample size was 30. According to the results, the highest productivity in the sample was 2666kg/ha/yr. It was revealed that the main reasons why farmers pay less interest in replanting were the absence of any other income source during the replanting period(36%), gap of a long period for new harvesting (21%), high labour cost and labour scarcity (21%), limitations in subsidy procedure and difficulties in obtaining subsidies (5%), and difficulties in finding quality planting materials (5%). Therefore, this study recommends to introduce some extra income sources such as self-employments, livestock and home gardening to ensure a source of income for tea smallholders during replanting period. Moreover, present study recommends regulating the existing procedure of giving subsidies and implementing projects to supply and disseminate quality planting materials among tea smallholders.

Keywords— *replanting, small holding tea sector, Galle district*

I. INTRODUCTION

Tea (*Camellia sinensis*) can be identified as one of the most important plantation crops among the other plantation crops grown in the world (Ranasinga, 2020). In the world market tea compete with coffee,

cocoa, alcoholic drinks and soft drinks as a natural beverage (Department of Census and Statistics, Statistical Pocket Diary, 2018). Sri Lanka is the fourth largest producer of tea in the world and the third largest exporter (Bandula, Abewickrama and Zoyza, 2017). Sri Lankan tea industry endure as second earner in value term which could remarked the blooming tea potential as premium quality tea from Sri Lanka in the global market. Tea industry contributes to the national economy in Sri Lanka through foreign exchange earnings, employment as well as GDP earning (Jeevanthi and shantha, 2021). It employees directly or indirectly about 1.5 million people in various disciplines in the trade (Sandika, 2018) and accounts for 0.7% of GDP (Economic Statistics of Sri Lanka, 2019).

The main tea growing areas are located in the central highland and southern inland in Sri Lanka. Country's main tea growing areas are Galle, Rathnapura, Kandy, Nuwaraeliya, Dimbula and Uva. According to the elevation, Sri Lankan tea production classified into main three categories which as high grown tea; 1200m upwards, medium grown tea; between 600m to 1200m and low grown tea; from sea level up to 600m. The total extent of tea cultivation area in Sri Lanka is 200,000 ha (Central Bank Report, 2020) and the total tea production was 278,489MT in 2020. However, this amount was comparatively less than previous years' production (Statistical information on plantation crops, 2018 & Sri Lanka Tea Board, 2021). The amount of tea export in Sri Lanka in 2020 was 265.569 MT (Tea Exporters Association, 2021). The labour issue and adverse weather condition affected to the main tea growing area are the main reasons for this production decline (Ranasingha, 2020).

Sri Lankan tea industry is strengthening by the plantation and smallholding sectors. Smallholding sector has contributed more quantitatively and qualitatively than plantation sector to the tea production in the country. Tea lands lesser than 10 acres considered as smallholdings tea lands.

Currently, Sri Lankan tea smallholding sector has grown in 3,692 Grama Niladhari Divisions and 123 Divisional Secretariat Divisions in fourteen districts in the country (Jeewanthi & Shantha, 2021). Tea smallholding sector contributes 122,448 ha of the total tea extent while they contributing over 74.5% to the total tea production, operating about 393,420 tea smallholders with 397,223 tea holdings with nearly 60% of the total tea extent in the country (Tea Smallholding Authority, 2017).

However, declining tea productivity during past few years enable to the competitors to expand their place in the world tea market (Abewardana, Rathnayaka & Kahandage, 2015). The average productivity of tea smallholder sector in the Low Country is around 2100 kg/ha/yr. and this amount is lower than the potential level of 3000 kg per ha/yr. (Bandula, Abewickrama and Zoysa, 2017). The productivity of tea lands indicated by yield/ha has declined during the last few years possibly due to undesirable weather, soil erosion that leading to infertile soil, pest and diseases, and old age crops. Among those reasons old age crops has a significant effect in decreasing of the productivity. Due to the senility of plantation annual green leaves production, size of tender leaves and the quality of leaves has been decreased (Ganewatta and Edward, 2000). The best economical yield of a tea bush can be obtained up to 20 years and after that the yield starts declining gradually. The possible reasons associated with this economical yield declining are decreasing the vegetative growth of tea bush, died plant parts and weaken plants (Bandula, Abewickrama and Zoysa, 2017). According to the ministry of plantation in Sri Lanka a recent issue faced by tea industry is maintenance of senile and low productive lands. According to the department of census and statistics information in 2005, a total extent of 116,492 ha of tea lands with adult tea bushes exist in the tea smallholding sector. In addition 21,613 ha of tea lands are crops already exceeded 25 years. Therefore immediate actions are encouraged to execute such as replanting.

Replanting and also rehabilitation of tea determine both the productivity and sustainability of the tea industry. According to the data 748ha, 1027ha and 806.46 ha of tea lands were replanted in smallholding sector in year of 2017, 2018 and 2019 respectively (Statistical information of plantation crop, 2018 & Ministry of Plantation, 2020). The ministry of plantation industries of Sri Lanka has announced recently to increase the current

replanting rate of 0.75% per annum to at least 2% to overcome the problem of decreasing land productivity. Annually 2% of tea replantation should be performed in existing tea lands as per the national policy with a view to steadily maintain the extent of tea lands while obtaining the maximum harvest (Tea Smallholding Authority, 2017)

A. Research Problem

However, considering the farmers' perspective most of them are reluctant to replace their old tea lands with new tea plantation and the reasons behind that can be increasing replanting cost, labor scarcity, lack of financial subsidies and finding quality planting materials etc. (Bandula Abewickrama and Zoysa, 2017). Government has been implemented various programs to encourage the farmers for replantation. Extension services are held 3 to 4 days per month. Subsidy program for replantation has been introduced in order to get relief in higher cost for replantation. This subsidy has been provided up to Rs. 500000 per hectare (Sri Lankan Tea Board, 2020).

Table 3: Subsidy scheme for replanting of tea with soil rehabilitation

Stage	Point of Release of subsidy	Approved subsidy amount (Rs/ha)
Uprooting & soil conservation	On completion of operation	130,000
Soil Rehabilitation 1	6 months after planting grass	50,000
Soil Rehabilitation 2	18 months after planting grass	200,000
Planting	On completion of planting	70,000
Maintenance	At the completion of one year after planting	50,000
	Total	500,000

Source: Sri Lanka Tea Board, 2020.

Although having encouragement programs, still there is a problem regarding with the reluctance of farmers for replantation. Since there is no empirical

research studies associated with reluctance of replanting of tea lands by the farmers in Galle district this research study was carried out.

B. Objective of the study

The main intention of this study was analysis of the factors behind the less interest of farmers for replanting old tea lands. Specific objectives were; to find out the productivity of old tea plantations in Tea Small Holding Sector in Galle district, to find out the factors affecting the rate of replanting. Finally, to give recommendations for motivating tea small holders for replanting.

II. METHODOLOGY

Galle district was purposively selected for the study as it produces about 40,000Mt of fresh leaves annually and contributes around 15% of the total tea production of the island. This district has more than 21% of the total tea small holdings and 21% of the total tea small holders of the tea small holdings sector in Sri Lanka. Tawalama, Neluwa, Nagoda, Yakkalumulla, Baddegama, Elipitiya, and Niyagama are the main tea growing DS divisions in Galle district out of total DS divisions, which contribute more than 90% of the total tea small holdings. The cluster sampling method was used and all tea small holders in Galle district were divided into small clusters according to the GN divisions. Out of 36 GN divisions in Tawalama DS divisions, Hiniduma west GN division was selected as the proposed cluster for this study. The sample size was 30 tea small holders in Hiniduma west GN division.

Primary data were collected by personally interviewing tea small holders using a structured questionnaire. In addition to that, interviews with extension officers, Grama Niladhari and other authorized personnel and direct field observations also carry out. Secondary information was collected from the annual reports of Tea Board, Tea Small Holding Authority and relevant research studies. Secondary data from publications of Ministry of Agriculture, Department of Census and Statistics and Central Bank of Sri Lanka also studied. Collected primary data were analyzed by using descriptive and inferential statistical methods. Microsoft excel package and SPSS statistical software were used to analyze data.

III. RESULTS AND DISCUSSION

A. Demographic Factors

The findings in the table 2 illustrate the socio-economics situation of the small holding tea farmers

in Hiniduma GN division. With Regards to the gender of the respondents majority was male (60%) while (40%) were female. Age of the respondent has been classified into four age levels as 25-35 years (6.6%), 35-45 years (33.3%), and 45-55 years (40%) and above 55 years (20%). Majority of farmers had only primary education (45%) while 40% farmers had education up to G.C.E O/L. However, only 15% farmers had education up to G.C.E A/L.

Table 4: Demographic details of the respondents

Socio-economic variable	Percentage
Gender Male	60%
Female	40%
Age 25-35 years	6.6%
35-45 years	33.3%
45-55 years	40%
Above 55 years	20%
Education primary education	40%
GCE O/L	45%
GCE A/L	15%

B. Status of the tea plantation in Small Holding Sector of Hiniduma GN division.

The results revealed that about 60% of tea small holding farmers mainly depend on the income coming from tea cultivation and 40% of them doing tea cultivation as an extra income source. There are 30% of farmers who maintain tea plantations over 25 years of age and majority of them maintain tea plantations belong to 5-25 years of age. It was revealed that 40% of farmers get extension service regarding tea cultivation while 43% of them get extension service as per month. However, 16% of farmers do not wish to get any extension service. Therefore, extension officers in this area should pay their attention on these farmers and deliver their service by covering all tea small holders in the area.

C. Find out The productivity in tea lands

According to the first objective the productivity of tea lands were calculated as dividing the yield (kg) by land area (ha) and the highest productivity in the sample was 2666kg/ha/yr. and the average productivity was 1462kg/ha/yr. and this is lower than the potential level of 3000 kg per ha/yr. in low country average tea productivity in smallholding sector.

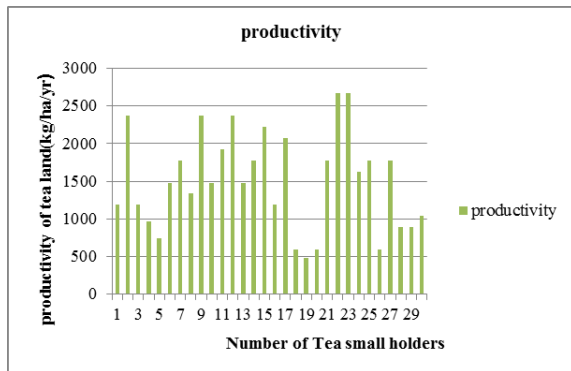


Figure 1: Productivity of tea lands

D. Find out the reasons of the farmers for less interest for replanting

According to the second objective it was attempt to find out the reasons for lack of interest of farmers regarding replanting of tea. It was revealed that only 33% of farmers practice the replanting and 66% of them reluctant to replant their old age tea lands. While considering the reasons for the reluctance of replanting majority of farmers (36%) were stated that, since they mainly depend on the income coming from tea lands they have no any other income source during the replanting period. Another 21% of them were stated that the gap period for new harvesting is too long. Thus they do not wish to replant there old tea lands. Tea plantation required approximately 3 years to get new harvest. A similar research conducted by Bandula, Abeywickrama and zoysa found out 52% of farmers in the sample were pay less interest to replanting due to long rehabilitation period. Therefore it is timely required to tea sector officers to find out ways to reduce this long rehabilitation period and introduce new extra income sources such as home gardening during this time period.

However, another 21% of tea small holding farmers were stated that high labor cost and labor scarcity is their reason for the reluctance of replanting. According to the Jeewanthi and Shantha (2021) the reason for the high labour cost of replanting is the labour shortages in the small holding sector. Considering on the money investment in replanting 9% of farmers were stated that they have replanted old age tea plantations using their personal capital. However, 81% of them have used government subsidies. However, 5% of farmers were stated that there have limitations in subsidy procedure and obtain subsidies is difficult to them. Therefore, government subsidy program should be cover up those barriers faced by the farmers while they obtain

subsidies and it should be effective with more benefits.

According to the results 5% were stated that finding quality planting material is somewhat difficult to them and therefore they pay less interest to the replanting of their old age tea lands. In this regards, multiply and disseminate quality planting materials among tea smallholders is timely required.

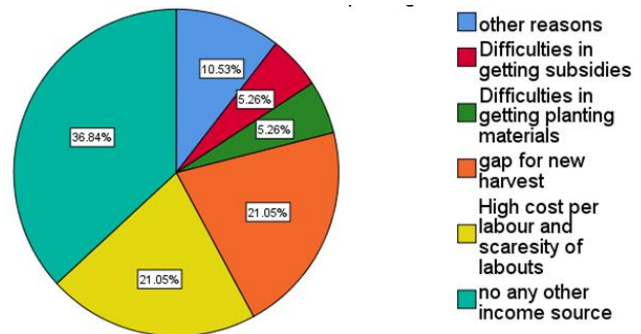


Figure 2: Reasons for less interest in replanting

IV. CONCLUSIONS & RECOMMENDATIONS

As an effort to find solutions to the current issues of low productivity in the tea sector and the reluctant of farmers in moving towards replanting in Sri Lanka, present study paves its way on exploring the problems and prospects of replanting Tea lands in smallholding sector in Sri Lanka with special reference to Galle District. Study reveals that the average productivity of the sample is 1462kg/ha/yr. According to the findings, present study concludes that out of several reasons, the main reason for the low rate of replanting in smallholding sector is loss of earning during the replanting period followed by long gap period for new harvesting. Thus present study recommends to Tea Small Holding Development Authority to introduce some income sources such as self-employments, livestock and home gardening to ensure the tea small holders' income during replanting period. This study also suggests introducing some alternative economic crops such as C4 grasses, oil crops and pulses for rehabilitation instead of the uneconomical grasses such as guinea, Bracharia, which can be used for animal feeding as well as an extra income source for farmers.

Moreover, present study revealed that existing government subsidies program has some limitations and barriers to farmers. Therefore, this study recommends regulating the existing procedure of giving subsidies and introducing an attractive special loan scheme with more benefits to the tea

smallholdings sector farmers. In addition, study recommends implementing projects to supply and disseminate quality planting materials among tea smallholders. Most of tea smallholding farmers live in rural areas, where the knowledge and technology information dissemination are very poor. Thus this study proposes to introduce new technologies to reduce high labor cost of replanting.

This study moreover suggests strengthening extension system of the TSHDA to deliver the messages about the importance and economic benefits of tea replanting to attract the Tea Smallholdings to the tea replanting regularly. Finally, this study directs policy makers in the sector to execute appropriate actions to enhance productivity of tea land through increasing replanting rate.

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An Operational Model of Managing Vocational Training for Persons with Visual Impairment and Blindness

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Abstract— Vocational training is a key means of strengthening employability of all including those with visual impairment and blindness. Although Sri Lanka too invests significantly on providing vocational training for people with disabilities there is a serious gap in finding productive employment for persons with visual impairment and blindness. This research is aimed at developing and validating a plausible model for strengthening the vocational training provision to visually impaired and blind community in Sri Lanka. Using case study method, three purposely selected leading vocational training centres representing the main forms in existence were examined to analyse their strengths and weaknesses, and the challenges encountered by the trained persons in finding jobs. A model aiming at strengthening the management, efficiency and overall quality of vocational training provision was developed first. This was revised by a number of management experts and stakeholders, both local and international, to arrive at the final model. This model portrays the key determinants and associated processes that could be adopted by the centres for making necessary improvements. Furthermore, an integrated approach linking the government, training centres and the industry responsible for providing employment is incorporated into the model implementation process. The proposed model would broaden the perspectives of policymakers, governmental institutions, and respective stakeholders aiming to empower persons with visual impairment and blindness.

Keywords— *vocational training, employment, persons with visual impairment and blindness*

I. METHODOLOGY

A mix methodology combining case study and expert opinion reviews through in-depth

interviews have been used as the main research approach. The methodology could be described under two phases, namely case study segment and the review. In the case study segment, three vocational training centers, with in-situ observations, interviews with a number of managers, trainers and some passed out trainees were examined. Then the results were analyzed to determine their strengths, weaknesses, opportunities, and threats.

As the second phase, a parsimonious model was developed combining the results of the case study phase with past literature, first. Next, the draft model was reviewed with experts and people of importance who are closely associated with training and development of persons with VI&B. Finally, with a number of iterations and deliberations, the resulting model was arrived at.

The three case study centers examined were identified as,

- a) Rajagiriya Center: Specialized Training and Disability Resource Centre of the Employers' Federation of Ceylon at Rajagiriya, Colombo District (Employer's Federation of Ceylon, 2021).
- b) Seeduwa Center: Vocational Training for Persons with Disabilities at Seeduwa, Gampaha District of Social services Department (Department of Social Services, 2021).
- c) Kaithady Centre: Home for Visually Handicapped and Industrial Centre – Kaithady, Jaffna District (Jaffna Association for the Visually Handicapped People, 2020)

II. RESULTS

Securing a job with a regular income or engaging in productive employment were echoed as the key

desires for trainees through discussions with almost all stakeholders. The following seven pitfalls related to vocational training were identified through qualitative interviews and observations.

A. *Securing Productive Employment*

One of the main challenges experienced by those who have completed training in most centers is the difficulty in securing productive employment. A blind freelance masseur who was trained in Seeduwa Center six years ago, said:

“I am thankful to Seeduwa training center for providing a life skill that allowed me to get a good income. I completed a one-year course in 2013. However, I struggled a lot to find a job was jobless for over three years. There was no proper mechanism for passed out trainees to find jobs. Since I am living in a costal tourist area and with the support of my friends, I managed to develop my own freelance work.

“Three of us competed this training. All were like this. About 12 were trained on cane weaving. They could not get a job and some of them are casual works in some places.”

A senior manager of Seeduwa center also said:

“It was observed that in Seeduwa and most our centers we offer training on mostly traditional crafts such as handloom weaving, broom making, making coir products and cane weaving. These people find it difficult to find a job. Even self-employment is not practical for them.”

It can be observed that not only most training courses offered are outdated but there appears to be no streamlined mechanism to get the people who got the training into productive employment. It is a common seen, and is unfortunate, that such people walk from door-to-door (e.g. Cane weavers, incense sticks or hand-woven carpets) looking for casual jobs. There is ample evidence to confirm that the skills imparted at training centers are not fitting and updated to meet the market demands. Thus, the need for updating training curricula along with employing expert trainers are imperative.

B. *Shortage of In-house expert trainers.*

The professional standing, qualifications, experience, and exposure to industry of the trainer fraternity plays a major role in producing quality trained personnel. In this respect the trainers need to be equipped with knowledge and skills of trades that are in demand in the industry. Also they must be able to foresee the market trends. In this respect the Manager of Rajagiriya center is seen to a well-qualified person who can act as role model for the young trainees, but this state of affairs is not found in most other centers.

“She is an International Trainer in CISCO qualifications and a Supported Employment Officer qualified from the Northern Ireland Union of Supported Employment. She has followed courses in Information and Communication Technology from the Tokyo Computer School for the Blind – Japan and All India Confederation of the Blind – India. She has also followed programmes on Training of Trainers in Information and Communication Technology for Vision Impaired Persons of the Asia Pacific Development Centre on Disability, Thailand, JAVA Application Development from the University of Colombo, School of Computing and Digital Accessible Information System (DAISY) from the University of Sri Jayewardenepura.” (Employer's Federation of Ceylon, 2021).

This person herself is blind. Her visual impairment has been caused as a tragic bomb blast accident. Undoubtedly this person-in-charge cum the trainer is a great asset to the center. However, the fact that the center runs mostly as a ‘one-man-show’ could be a major pitfall as far as the leadership succession is concerned.

The situation in Seeduwa Center is quite different:

“We practically run about eleven courses. For each course there is one dedicated trainer. Most of them have been here for the last 65 years.” A senior manager proclaimed.

Our observation was that most of the trainers themselves were also persons with several impairments. For example, the trainer looking after the blind persons is also blind. Though accommodating persons with disabilities is a means of providing employment to this community, our observation is that the trainer capacity need to augment to enhance the quality of training.

“we are not hiring new trainers. It’s the department (of Ministry of Social services) that send people here. Also, no provision to hire lecturers from outside”, was his reply to our inquiry.

In the Kaithady center too the situation does not differ much. The officer in-charge said, *“ We have a mix of both disabled and others to look after the people here. We do not recruit outsiders for training here. This is a home for blind people as well as a training center. For example there is one lady who is trained in poultry farming; she successfully looks after this poultry shed with 200 hens on her own”* .

It can be seen that the in-house trainer capacity is key component for the success of running a vocational training center.

C. Outdated Curriculum

Only the Rajagiriya center is seen to be focusing on computer applications and information technology. The activities in Kaithady Center include ‘paper plate making’ ‘poultry farming’ and few other minor trades. This situation may be justified since this is not a dedicated training center and is also a home for the blind people. However, the courses run for the blind persons, generally youth, appear to mostly depend on traditional trades such as broom making, handloom and cane weaving is not appropriate. Such trades do not have a mark value in the current context. Further, they may not fit even for productive self-employment ventures. Massage therapy is seen to be an appropriate trade for the blind persons. This is confirmed by the freelance masseuse who got trained in Seeduwa Centre.

On the other hand, the senior manager at Rajagiriya center said:

“My experience is that if we can produce people who are good in IT skills, they have a reasonable chance to get jobs in the private sector”.

Findings of Lund and Cmar (2019) supported this assertion that training should be done in modern trades rather than sticking on with outdated training. Also, the grass-root level should be reached of establishing modernized equipment along with independent training. Even the trainees are keen to learn new trades and vocations. For example, one ‘inmate’ from Kaithady centre said:

“We do broom making, paper plate production and things like that. But we don’t have access to

computer training. We like IT and find a good job outside”

A senior manager of Seeduwa center pointed that:

“I am concerned that some courses we offer are outdated...But making changes to our systems is huge challenge to change, It is a long process....It is the department (of the Ministry of social services) make changes to curriculum, and we can’t change anything. After a long struggle, we recently introduced a computer course; other than that we have cane and coir making, massage therapy, carpentry, sewing like that.”

Thus, the outdated curricular and training that are not in demand in the industry today is a pitfall of vocational training centres. The fact that state run concerns like Seeduwa Centre is catering to people of different disabilities is also limits flexibility for tailoring the programmes fitting with market needs.

D. Management and leadership

Effective management and able leadership are two key elements for success of any organisation. The leadership quality of the manager Rajagiriya centre is clearly visible. The blind-friendly environment equipped with tact-tile flows, side railings, design of doors and corridors with voice activation and sound elevations in the centre are roused due to efforts of the leader.

“I had long struggle with the top management to get this place developed. Now it is in good shape. The trainers should be imparted with professional qualities, in addition to the trade they master.” Said the manager Rajagiriya Centre.

In contrast, a senior manager Seeduwa center said: *“It’s very difficult to manage the staff and the students because they come from different social backgrounds. There is a problem with them adapting to new situations. Therefore, it difficult to guide and control.”*

In the Seeduwa center the center manager is centrally appointed by the Ministry of Social Services, and hence the management succession appear to be not a major issue. However, it was observed that the center manager’s leadership skills are somewhat inadequate to run an organization of this nature.

E. Funding and Financial issues

Sufficient sources of funding is a mandatory requirement or any organization to survive and grow. The funding sources of the three vocational training centers examined were diverse. Seeduwa center is fully funded by the Sri Lankan Government whereas the Rajagiriya center is run under the preview of an Employers' trade union established in 1935. Although the aim of this organization is unification among Employer interests, with the expansion of its scope a disability training center has been established. Kaithady center is run by a charitable organization devoted for the blind community and the higher management comprises mostly of blind persons. Senior manager of Rajagiriya center echoing financial issues and difficulties in securing funds for expansion, said:

"It is mainly by the employers federation, but I have to go behind them to get sponsors...we get only a very little from sponsors. Volunteer support is lacking for the center."

A senior official from Kaithady center said:

"we can manage reasonably with our funding sources. Mostly we run with donations of the well wishes; both local and overseas. A good proportion of our regular expenses are covered with the money we generate within. For example, our poultry section gives a regular income. Government is also proving a small amount based on the number of inmates"

Seeduwa center appears to be running with financial difficulties, since the Government's provides a limited budget. This issue also a major pitfall toward making necessary expansions to introduce market-oriented courses.

F. Industry reluctance for hiring persons with disabilities and adverse social norms

It is observed that there a general reluctance to hire persons with disabilities including VI&B by the prospective employees. One HR manager of a medium scale company said:

"One concern is that we do not know whether they can perform the tasks assigned. On the other hand we may have to provide extra facilities, which we do not have and is an extra expense. In a way it is a risk"

However, it is worth mention here that a number of private sector organizations do hire such skilled workers. Another, feature is that some companies tend to hire persons with disabilities under their CSR (corporate social responsibility) schemes. The industry reluctance to hire such people may be seen as an extension of the undesirable social attitude and cultural practices. This problem is highlighted by many visually handicapped persons who have already completed training and their community leaders.

"Blind people are not generally welcomed in the society, so you have to earn that by our own behavior. One day when I was walking with the white cane in a street in a Colombo suburb, I head a lady rad side hawker selling fruit or vegetables saying to her companion- "look this is how the sins of last birth is manifested". I am sure they did not know that I was going for a free-lance appointment of massage therapy, for which I may earn their full daily income in an hour"

Said a free-lance a masseur trained in Seeduwa center.

Problems of this nature prevailed in traditional societies need to be addressed through awareness programs and state incentives. This is long standing process and even the developed nations have passed this era after many struggles. The developing countries like Sri Lanka with undesirable cultural behaviors has to learn much from the experience of the developed world.

G. Gaps in national policy

Interviews with two Japanese experts, one visually handicapped social worker and a sighted Japanese trainer in a center dedicated for this community reviewed that their National government plays a key role in empowering persons with visually impaired blind.

"we have a policy that all companies must allocated a quota of 2% jobs for the blind people. If a particular company does not abide by to the rule, it has to pay a fine of Japanese Yen 50,000 to the Government. On the other hand, for each employee absorbed in to the company, the Government is paying Japanese Yen 80,000 as an incentive and also to supplement the cost of employee accommodation."

In Sri Lanka, the entire process appeared to be left alone to the training centers and the respective trainees. Hence, a significant Government intervention is required to address most of these pitfalls in the vocational training of persons with visual disabilities.

III. PROPOSED MODEL

The underlying aim of the study is to make a proposition to uplift human capital with VI&B through productive employment. Considering the pitfalls, issues and problems identified within the training concerns and the environment in which the trained personnel are accommodated, the model presented in Figure I is proposed. The details of this framework are discussed in forthcoming sections.

This model could be used as a guide to make progressive improvements to the existing vocational training centres or to develop new centres that could successfully overcome the challenges, issues and problems encountered by the stakeholders of vocational training for persons with VI&B.

The model could be best-read from the centre to periphery. The pitfalls brought about through findings of this study can be comprehended under four basic managerial functions, namely, planning, organising, controlling, and leading. These four functionalities fall under formulation phase. Next outer layer is the implementation phase where respective activities are to be made visible on the ground in a timely and objective manner. The outermost ring is designed to highlight the importance of maintaining and continuous improvement of quality standards. This must be an integral part of all activities and processes. Another noteworthy feature of the model is that while this is designed for training of visually disabled community, it can be equally adopted by other training concerns with suitable modifications.

The next section details each component of the of the model in detail.

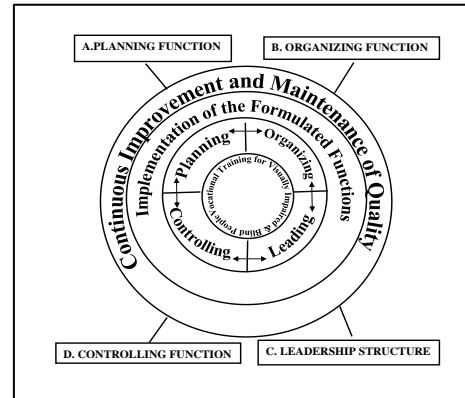


Figure 1: Proposed model

Source: AHEAD Project

A. Planning Function: Basically, training curriculum need to be redesigned focusing on two broad aspects;: The social and living skills need to be imparted on one side, and the trade/vocational skills on the other. In this prospect, the model proposes to review the social and industry needs, and trends to determine market demand in designing the training courses of the trades and vocations suitable for persons with VI&B. Curriculum design and development coupled with the market review findings and using the state-of-the-art training methods are proposed. Progressively reducing the focus on traditional trades like broom making and moving on to information technology and other modern technology resources could be the way forward.

Furthermore, planning for quality improvement needs to be strengthened to improve the quality of human resources in the training arena. It is observed that, in a way, employing the 'blind' persons as trainers is a positive sign since they may be able to deeply understand the trainee's requirements. However, combing them with sighted persons having the right attitude and aptitude could produce better results. Plans need to be in place for improving the quality of existing panel of trainers. This is proven with the developments observed in Rajagiriya Centre. Plans also need to be in place to supplement the in-house training panel with industry experts. As observed the Government vocational training centres are catering to a mix of persons with different impairments like deaf, blind, mentally retarded and people with physiological problems. This integration of 'disabilities' would tend to lose the

focus on providing a targeted quality training to a particular group. This situation also negatively influences the moral of trainees. This aspect was highlighted with the observation that the trainees in Jaffna and Rajagiriya centres appeared to be pleased and contained in comparison to Seeduwa centre.

It is also important to plan for incorporating industry exposure component in the training curriculum. Carrier support and job placement process also need to be planned especially through an establishment of a career guidance unit in each centre.

B. Organizing Function: The key activities of this function are organising the processes and resources including human capital, infrastructure, technology, and finances. This function is to deal with putting the plans into action. Since it was observed that there are weaknesses in management, setting up of an implementation and management unit is proposed. This team should comprise of a mix of personalities both blind and sighted communities. Otherwise, the management teams may not be able to truly understand the real issues. The buildings, infrastructure, training locations and walking pathways need to be designed to accommodate the needs of persons with VI&B. In this respect Rajagiriya centre is seen to be well organised whereas Seeduwa centre is somewhat weak. Since mobility and transport from long distances are intrinsic issues of blind people, the centres need to provide in-house accommodation along with a financial incentive as a motivational boost.

Organising the curriculum delivery that fits with the visually disabled trainees' needs special attention. In this respect, two broad areas of training, namely (a) mobility, orientation, and life skills on one hand and the (b) training on a vocation or a trade on the other need to be incorporated along with a setup of career guidance unit linked with employers.

C. Leading: Leadership is an integral part of any successful organisation. In this model a number of levels of leadership has been identified and are self-explanatory. The significant feature in these vocational training centres is that the personalities with VI&B need to be given responsibility in certain levels of hierarchy. Three very effective leaders who themselves are blind as

observed by researchers can be cited as examples. Three such personalities are (a) a well-qualified and experienced enthusiastic lady who is heading the Rajagiriya Center, (b) Chairman of Jaffna Association of the Visually Handicapped, a practicing attorney-at-law and (c) Chairman of "VAAZHVAHAM" – Centre for Development of Visually Disabled, Jaffna, NGO dedicated for blind children. The leadership structure need to set-aside appropriate positions for visually disabled accommodating with shared or full responsibility. On the other hand, positions such as chief financial officer need to be from sighted community

D. Controlling: Monitoring and controlling to make sure the organised activities are implemented as planned is a key component in any organisation. This area seems to be weak in most case study organisations. Hence new strategies need to be introduced in this sphere of activities.

E. Implementation: Implementation of the four managerial function in a timely, effective, and objective manner is the key to success of the entire process. This need to be done with the support of policy initiatives of the Government. Considering the Government is responsible for the welfare and development of all citizens of the country, the vocational training sector persons with VI&B need to be working closely with the state policy and industry. Creating a conducive environment for empowering the VI&B community, in a wide-ranging fashion need to be addressed through an intergraded agenda with all stakeholders including the Government, the implementing agencies and public and private sector of the country. Furthermore, the training centres need to be closely working with the job providing concerns to ascertain the market-oriented training courses.

In this respect many lessons could be learnt from the Japanese experience that was reviled through model review interviews. In Japan, the government set the threshold of number of persons with VI&B (or persons with disabilities as the case may be) by every company. Currently this proportion is set to be 2% of the full workforce of each company. Accordingly, the industry is bound to accommodate a stipulated quota for visually disabled persons. For each employed person with VI&B, the company is provided with a monetary incentive (currently 80,000 Japanese yen per person). These funds could be used by the company for providing

facilities to accommodate the blinded employee. On the other hand, the company has to pay back to the Government a sum of 50,000 Japanese yen for each vacant position of the VI&B quota, under the current standards. This reciprocal binding of the key stakeholders would facilitate empowering the VI&B community in employment without any barrier.

IV. CONCLUSIONS

Outcomes of this study presents an advanced and comprehensive model developed with a purpose of strengthening the vocational training centres for the persons with VI&B. The model is featured with four managerial functions; planning, organising, leading and controlling. Each managerial function is elaborated in detail with specific activities and processes. The modalities of implementation of formulated functions are also detailed. An interwoven process of integrating the key stakeholders including the Government, industry and training centres is also proposed. Researchers could venture into specific aspects of training, market demand and social standing using this model as the basis for their future studies. This model could be further validated on ground by implementing the processes in one of the existing vocational training centres. The other option would be for an organisation like NAITA to proceed with this model as a new venture. Although this model is developed targeting vocational training centres for the visually disabled persons, this could be equally extended for training of persons with other disabilities.

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Economic Sensitivity of Non-Working Females for Wage Differential Compensation: Empirical Evidence from Sri Lanka

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Abstract— The pathway towards gender equality, poverty eradication and inclusive economic growth can be built by women empowerment. This study addresses the problem of inadequate female labour force participation in South Asia. As such, following a mixed methodological approach, both the qualitative and quantitative analyses were triangulated to achieve the objective of the study. Women’s Wage Compensation Sensitivity Index (WWCSI) is constructed as the ultimate output of the quantitative analysis using a sample of 112 respondents (non-working females) from Sri Lanka, India, Pakistan and Bangladesh. The findings of that analysis suggested that compensating wage differentials can economically empower non-working females in South Asia. However, wage differential compensation is likely to be more productive among rural females and then among urban females, and it will be more successful among less educated females. According to the newly recognized backward bending nature of WWCS curve, wage differential compensation should be offered for females in prime working age (25-45 years) instead of mothers with infants or elder children. Further, governments should come up with temporary subsidization programmes especially for urban females in order to turn housewives into own account worker because the interest of females to earn at home is high. The follow-up qualitative analysis involved an in-depth inquiry on empirical evidence of wage differential compensation sensitivity of non-working females through a case study in Sri Lanka. Therein, motherhood and children’s age, co-habitation of grandparents, male supremacy in traditionally patriarchal families, intergenerational education and learning, voluntary child labour, human trafficking for women labour exploitation and growth needs and domestic financial requirements were explored as the determinants of women’s wage differential compensation sensitivity.

Keywords— *female labour force participation, women economic empowerment, women’s wage differential compensation sensitivity*

I. INTRODUCTION

Direct path towards gender equality, poverty eradication and inclusive economic growth can be built by women empowerment. But recently, fast GDP growth has not translated into fast labour force participation growth in South Asian region. Only 28% of South Asian females have a job or are seeking for one, compared to 79% of men. This is the second lowest in the world, after the Middle East and North Africa region which is at 21% (Doss, 1996). According to these statistics, at least half of the working age female population in most of South Asian countries do not belong to the labour force (World Development Indicator, 2018). Accordingly, one of current serious economic issues in South Asia is “Inadequacy of women’s labour force participation”. Most of the South Asian countries show significant lack in female labour force participation when compared to males. As per World Development Indicator (WDI), countries namely India, Pakistan, Sri Lanka and Bangladesh show lowest female labour force participation in South Asian region. However, women participation in the labor force in poorer countries like Nepal, Bhutan, Afghanistan is higher than other countries in South Asia.

A. *Research Problem and Justification:*

In South Asia, there is much evidence on the substantial burden on women’s time due to maternity, **childcare & family-oriented policies**, violence and discriminations against women. Therefore, the opportunity cost of work of women is relatively higher (Banu, 2016). This research mainly involves in testing following research question.

“Can compensating wage differentials, economically empower non-working females?”

This question can be subjected to debates in development research because the income factor is the central dimension for women’s empowerment in this research question. However, this research paper focused on labour income which was surprisingly not included by other empirical studies as women’s empowerment tool and that has not previously been studied for the entire South Asian region.

B. Objectives of the Study:

Primary objective: To investigate the impact of compensating wage differentials on women’s economic empowerment in the South Asian Region at the micro level.

C. Secondary objective:

1. To examine the responsiveness of South Asian non-working females to wage increment at the macro level and determine the relationship between wages and female labour force participation. (objective of macro level quantitative analysis)
2. To identify the non-wage factors which determine the women's economic empowerment in South Asian region. (objective of micro level quantitative analysis)
3. To find the determinants of women’s wage differential compensation sensitivity in Sri Lanka and causes for Sri Lanka's regional disparity of wage differential compensation sensitivity (objective of qualitative analysis)

II. METHODOLOGY

This study used mixed method approach called follow-up explanations model of explanatory design in which initial quantitative phase is followed by a qualitative phase to expand the quantitative results.

A. Methodology of Quantitative Study

1) Macro level study:

This study has employed the deductive approach to empirically validate the relationship between “Wage” and “Female Labour Force Participation”.

Deductive approach generally starts with a theory and then test its implications with data. This study uses a panel data model (longitudinal) of four sample South Asian countries over the period of 17 years from 2000-2017. India, Sri Lanka, Bangladesh and Pakistan are selected as the subjects of the sample because those were the four South Asian countries who have showed the lowest female labour force participation rate in 2018 (World Development Indicator, 2018). This study uses multiple regression analysis to explain the relationship between wage and female labour force participation. The female labour force participation rate is taken as the dependent variable in the model and it is used as the proxy variable for women’s economic empowerment. Independent variables of model are the determinants of female labour force participation namely; wage, education level, health and working poverty. Stationarity of variables is checked using “Levin Lin and Chu” (LLC) test. Multicollinearity is checked by the “Variance Inflation Factor” (VIF). The empirical investigation is based on the following regression equation:

Female labour force participation= f (wage, educational level, health, working poverty) (1)

The study intends to test following hypothesis by using the model explained above.

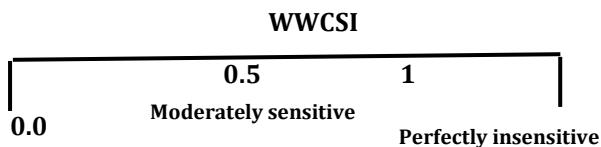
- ❖ Null Hypothesis 1: There is no significant relationship between wage and female labour force participation rate.
- ❖ Alternative Hypothesis 1: There is a significant relationship between wage and female labour force participation rate.

2) Micro Level Study:

The micro level analysis of the quantitative study involved in identifying the economic empowerment-based responsiveness or sensitivity of South Asian non-working females for wage differential compensation. For this purpose, an index called Women’s Wage Compensation Sensitivity Index (WWCSI) is constructed as the ultimate output of this analysis with use of the sample of 112 respondents (non-working females) from same four countries. This is the index which shows how sensitive South Asian women are to wage differential compensation in terms of economic empowerment. This index can be used to determine whether paying additional wage or subsidy as a compensation to cover the extra

opportunity cost of female workers is a successful tool to economically empower South Asian women. WWCSI is constructed by following Human Development Index (HDI) made by the United Nations Development Program using the formula below (Haque *et al.*, 2011):

$$\text{Dimension Index} = \frac{\text{Actual Score} - \text{Minimum Score}}{\text{Maximum Score} - \text{Minimum Score}} \quad (2)$$



Perfectly Perfectly sensitive

Women's economic empowerment was measured by using two major dimensions namely "Economic Advancement" and "Power and Agency". According to International Centre for Research on Women, World Bank and UNDP access to credit, livelihood, involvement in training, women's economic participation and access to new market are the sub indicators used to measure "Economic Advancement". And "Power & Agency" is measured by five indicators namely financial independence, control on household resources, domestic activity outsourcing ability, workplace decision making ability and bargaining power.

B. Methodology of Qualitative Study

Quantitative results were followed up with an in-depth qualitative study to explain why these results emerged. For this in-depth analysis, the researcher has done a narrative analysis in Sri Lanka. Snowball sampling technique is used to select subjects to the sample and it is consisted with twelve (12) participants (non-working females) from all the three clusters namely urban, rural and estate sectorial clusters (4 per each). 90 minutes physical interviews were conducted to collect data. This study has adopted the reflexive thematic analysis approach introduced by Virginia Braun and Victoria Clarke (Braun and Clarke, 2006) which is an approach to narrative analysis.

III. DISCUSSION AND ANALYSIS

A. Quantitative Analysis

The micro level analytical model was tested for both random effect and fixed effect. Table 2, column 01 gives the Random Effect model, column 02 gives the Fixed Effect model. The Hausman test recommended the suitability of Fixed Effect model. Hence, it was adjusted for heteroskedasticity. Column 03 shows Fixed Effect model adjusted to be robust.

Table 2: Results of model employed in micro level quantitative analysis

Variables	(1) Random Effect	(2) Fixed Effect	(3) Fixed Effect, Robust
Educational Level	-0.0837 (-0.421)	0.428 (0.846)	0.428 (0.863)
Health	-0.199*** (-9.061)	0.144 (1.282)	0.144 (0.681)
Wage	0.00310 (0.0329)	0.516*** (3.490)	0.516* (3.580)
Working Poverty	0.298*** (4.396)	-0.267 (-1.001)	-0.267 (-0.532)
Constant	52.12*** (5.104)	-29.34 (-1.162)	-29.34 (-1.240)
Observations	45	45	45
R-squared	0.9073	0.6499	0.6499
Number of country ID	4	4	4

Note: t-statistics are given in parentheses and *** p<0.01, ** p<0.05, * p<0.1

Source: Results extracted from the STATA

There is a positive significant relationship between wage and female labour force participation rate. Based on the results of the macro level analysis, we fail to reject the hypothesis.

Table 3 presents the comparative result of women wage compensation sensitivity by mean values of WWCSI indicators of sample countries. Economic advancement index value in overall South Asia is 0.844 while power and agency index value are 0.794. This means, women wage differential

Table 3: WWCSI and its sub-indices in Sri Lanka, India, Pakistan, and Bangladesh

INDICATORS OF WWCSI													
	Economic advancement (mean value)						Power and agency (mean value)						W W C S I
	Women part. Index	Training index	Access to mkt. Index	Livelihood index	Access to credit index	Economic Advancement Index	Household ctrl. Index	Fin. Ind. Index	Bargaining index	Dec.ma. Index	Outsourcing index	Power and agency index	
Sri Lanka	0.783	0.866	0.82	0.849	0.872	0.838	0.814	0.883	0.67	0.7	0.82	0.777	0.807
India	0.817	0.865	0.837	0.872	0.851	0.848	0.853	0.881	0.625	0.745	0.83	0.787	0.817
Pakistan	0.810	0.9	0.837	1	0.9	0.846	0.842	0.895	0.747	0.742	0.824	0.81	0.828
Bangladesh	0.812	0.864	0.838	0.87	0.848	0.846	0.830	1	0.7	0.745	0.827	0.804	0.825
South Asia	0.813	0.866	0.839	0.873	0.85	0.844	0.848	0.882	0.721	0.743	0.824	0.794	0.819

Source: Results generated by WWCSI calculation in the study

Table 4: WWCSI based on residence and educational level

Criteria	Category	Indicators of WWCSI		WWCSI
		Economic advancement index (Mean value)	Power and agency index (Mean value)	
Residence	Rural	0.850	0.809	0.829
	Urban	0.847	0.802	0.825
	Estate	0.707	0.666	0.687
Education level	10 year or less	0.851	0.816	0.834
	10-14 years	0.850	0.809	0.829
	14 year or more	0.746	0.700	0.723

Source: Results produced by WWCSI calculation in the study

can contribute for economic advancement of females than for the rise of women's power and agency. Mean value of those two major indices is calculated as women's wage compensation sensitivity index (WWCSI). Overall South Asia's WWCSI value is recorded as 0.819. This value is

closer to perfect sensitivity in WWCSI index range. Table 4 presents the results of WWCSI and its sub-indices based on residence and educational level of South Asian women. According to the results, highest sensitivity for wage differential compensation is showed by rural female while urban females are showing slightly less sensitivity than rural women. Moreover, with reference to the table 4, WWCSI value is lesser among highly educated females than the less educated females. This indicates that, females with low level of education are more likely to empower economically than women with high level of education if wage differential compensation is paid. Based on results of the micro level analysis, we fail to reject the hypothesis.

B. Qualitative Analysis

Thematic analysis of qualitative study found seven (7) determinants of women's wage differential compensation sensitivity (WWCS) namely motherhood and child age, co-habitation of grandparents, male supremacy in traditionally patriarchal families, intergenerational education & learning, voluntary child labour, human trafficking for women labour exploitation and growth needs & domestic financial requirements.

Extreme male supremacy, negative impact of parental less education on children's school dropouts at early age, high voluntary child labour, oppressive human trafficking for the exploitation of female labor, less growth needs have been identified as the main reasons why estate women are less sensitive to wage differential compensation.

Financial deprivation prevailing among rural females to meet their needs including growth needs is the key reason for relatively high wage differential compensation sensitivity of rural females. Less education is identified as a major reason behind the financial deprivation. Urban females are also showing relatively high WWCS mainly because of their rising growth needs. Further, it found backward bending WWCS curve which shows the relationship between child age and WWCS.

Seven major themes which were identified as determinants of women's wage differential compensation sensitivity (WWCS) in Sri Lanka are presented as follows. When presenting extractions under each theme, fake names are given to participants by the author to protect their personal identity.

1) *Motherhood and Child Age*

According to the findings, majority of the females have done at least one job before they reach to motherhood. Childbearing push their steps back to house from the workplace. Women who live alone are more likely to be in the workforce than women who live with kids under a complete family. Therefore, sensitivity shown by females for financial motive like wage differential compensation is relatively low among mothers than single female in working age.

"I'm super talented in tailoring since my childhood. So, I entered to a garment factory as a tailor in my home village when I was 18-year girl. I learnt lots about tailoring techniques at there. After one year, I joined with a garment factory in Colombo area, because I wanted to earn more through my skills in my young age. Later I got married when I was in 21 year of age. However, I have resigned from my job after bearing my first baby in 1996. After that, I was not in a situation to rejoin with a job even though my factory asked me to join as a team supervisor under

increased basic salary" (Shanthi, Rural Female, 45 years)

This statement indirectly says that, single female with no family responsibilities or child care burden can be easily be motivated to do jobs through financial incentive like wage differential compensation. But the main root cause for Shanthi's resignation from job is the birth of her elder child.

2) *Co-habitation of grand parents*

This study found that, females who are living together with grandparents in same household are showing greater sensitivity for wage differential compensation than females who are living separately from grandparents.

"When I was working in a garment factory, my mother did all the chores like bringing son to school, washing son's uniforms, preparing lunch packet for him etc. and I would not be able to go to the factory to earn if my mother was not there to look after my son." (Mari Amma, Estate Female, 34 years)

An estate female named Mari Amma has gone to garment factory by assigning child care chores to her mother and she still believes that her mother's support was a critical factor affected for her earning decision. Therefore, estate females will highly sensitive to wage differential compensation if grandparents are living together in the same household.

3) *Male Supremacy in traditionally patriarchal families*

According to findings, absence of paid job for females further weaken the domestic autonomy of themselves because women who are unemployed and don't earn money have a weaker say in domestic decision making than women who have a job or do work for money. The male supremacy was clearly observed in this qualitative analysis as the sample consisted of non-working females

"What the hell is this.....(Aggressively). Don't you have any other questions to ask from my wife. Are you going to create new problems in my family? My wife will not take decisions according to you. She is my wife, not your wife. Get out from the house...." (Thramakumari's husband, Estate male, 31 years)

Above statement shows the reply given by Thramakumari's husband when researcher ask the

questions regarding impact of earning cash through a job for her bargain power and domestic autonomy in the family. This husband's aggressive behavior is a good proof for negative impact of male supremacy on employment decisions of females.

4) *Intergenerational education & learning*

Impact of parents' education on their children's school success can have a significant impact on the level of sensitivity that women show for wage differential compensation.

"My mom was a teacher and dad were a post master. Since they know the value of education a lot, they wanted me also to study till university level to do a good job. Thanks to them, finally I ended with bachelor degree in a local university. I had a good income since the beginning in my Accountant job what I did after university." (Nadee, Urban Female, 44 years)

5) *Voluntary Child Labour*

This research found that, still there are unrecorded voluntary child labour among poor families in Sri Lanka. It has impacted on women's' wage differential compensation sensitivity of females in estate sector. Since most of the families are poor in estate sector, voluntary child labour was a common phenomenon observed in estate sector. Rajeswari also said that, her mother had gradually reduced intention to work for pay as result of entrance of herself (voluntary child labour) to workforce.

6) *Human trafficking for women labour exploitation*

Human trafficking for women labour exploitation can reduce the sensitivity of estate females for wage differential compensation.

"One day, I raised my voice against strict working conditions. For that reason, Kankanam Mahaththaya (Plantation Superintendent) reduces the weight of the plucked leaves and increases it for those who like him or for women who are silent even under the harsh background of work" (Rani, Estate Female, 49 years)

Since the payment of extra wages or subsidization could not have such positive impact on the reversal of slavery and slavery pressure, the sensitivity for wage differential compensation among women in the sectors like estates who have

to work with human trafficking for the labour exploitation was relatively low.

7) *Growth Needs and Domestic financial requirements*

According to research findings, women with such growth needs are having high level of financial requirements to achieve those growth needs. Such set of women show relatively high sensitivity for wage differential compensation.

Although this growth needs of herself motivate her to join the labor force, rural women in general did not have high-paying jobs opportunities, possibly due to poor education. With rising financial requirements to meet growth needs, she eventually ended up going abroad for a job, mainly to earn higher salary. This clearly showed that, sensitivity shown by rural females is relatively high because of presence of growth needs and high financial requirements.

IV. CONCLUSION

According to the results of macro level analysis of quantitative study, women's wage increment can influence the rise of female labour force participation and economic empowerment of women. Similar result is followed by S.Garikipati (Garikipati, 2006), O.Weber & A.Ahmad (Weber and Ahmad, 2014), F.W.Bayissa, J. Smits and R.Ruben (Bayissa, Smits and Ruben, 2017). Results in micro level analysis, show that WWCSI value of all the sample countries is greater than 0.5, which means South Asian non-working females are relatively highly sensitive for wage differential compensation in terms of economic empowerment. Further, results show that WWCSI is highest in rural sectors compared to other sectors. This is mainly because high financial requirements and big growth expectations among rural people. The lowest WWCSI value is observed in estate sector. Human trafficking of female labour, lack of growth needs, male supremacy, weaker educational backgrounds were identified as the causes which discourage estate females to join the labour force even though they receive an additional wage as a compensation.

Moreover, there is a negative relationship between female education level and WWCSI value. Accordingly, sensitivity for wage differential

compensation is relatively high among lower educated females and relatively low among high educated females. This finding implies that, priority given by educated females for non-wage factors is greater than the that for wage compensation when taking decisions related to economic empowerment. This is because they can already earn a decent salary with their higher education level. Therefore, absence of wage differential compensation is not a significant factor affects for low economic empowerment among educated females. But less educated women are more sensitive to wage differential compensation because they have fewer "higher paying jobs opportunities" for their education level.

"I want to see my son entering a local university. So, I wanted to teach him very well somehow. We sent him to tuition classes in town too. With the elderring of children, money requirement increased gradually. So, I decided to do a job. But No one gave me job for enough. I finally went abroad as a female attendant to earn money for my children and I do not regret that decision as my eldest child was selected for the University of Colombo in 2017" (Kamala, Rural female, 52 years)

This research also identified relatively low wage differential compensation sensitivity in terms of power and agency with compared to economic advancement. This is mainly because of relatively low value in bargaining power index and workplace decision making index. According to Doss, labour income can influence only for little rise in bargaining power with compared to non-labour income because income that is not related to labour decisions does not affect the relative prices of home-produced goods and purchased goods (Doss, 1996). Further thematic analysis of the qualitative study revealed that the strength of the emotional relationship between husband and wife also affects the bargaining power of women. It found that wives with weak emotional ties with their husbands had a higher level of positive impact of wage differential compensation on bargaining power than wives with strong emotional ties. As per to Becker relatively low workplace decision making power can be there, because of gender based invidious and non-invidious discrimination and attitude of considering women as less important labour factor than men by both men and women (Becker, 1986). However, domestic work outsourcing index is relatively high in all four

countries, which means additional wage is required for married women to fulfill domestic tasks like child care, household chores from the market.

Seven determinants of women's wage differential compensation sensitivity identified in the of thematic analysis of qualitative study were also highlighted in previous literatures. Motherhood and child age is the key determinant of women's wage differential compensation in Sri Lanka. Similar result is followed by the analysis done by International Labour Organization (ILO)(Azcona *et al.*, 2020). Some scholars identified positive relationship between grandparents' childcare on maternal labor force participation (Posadas and Vidal-Fernandez, 2013) Male Supremacy in traditionally patriarchal families was explained in terms of women's empowerment by Sri Lankan scholars too (Senarath and Nalika Gunawardena, 2009). Gail Weinstein also identified the early home experiences and parents' education (similar to Intergenerational education & learning) as critical determinants of children's school achievements(Gail Weinstein, 1998). This study further recognized patriarchy & hierarchical labor regimes as the causes for human trafficking for the exploitation of women labor. Similar finding were followed by Kurian and Jayawardena (Kurian and Jayawardena, 2013). Impact of growth needs on women's economic empowerment was also emphasized by Kanti, an Indian scholar (Kanti, 2012).

In overall view, compensating wage differentials can definitely economically empower non-working females in South Asian region. However, wage differential compensation is likely to be more productive among rural females and then among urban females. And it will be more successful among less educated females. This could be due to the opportunity cost of care being greater in more isolated rural settings, often necessitating paying to replace the 'care' even though prevailing salaries are lower due to less educated nature. According to the backward bending nature of WWCS curve, wage differential compensation should be offered for females in prime working age (25-45 years) instead of mothers with infants or elder children. Since lack of education is the root cause for many barriers for women empowerment, Sri Lanka should design a national long-term project to get

more rural and estate girls educated especially for STEM. Further, government should reduce oppressive women labour exploitation and voluntary child labour, especially in estate and rural sectors by strengthening existing labour laws under continuous supervision programme. Moreover, they should come up with temporary subsidization programme especially for urban females in order to turn housewives into own account worker because interest of females to earn at home is high.

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ABBREVIATIONS AND SPECIFIC SYMBOLS

VARIABLE	DEFINITION
Female Labour force Participation	Labour force participation rate, female (% of female population ages 15+) (modeled ILO estimate)
Wage	Labour income share as a percent of GDP (%)
Educational Level	Primary education, pupils (% female)
Health	Mortality rate, adult, female (per 1,000 female adults)
Working Poverty	Working poverty rate (percentage of employed living below US\$1.90 PPP) (%)

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Factors Affecting on Shifting from Current Cultivation to Hot Pepper Cultivation along with Contract Farming Practices: A Case Study in Minuwangoda, Sri Lanka

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Abstract— Even though Capsicum Chinese (Hot Pepper) has been recognized as a profitable crop for contract farming in all over the world, Sri Lanka has not yet recognized its economic value and this sector remains unexplored yet. Therefore, this study was conducted to identify the factors affecting the shifting from current cultivation to Hot Pepper cultivation. This research survey study was carried out using a pre-tested questionnaire for 70 vegetable farmers in Minuwangoda. The sample was selected using simple random sampling method. Collected data were analysed using descriptive and inferential statistics. The findings of this study revealed that market potential and agro climatic compatibility are the main factors that impact on farmers' preference on Hot Pepper cultivation on contract basis. Furthermore, the present study revealed that price, quality, timeliness, quantity, proximity and credibility of seed source and crop performance affect while purchasing the seeds from the company in contract farming. Moreover, a fixed price, market assurance, profit, quality standards, transportation and legal framework are requirements demanded by the farmers. According to the findings, the study provides significant insights to plan a sustainable contract farming system for Hot Pepper cultivation with suitable policy initiatives. Key recommendations of this research study include, providing extension services, remedies for diseases, free trials, proper responses to farmer inquiries and flexible agreements, which are required to enhance and sustain Hot Pepper cultivation along with contract farming system.

Keywords— *contract farming, hot pepper, shifting cultivation*

I. INTRODUCTION

Chilli (*Capsicum* spp.) is one of the major spice crops all over the world. It is daily consumed by one quarter of the world's population, and the rate of consumption is ever growing. Hot Pepper (*Capsicum chinense*) belongs to family Solonacea, genus *Capsicum* and Originally found in Amazon basin. Even though Hot Pepper has been identified as a profitable crop in all over the world, Sri Lanka has not yet recognized its economic value. Hence, a leading conglomerate in Sri Lanka expects to shift farmers from current cultivation to Hot Pepper cultivation along with contract farming practices in Minuwangoda.

Fruits of this species show an enormous variability in size and shape, and in the different intensities of yellow, orange or red when ripe. Since Hot Pepper shows a wide range of colors and shapes in fruits, it is used as an ornamental plant among gardeners. Especially it uses to add significant heat to traditional foods like stews, sauce, and marinades the meat since the high content of carotenoids in ripe pepper fruits make them important sources of these essential nutrients in the human diet. Moreover, it is used to produce hot sauces, paste, sausage, and extra spicy salsas in western foods. Additionally, Hot Pepper shows medicinal uses like Stimulate circulatory and digestive system, varicose veins, Asthma, Digestive problems etc.

This plant has natural capsaicinoids such as capsaicin, dihydrocapsaicin, norhydrocapsaicin, homocapsaicin, and homodihydrocapsaicin, (Sarwa et, al, 2012). Hot Pepper's unique fruity aroma and Intense spiciness of the crop due to the presence of these chemicals naturally has made increasing demand and an economical price in both global and local market. Sri Lanka also has a higher

climatic potential to cultivate this as it represents the tropical climate. Even though, this is an unidentified profitable crop seeds of that variety are very expensive (1kg of seeds are more than Rs.1.8 Million) and Hot Pepper has thriving demand, excellent properties, and economic profitability with a high price, the cultivation of Hot Pepper can't be observed in Sri Lankan context in large scale. Only very few farmers cultivate this crop on a contract basis for research purposes.

Sri Lanka has to face number of challenges under an open economy such as production at competitive prices and meeting global standards regarding quality while providing foods for the rising population. Wide fluctuations in food commodity prices due to the seasonality of crop production are a common phenomenon experienced in the farming sector. In general, agricultural commodity prices have been more volatile than those of manufactured goods over the last three decades all over the world, mainly due to the impacts of changing climate or weather-related risks and price-related risks which is inherent to the agriculture sector (Champika, 2014).

Contract farming involves agricultural production being carried out on the basis of an agreement between the company and farmers. This is a production and marketing/procurement system wherein producers agree to grow a crop at a pre-agreed market price for procurement by another party, usually a public or private company/corporation. Both the company and the farmer are bound by a written and signed contract agreement that specifies the terms and conditions of the relationship between the two parties, including the buyback prices. In this system, the farmer undertakes to supply agreed quantity of the harvest based on the quality standards and delivery requirements of the buyer. In return, the company purchases the products often at a price that established in advance. As well as, the company agrees to support the farmer through supplying inputs, assisting with land preparation, providing production advice and transporting produce to its premises.

Contract farming has been used for agricultural production for decades but its popularity appears to have been increasing in recent years. The use of contracts has become attractive to many farmers because the arrangement can offer both an assured

market and access to production support. Contracts with farmers can also reduce risk from disease, weather, price fluctuations, market uncertainty and facilitate certification, which is being increasingly demanded by advanced markets. Therefore, Contract farming is considered as a risk transferring mechanism, which enables small scale farmers to transfer market risks to global agribusiness firms (Woodend, 2003). Furthermore, Colier and Dercon, 2014 stated that, there are also potential benefits for national economies as contract farming leads to economies of scale. As well as, contract farming has to be commercially viable and companies need to choose the best available farmers to maximize the profitability. Once suitable farmers have been identified it is then necessary to develop trust, as contracts will only work when both parties believe they are better off by engaging in them.

According to Champika and Abeywickrama, 2014, Contract farming facilitates the linkage between smallholder farmers and agribusiness firms who have built strong marketing channels. Furthermore, Contract farming has tremendous potential to boost the agricultural sector to be on par with other sectors that exist in an economy. It is evident that the development of contract farming relies very much on our youths since they are the pillar of the future. (D'Silva et al., 2009). All in all, it's clear that contract farming has tremendous potential to boost the agricultural sector to be on par with other sectors that exist in an economy.

II. METHODOLOGY

A. Problem Statement

Even though Hot Pepper (*Capsicum chinense*) has been identified as a profitable crop (Sanusi et al, 2013) and it has a very good market potential locally and globally, Sri Lanka has not yet recognized the economic value of it and cultivation of Hot Pepper cannot be seen in Sri Lanka for commercial purposes. Even though, some areas are very suitable for this crop, farmers are growing other crops in vain, while missing the opportunity of gaining profits. As a new direction, a leading conglomerate in Sri Lanka expects to go for some innovations in their product portfolio using a unique variety of Hot pepper. The global market place also has expanded for hot sauces due to its evolving popularity and enhanced consumer inclination towards innovative and bold flavors.

Therefore, the company needs to shift farmers from current cultivation to Hot Pepper cultivation along with contract farming practices in Minuwangoda area. But shifting from current cultivation to Hot Pepper cultivation seems a judicious decision if it is financially profitable, since need to explore, as the existing literature didn't document much on this. For that, factors affecting on shifting vegetable farming towards Hot pepper should be analyzed.

B. Research Objective

The primary objective of this research is to identify factors affecting on shifting farmers from current cultivation to Hot Pepper cultivation along with contract farming practices.

C. Literature Review

Chilli belongs to family Solanaceae and consists of 27 species (Onus and Pickersgill, 2004) including five domesticated *Capsicum* species: *Capsicum annuum* L., *C. chinense* Jacq. *C. frutescens* L., *C. baccatum* L., and *C. pubescens* Ruiz & Pav. Among the five domesticated *Capsicum* species, *Capsicum annuum* (Common chilli), *C. chinense* (Nai miris) and *C. frutescens* (Kochchi) are commonly cultivated in Sri Lanka. *C. chinense* and *C. frutescens* species have special characteristics such as resistant to pest and disease incidences, high pungency and resistant to drought conditions (Kannangara, 2013). *C. chinense*, known as hot chili or hot pepper is the hottest species among the *Capsicum* species. Moreover, having the uppermost extent of phenolic compounds (Zhang and Hamazu, 2003). It reveals that *C. chinense* has the highest antioxidant activity and it is known to be an excellent source of phytochemicals, including Vitamins A and C, phenolic compounds, flavonoids and carotenoids (Zhang and Hamazu, 2003). In addition, *C. chinense* has a wide diversity in traits such as pod color, pod length, pod size, pod shape, pod weight, plant height, capsaicin content and pungency level (Finger *et al.*, 2010). Due to the unique aromatic flavor, *C. chinense* has a high demand as an appetizer, success in breeding (can artificially cross with *C. annuum*) less germination problems compared to *C. frutescens* and can get a good yield for a long period due to its perennial nature (Kannangara, 2013).

Sri Lanka has a diverse collection of *C. chinense* at Plant Genetic Resources Center (PGRC),

Gannoruwa and Nanayakkara *et al.* (2018) revealed that there is a high genetic diversity among selected *Capsicum* species and within the tested *C. chinense* germplasm and the genetic diversity identified in this study will be useful in *C. chinense* breeding programs and for conservation activities. Temperature is one of the main environmental factors involved in plant growth and development. Garruña-Hernández *et al.*, (2014) stated that the thermal optimum range in a tropical crop such as Habanero pepper is between 30 and 35°C (leaf temperature, not air temperature). In this range, gas exchange through stomata is probably optimal. *Capsicum chinense* cultivars with different pungency levels: Bhut Jolokia, Akaneer Pirote, Orange Habanero, and BGH1719 have different capsaicinoid production levels depending on the shade level. Approximately, 70% of shade is needed for Bhut Jolokia, 50% for Akaneer Pirote and BGH17 needs lower shade. Therefore, to increase capsaicinoid yield, it is recommended to use appropriate level of shading to manage the light intensity. (Tanaka *et al.*, 2017) The level of soil organic content, and microbial activity have significant influence on capsaicin, pungency and other important metabolites in Hot Pepper plants. Moreover, fruit yield, protein, fibre and sugar-acid contents in plants increased with organic inputs. In addition, inorganic fertilizers can be useful in enhancing capsaicin accumulation in *C. chinense* fruits. (Saban *et al.*, 2015).

Capsicum spp. is a tropical and sub-tropical plant requiring a combination of warm, humid yet dry weather. During the growth stage it needs a warm and humid weather. However, a dry weather is suitable for fruit maturity. Range between 20^o-25^oC is ideal temperature range for chilli growth. At 37^oC or higher the crop development is affected. Similarly in case of heavy rain the plant starts rotting. In case of low moisture conditions during fruiting time period the bud does not develop properly. It has been found that black soil which retains moisture is ideal in case they are grown as rainfed crops. Under irrigated conditions, the crop needs well-drained sandy loam with rich organic content. (Gurung *et al.*, 2011).

Minuwangoda belongs to the wet zone of the country and it has a mild temperature. The mean annual temperature varies from 26.5 C to 28.5C. The most part of the Gampaha district receive high

precipitation annually which is about 2000 to 3500 mm from both monsoons as well as from inter monsoon. Soil type of Minuwangoda area is Red Yellow Podzolic Soils with soft and hard laterite.(Fernando,2018)

Contract farming can be defined as a firm lending “inputs” — such as seed, fertilizer, credit or extension to a farmer in exchange for exclusive purchasing rights over the specified crop. It is a form of vertical integration within agricultural commodity chains so that the firm has greater control over the production process and final product, as well as the quantity, quality, characteristics and the timing of what is produced (Prowse, M., 2012). However, the existing local and international literature suggest that long term viability and better execution of FSC is practiced only under contract farming system. (Champika and Abeywickrama, 2014).

Under contract farming, landowners or tenants have contracts with agribusiness marketing and/or processing firms, who specify prices, timing, quality and quantity/ of the produce to be delivered. The agreement could involve the agribusiness firm supplying inputs and, in some cases, controlling and supervising farm operations. Contract farming has been practiced in various countries for a long time, and it has had a significant effect on contracting households' incomes (Bellemare, M.F. and Bloem, J.R., 2018).

According to Champika and Abeywickrama, 2014, contract farming makes it easier for smallholder farmers to connect with agribusiness firms that have developed strong marketing networks. It was revealed that full-time farmers who have higher proportion of agricultural income, higher agricultural land ownership as well as agricultural experience and family labour participation were more likely to adopt contract farming system. Further, adopters earned about two times higher agricultural income than nonadopters. It revealed that mutual trust between farmers and buyers and existence of an assured market for buyers were the key factors for the success of the system. In addition, Inability to sell the whole harvest through contract farming system is the biggest challenge faced by the contract farmers. It appeared that absence of a crop insurance scheme and unavailability of an authorized institution to govern the contract farming process have hindered

the diffusion of contract farming system throughout the country.

Producers, processors, wholesalers, retailers, and other supply chain actors face threats and opportunities as a result of agricultural transitions toward contract farming and government responses. Small farmers in developing countries, in particular, are perceived to be especially vulnerable to changes. As Chen et al. (2005) indicate, modern organizational arrangements in agro-food systems might promote the emergence of power imbalances and unfavorable terms of trade in the transactions between smaller-scale chain actors and the larger players which typically exercise the leading coordination role in a managed supply chain. Despite these stereotypes, governments and development agencies are promoting contract farming as a mode of cooperation that can help small farmers integrate into supply chains. (Da Silva, 2005).

D. Research Methodology

The survey of this research was conducted for vegetable farmers in Minuwangoda D.S division. There are 121 G.N. divisions under Minuwangoda D.S. Division. Among that 25 G.N. divisions having higher number of vegetable farmers are selected purposively. Thereafter, among these 25 G.N. divisions, 70 farmers were selected using simple random sampling method. This study was based on both primary and secondary data on the information sources. Primary data were collected from survey questionnaire, interviews and discussions. Pre structured questionnaire was tested on each objective in the research based on variables and measurements. Secondary data were collected using journal articles, reviews, books and websites. As well as details of vegetable farmers in Minuwangoda D.S. division were obtained from the Govijana Sewa Centre, Minuwangoda.

In data analysis procedure, first of all the collected data were tabulated in a way that is convenient to use them for analysis in order to achieve the intended research objectives. All the collected data were tabulated in IBM SPSS statistics 25 software for non-parametric analysis using descriptive and inferential statistics such as bar charts, pie charts, Wilcoxon sign rank test.

III. DISCUSSION AND ANALYSIS

A. Farmers Willingness to Shift Towards Hot Pepper Cultivation

Table 1. Farmers’ willingness to shift from current cultivation to Hot Pepper cultivation

Factor	P	Decision
Preference to grow Hot Pepper	0.000*	Significant
Willingness to shift from current cultivation to Hot Pepper cultivation	0.000*	Significant
Profitability of Hot Pepper cultivation	0.000*	Significant

Wilcoxon signed rank test

The significance level is 0.05 (P< 0.05) *Significance

Wilcoxon Signed Ranked Test was used to analyze farmers’ preference to grow hot pepper as a commercial crop, farmers’ willingness to shift from current cultivation to Hot pepper cultivation and profitability of cultivating hot pepper in the study area. According to the obtained results of this test, the significance of all three factors is less than 0.05 which means these three factors are significantly affecting on shifting farmers towards hot pepper cultivation. Therefore, when farmers prefer to grow Hot Pepper as commercial crop, they tend to shift from current cultivation to Hot Pepper cultivation. As well as, if the farmers perceive that cultivation of Hot Pepper is profitable than their current cultivation, they are more likely to shift towards Hot Pepper cultivation.

Preference to grow Hot Pepper as a commercial crop

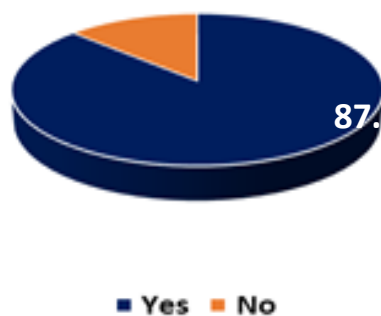


Figure 1. Preference to grow Hot Pepper as a commercial crop

Willingness to shift from current cultivation to Hot Pepper cultivation

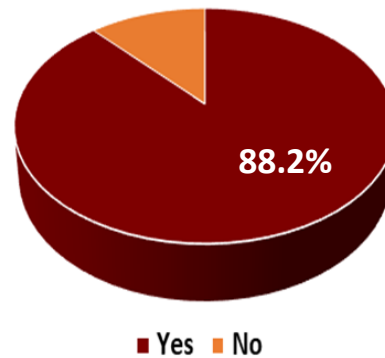


Figure 2. Willingness to shift from current

Figure 1 and figure 2 represent that 87.1% of farmers in Minuwangoda prefer to grow Hot Pepper as a commercial crop while 88.2 % of farmers are willing to shift from current cultivation to Hot Pepper cultivation. Therefore, majority of farmers in Minuwangoda prefer to cultivate Hot Pepper in commercial level while gaining the maximum benefits.

B. Factors Affecting On Shifting Towards Hot Pepper Cultivation With Contract Basis

Table 2. Factors affecting on shifting from current cultivation to Hot Pepper cultivation along with contract farming practices

Factor	P	Decision
Market potential	0.006*	Considering factor
Agro climatic compatibility	0.006*	Considering factor
Credit facilities	0.791	Not consider
Extension services	0.726	Not consider
Crop insurance	0.267	Not consider
Incentives	0.579	Not consider
Required technology & equipment	0.087	Not consider

Kruskal Wallis Test

The significance level is 0.05 (P<0.05) *Significance

Kruskal Wallis test was used to analyze the significance of factors affecting on shifting towards Hot Pepper cultivation along with Contract Farming practices. According to that only market potential and agro climatic compatibility similarly and significantly affected on shifting towards Hot Pepper cultivation. It means if there is a good market potential and Hot Pepper is compatible with the agro climatic condition in Minuwangoda, there is a more tendency to shift towards Hot Pepper cultivation.

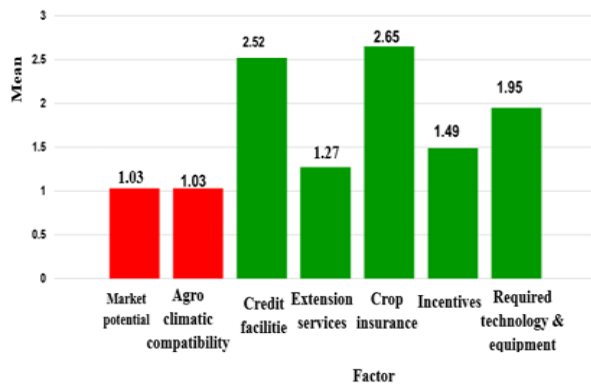


Figure 3. Factors affecting on shifting from current cultivation to Hot Pepper cultivation along with contract farming system

Figure 3 shows the mean value of above factors. Here also it's very clear that only market potential and agro climatic compatibility significantly affected when shifting towards Hot Pepper cultivation. Therefore, if there is a good market in the industry for Hot Pepper and if the variety well suited for the agro climatic condition in the area current vegetable farmers in Minuwangoda will shift towards Hot Pepper cultivation.

C. Types of inputs provided by the company

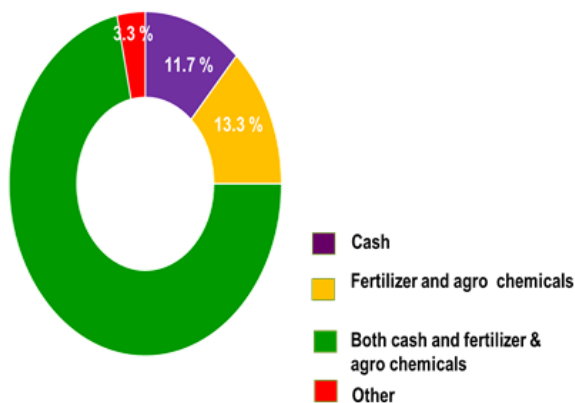


Figure 4. The type of inputs provided by the company

This diagram shows the farmers' preference on the type of inputs provided by the company. Normally inputs are provided by the company for the farmers at the earliest of the cultivation and its cost will be deducted from the harvest to be sold to the company. According to that most of the farmers in Minuwangoda expected both cash and fertilizer & agro chemicals as inputs. Only 3.3 % of farmers require other inputs such as land for rent, tools and equipment etc.

D. Preference To Engage With Contract Farming Practices

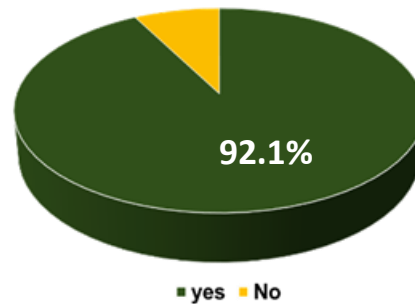


Figure 5. Preference to engage with CF practices

E. Easiness of Contract Farming System

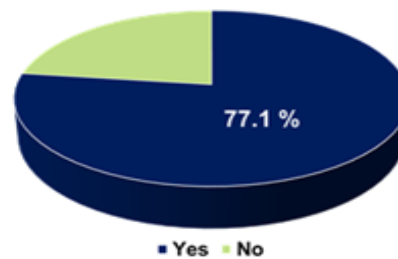


Figure 6. Easiness of contract farming

Figure 5 and 6 represent farmers' preference on Contract Farming system. According to that 92.1 % of farmers prefer to engage with contract farming practices while 77.1 % of farmers think it is easy for them to engage with contract farming system rather than cultivating at their own risk.

F. Factors Affecting While Purchasing Hot Pepper Seeds From The Company

Table 3. Factors affecting while purchasing Hot Pepper seeds from the company

Factors	Mean	P	Decision
Price of the seeds	1.98*	0.000	Considering factor

Quality of the seeds	1.98*	0.000	Considering factor
Timeliness of availability of seeds	0.86*	0.000	Considering factor
Availability of seeds in adequate quantities	0.88*	0.000	Considering factor
Proximity to seed source	1.17*	0.000	Considering factor
Credibility of seed source	1.90*	0.000	Considering factor
Crop performance	1.92*	0.000	Considering factor

Wilcoxon signed rank test

The significance level 0.05 ($p < 0.05$)
*Significance

Wilcoxon signed rank test was used to check the significance of factors affecting while purchasing Hot Pepper seeds. According to that P values of price of the seeds, quality of the seeds, Timeliness of availability of seeds, Availability of seeds in adequate quantities, Proximity to seed source, Credibility of seed source and crop performance are less than 0.05. Therefore, all these factors significantly affected while purchasing Hot Pepper seeds from the company. When price of the seeds decreases and quality of the seeds increases farmers are willing to purchase seeds from the company. As well as when seeds are available in adequate quantities within the required time period like rainy season farmers are more likely to purchase the seeds. Further, seed source should not be far from the field and farmers expect higher crop performance and trustworthiness with the company to purchase the seeds for long time.

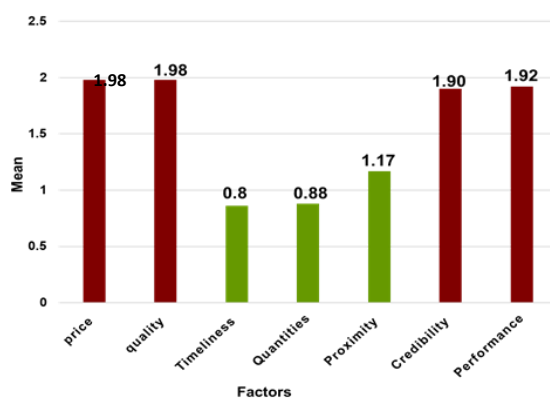


Figure 7. Factors affecting while purchasing Hot Pepper seeds from the company

According to figure 7 most prominent factors considered by farmers while purchasing the seeds

from the company are price of the seeds, quality of the seeds, credibility of seed source and crop performance. When price of the seeds is low and seeds are in good quality, farmers are willing to purchase seeds from the company. As well as, to purchase seeds from the company, there should be good credibility with the seed source. Furthermore, farmers preferred to purchase seeds if the crops are highly performed.

In addition to that, seeds should be available in required time in adequate quantities. If there is a less proximity to seed source farmers are willing to purchase seeds from the company due to less transport cost.

G. The Method of Purchasing Hot Pepper Seeds

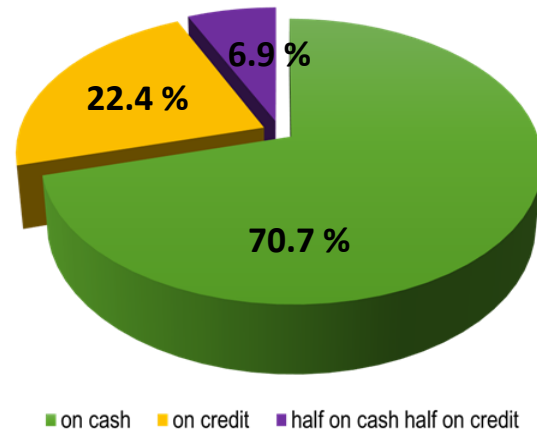


Figure 8. Methods of purchasing Hot Pepper seeds

This diagram shows different seed purchasing methods of farmers in Minuwangoda. According to that majority of farmers willing to purchase seeds on cash while 22.4 % farmers prefer to purchase seeds on credit. Only 6.9% farmers prefer to purchase the seeds half on cash & half on credit.

H. Factors Affecting While Selling the Harvest to the Company

Table 4. Factors affecting while selling the harvest to the company

Factor	Mean	P	Decision
Guaranteed & fixed pricing strategies	1.85	0.000*	Considering factor
Assured market	1.97	0.000*	Considering factor
Profit margin	1.98	0.000*	Considering factor
Quality standards	1.56	0.000*	Considering factor

Easiness of transportation	1.03	0.000*	Considering factor
Agreed quantity	0.03	0.684	Not consider
Legal framework	1.71	0.000*	Considering factor

Wilcoxon signed rank test

The significance level 0.05 ($p < 0.05$) * Significance

Wilcoxon signed rank test was used to check the significance of factors affecting while selling the Hot Pepper harvest to the company. According to that, guaranteed & fixed pricing strategies, assured market, profit margin, quality standards, easiness of transportation and legal framework significantly affected while selling the harvest to the company. Therefore, these factors are considered by farmers while selling the harvest to the company. But agreed quantity was not significantly affected while selling the Hot Pepper harvest to the company. It means agreed quantity was not considered by farmers while selling the harvest to the company. Farmers are willing to sell their whole harvest, even at lower prices than the market price, if the company continuously purchase the harvest from those farmers.

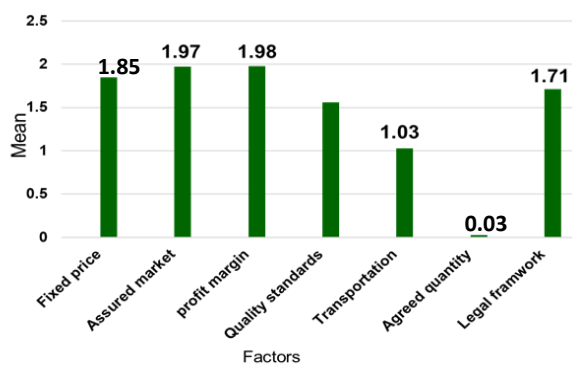


Figure 9: Factors affecting while selling the harvest to the company

Figure 9 shows the mean values of above factors. According to this graph most prominent factors considered by farmers while selling the harvest are profit margin, assured market, guaranteed & fixed pricing strategies and legal framework. The least considering factor is agreed quantity. Therefore, if there is a good profit margin for the harvest farmers prefer to sell their whole harvest to the company. As well as farmers expect assured market, guaranteed and fixed prices and legal protection when dealing with a company. Further,

if their harvest is in good quality, they tend to grade it sell at higher prices to the company. Moreover, majority of farmers in Minuwangoda preferred the company come to their field and collect the harvest. Then they can sell their harvest at lower prices due to reduced transport cost and convenience. However, if the farmer has to transport the harvest to the company, they preferred to sell their harvest somewhat higher prices due to the transport cost.

IV. CONCLUSION

According to the research findings, when shifting from current cultivation to Hot Pepper cultivation 87.1 % of farmers prefer to grow Hot Pepper as a commercial crop while 88.2 % of farmers are willing to shift towards Hot Pepper cultivation. As well as, both market potential and agro climatic compatibility similarly and significantly affect when shifting from current cultivation to Hot Pepper cultivation along with contract farming practices.

Furthermore, factors such as price of the seeds, quality of the seeds, crop performance, credibility of the seed source, proximity to seed source, availability of seeds in adequate quantities and timeliness and availability of seeds are considered by farmers while purchasing the seeds from the company. As well as, factors such as profit margin, assured market, guaranteed & fixed pricing strategies, legal framework, quality standards, easiness of transportation are considered by farmers while selling the Hot Pepper harvest to the company. But agreed quantity is not considered by farmers while selling the harvest to the company and farmers are willing to selling their whole harvest to the company even at lower price than market price if the company continuously purchase the harvest from those farmers.

Finally, to enhance and sustain Hot Pepper cultivation along with this type of contract farming system different suggestions made by farmers in the study area. They are, providing extension services, providing suitable lands, remedies for diseases, free trial, proper responds for farmer inquiries, flexible agreement, collaborative farming, pot cultivation, providing water facilities, providing nursery plants instead of seeds.

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