

Development of a Mechanism That Leads to a Psychological Paradigm Shift in Students' Demand and Enrolment for Various Academic Disciplines in the Tertiary Education in Sri Lanka: Qualitative Analysis

Veronica Kurukulaarachchi¹, Lakshmi Ranwala², K.A.P. Siddhisena³, Sampath Siriwardena² & Lalith Edirisinghe²

¹ Faculty of Humanities & Education, CINEC Campus, Malabe, Sri Lanka

² Faculty of Management & Social Science, CINEC Campus, Malabe, Sri Lanka

³ Department of Demography, Faculty of Arts, University of Colombo, Sri Lanka

Correspondence: Professor Lalith Edirisinghe, Faculty of Management & Social Science, CINEC Campus, Malabe, Sri Lanka. Tel: 94-0114-486-400. E-mail: edirisinghe@cinec.edu

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Abstract

Creating a psychological paradigm shift in students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka is important since it is vital for not only for students but also for other stakeholders explicitly employers, community, and government as this paradigm shift provides creative and adoptable graduate. However, those who enter to government universities after a very competitive selection process in Sri Lanka are compelled to be unemployed mainly due to mismatch of employers' perspectives in the modern world against the skills and competence they developed in the tertiary education. It is therefore timely, to develop a mechanism that leads to a psychological paradigm shift in students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka. Objectives of the study are to explore the student demand side aspects for various academic disciplines and to explore the student supply side expectations for various academic disciplines in Sri Lanka. This qualitative study applied purposeful sampling technique and employers, executives and academics in state and non-state higher education institutes participated in the study and data collection techniques were interviews and other secondary documents. Study revealed that new graduates have issues with the practical skills, attitude problems and soft skills. Many employers, neither possess a mechanism to match graduates' skills and background to their job and responsibilities nor participation in curriculum revision in institutes. Consequently, a few employers involve with curriculum revision, and this might lead to mismatch of curriculum with demands of existing labour market demands. Only some parents have a clear understanding of their child about selecting the best pathway that suits their strengths and weaknesses. Study concluded that for the improvement of the tertiary education, students' needs to gain and focus more on practical aspects of education, purposeful learning experience and experiential learning. Moreover, not only knowledge but also attitudes and skills of the graduates should be developed.

Keywords: tertiary education, demand and supply side, paradigm shift, qualitative study

1. Introduction

1.1 Background

Rightly directed education is the key to improve productivity and competitiveness of their workforce (Mudunkotuwa & Edirisinghe, 2017). However, education is not a utility function for many people (Edirisinghe, Siddhisena, Siriwardena, & Ranwala, 2022) thus qualification the student secure as the output is the most decisive factor. Tertiary education relates to all formal post-secondary education, consist of public and private universities, colleges, technical training institutes, and vocational schools. Tertiary education is contributing to promoting growth, lessening poverty, and enhancing collective success. The universities have a huge responsibility to cater

to the need of employers (Edirisinghe, Siriwardena, & Ranwala, 2022). A proficient and skillful workforce, with enduring access to a sound post-secondary education, is a precondition for invention and development. Learnt individuals are more employable and productive, earn higher salaries, and survive with economic repercussions better (World Bank, 2021). The post-secondary level usually defines the destiny of students being whether an industry professional or an entrepreneur (Edirisinghe, et al., 2022). Tertiary education rest on secondary education delivering learning activities in particular arenas of education. It works towards learning at deep level of intricacy and specialty. Mostly, tertiary education can be recognized as academic education however also includes advanced vocational education or professional education (UNESCO, 2011). Generally socio-economic aspects that affect education (Edirisinghe, Siddhisena, Siriwardena, & Ranwala, 2022). There is a rapid growth in the enrolment of tertiary level education in developing countries globally after de colonization (Salmi & Bassett , 2014). It states that the expansion of primary and secondary education in many countries have contributed to the increasing demand for tertiary education sectors. Employers recruit undergraduates only from relevant disciplines (Edirisinghe L. , 2020). Furthermore, it states that increased proportion of students of high socio-economic status accelerates this process. However, authors highlighted that there is a high percentage of youth with less purchasing power completing secondary schooling and entering the market. According to the findings, there should be a well efficient financial support system to remove the financial barriers for the enrolments in tertiary education and the specified barriers can only be mitigate mainly by low fees, student loans and grants. Furthermore, authors stressed that there are many outreach programs implemented by secondary schools and retention programs to improve the completion rates (Salmi & Bassett , 2014). Public and private institutional collaboration may play a substantial role in the way forward (Edirisinghe, et al., 2017). Further Governments are progressively considerate that the complete educational system from early childhood to tertiary education must mirror the new societal and economic needs of the worldwide knowledge economy, which growingly demands a well-trained, skillful, and flexible workforce (World Bank, 2021). Nevertheless, challenges continue with the bigger pool of graduates of tertiary education, many do not possess locally pertinent abilities required for a fruitful integration into the labor market. At the same time, greater numbers of students intensify the tension on publicly-funded higher education institutes. Further, many nations with constrained resources are battling to fund the growing needs of large number of students, without compromising the quality of their educational aids (World Bank, 2021). Furthermore, in Sri Lanka context, due to the capacity restraint in state sector, higher Education Institutes need for the participation in parallel system of private sector higher Education has emerged (Kelegama, 2017). Female students prefer Humanities, Education, Management (HEM) yet majority remain unemployed (Edirisinghe, et al., 2021). Secondary school graduates who cannot enter the state university as a consequence of limited capacity need option to continue their higher education dreams. Computer technology and language proficiency are fundamental prerequisites in the knowledge economy. (Edirisinghe, et al., 2021). Therefore, it is required the long-term plans in Sri Lanka to increase the higher educational opportunities all over the country (Dona and Warusavitarana, 2014). However, there is no any mechanism to overcome the barriers to be successful in tertiary education with one directive policy (Salmi & Bassett , 2014).

1.2 Leading Towards the Psychological Paradigm

Creating a psychological paradigm shift in students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka is important in tertiary education since it is vital for not only for students but also for other stakeholders namely employers, community, and government as this paradigm shift provides creative and adoptable graduate. External pressure from family, society and teachers may influence the students' choice (Edirisinghe, 2018) and the institutional attributes influence the students' choice (Edirisinghe, Jayakody, Ranwala, & Shen, 2016). In 1962 American philosopher Thomas Kuhn in his renowned book "The structure of Scientific Revolution" claimed that Paradigm shift experiences episodic revolutions when acquiring new knowledge as science does not evolve as a rectilinear process (Kuhn, 1970). A paradigm is "some accepted examples of actual scientific practice—examples which include law, theory, application, and instrumentation together— provide models from which spring particular coherent traditions of scientific research" (Kuhn, 1970, p.10). Kuhn further explained "paradigm mainly prepares the student for membership in the particular scientific community with which he will later practice" (p.10). Kuhn's book triggered many discussions in the discipline of "philosophy of science, history of science, social sciences" (McDonag, 1976, p.51). The visibility and awareness about various options in education is the key in making right choice of academic discipline (Edirisinghe, et al., 2019). Paradigm shift has also occurred in social science for instance in sociology and humanities. Similarly, paradigm shift has applied in education context since 1980's. When thinking about changing education the term paradigm shift has used in education setting (Jacobs & Farrell, 2001). Further a paradigm is a model of something, or a very clear and example of something (Cambridge dictionary, 2021). Further, in the 21st century education students need to develop their creativity and adaptability as it is

indispensable component of education (McKeown, 2012; Simonton, 2003; Irugalbandara 2020) which indicated that paradigm shift is needed in education. In order to bridge the economic development gap that splits the Asian countries namely Malaysia and Thailand, the Government of Sri Lanka hopes to achieve an annual growth rate of at least 8 percent in the future. Hence the Government aims to increase the manufacturing, services, agricultural, and fisheries in international markets and encourage the formation of further million jobs. If the labour force is educated skilled and trained, the purpose of the promoting additional jobs will be prospered. Therefore, the Government has made education as a priority and knowing that, employers are questioning the quality and relevance of education, lack of skills and discrepancy with employers needs weaken the productivity and development, differences in learning outcomes specifically in primary, secondary education and access to technical and vocational and higher education undermines the growth objectives (World Bank, 2017). Therefore, World bank report indicated that creating a psychological paradigm in students degree choice is needed to achieve the aforementioned goals of the government. However, it is noted that in Sri Lanka the pedagogical approach moves more slowly compared to other countries in the world and students are not encouraged to be inventive or adaptable (Abayasekara & Arunatilake, 2018; Irugalbandara 2020)

1.3 Problem Identification

Those who enter to government universities after a very competitive selection process in Sri Lanka are compelled be unemployed mainly due to mismatch of employers' perspectives in the modern world against the skills and competence they developed in the tertiary education. It is therefore timely, if not already late, to develop a mechanism that leads to a psychological paradigm shift in students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka. The immediate puzzle that comes to mind then is that whether the universities in Sri Lanka conduct degree programs cater to the employers' perspectives in the modern world. In fact, there are many criticisms that the learnings of degree programs conducted in government universities do not result in creating a graduate that the commercial world demands in the present context. However, on the other hand the contribution from the non-state higher education is emerging. Therefore, these institutions will react to the demand immediately and cater to the shifted paradigm. Therefore, this research will primarily question about the how the psychological paradigm shift leads to students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka.

The tertiary education in Sri Lanka is faced with two fundamental challenges. On one hand out of those passing the G.C.E. Advanced Level Examination only 17% enter universities while 83% are left behind. Nearly 125,000 students annually lose the opportunity to proceed to higher education due to the closed national higher education. This means, during the last 40 years we have sacrificed a minimum of two to four million of youths in Sri Lanka without any sustainable solution. On the other hand, there is a higher unemployment rate of graduates in the country even after this competitive selection process. While those who are deprived of an opportunity to pursue their higher education despite them qualifying, their future is unwelcoming for no fault of theirs. The highest unemployment rate (9.1%) is reported from the G.C.E. (A/L) & above group in Sri Lanka. It is 5.1 percent and 13.2 percent for male and female respectively (Department of Census and Statistics, 2018). As at 2017, total number of unemployed graduates in Sri Lanka was 34,316. In Sri Lanka graduate output in 2017 was 47,858 (Graduate output consists of graduate, post graduate, graduate of open university and external degrees) (Bandara, 2023). Hence, out of 47,858, 34,316 was unemployed graduates and percentage of unemployed graduates out of graduate output was 72 percent (72%). Among the unemployed graduates, about 54 percent are Art degree holders while the other 46 percent consist with other degree holders (Department of Census and Statistics, 2017). Considering the above background of tertiary education in Sri Lanka, the higher unemployment rate of graduate is not only a problem of them but others who sacrificed their future in this tough competition. It is a problem to those who pay taxes making the government possible to provide free education in universities. It is a problem to their parents and other family members who contributed major part of their lives making them graduates.

Consequently, those who have the money go overseas using country's valuable foreign exchange and many do not return to Sri Lanka after qualifying which is another Considerable loss to the country as well as to the parents. Many Sri Lankan youth reportedly view migration or international schooling as an opportunity to enhance their employment prospects, and Sri Lanka's tertiary-level student population is quite mobile – in part because higher education in Sri Lanka has insufficient capacity to address student demand, especially at the undergraduate level (D'Souza, & Moore, 2017).

Hence in this background research question is,

How the psychological paradigm shift leads to students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka?

1.4 Objectives of the Study

- 1) To explore the student demand side aspects for various academic disciplines in Sri Lanka.
- 2) To explore the student supply side expectations for various academic disciplines in Sri Lanka

1.5 Justification

Sri Lanka is falling behind many of the other countries that are progressing at a very rapid level especially in Science and Technology and skill development. It is reported around 12,000 Sri Lankan students go overseas annually for higher education opportunities. The drain on foreign exchange is estimated at \$ 50 million per annum. Accelerating Higher Education Expansion and Development (AHEAD) Ministry of Higher Education recognizes, in its objective of results area 1, to increase enrolment in higher education programs of strategic importance for economic development. Employability Survey Report 2017 of Wayamba University of Sri Lanka (ESR – WUSL) reports that employability status of the graduates at the general convocation of 2017. According to this report average 37 percent of unemployed graduates in 12 departments at the time of the survey.

Further analysis of this report reveals that even those who are employed are not performing their duties in the relevant field. It shows employers' recognition of the knowledge and training provided by the degree programme as relevant to the needs of the industry. Accordingly, among the respondents, 27 percent of the students graduated in different degree programmes had 50 percent or lower relevancy to the job. Only in Faculty of Applied Sciences (FAS) among all graduates of FAS has reported higher employment, i.e. 77% at the time of the survey. However, 38 percent of these graduates are ultimately end up employing in the field that are not relevant (50% or less relevant) to the programs they followed in the university. In other words, there is a mismatch in the areas of teaching in the tertiary education and the real demand in the job market. Against this background it is relevant and timely to conduct this study on psychological paradigm shift in Students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka since it gives the opportunity to explore the views of demand side (employers view) aspect and supply side (university/institute) expectations. The study intends to enhance the existing knowledge of psychological paradigm shift in Students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka. The findings of this research will be of assistance to future researchers to inform their studies on students' demand and enrolments. Further, the findings of the study will be of help the ministry of education, management of the institutes to formalize their policies on students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka

2. Method

In order to achieve the objectives of the study, the qualitative study has conducted. Hence the various steps were taken to obtain more in-depth information from employers and institutes. Purposeful sampling technique has applied to select the participants and in order to identify and select cases with detailed information and make the best use of the limited resources available, purposeful sampling is a technique that is frequently used in qualitative research (Patton, 2002; Palinkas et al., 2015). Recognizing and choosing individuals or groups of individuals who are particularly knowledgeable about or experienced with a phenomenon of interest are examples of purposeful sampling. (Creswell 2014). Hence to gather the information pertain to Students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka, employers and executives in institutes (whether State or Non-State higher education institutes) have selected since the participants are knowledgeable and experienced with this issue whereas employers recruit graduates and institutes are contributing immensely to produce these graduates. Small, medium and large-scale, state organizations to private organizations and their executive staff were interviewed, and also academic coordinators, lecturers and academic managers were interviewed from various state and non-state institutes (Table 1). Information gathered from conducting interviews with employers, reviewing institutes policies and procedures, reviewing MoE policies and through informal discussions. Participants in interviews were selected based on their roles since they paly vital role in the organization in terms of recruiting new staff. Anticipated duration of the Interviews varies from 40 minutes to 45 minutes. Interview consists of some close ended and open-ended questions. Interviews commenced after obtaining the interviewees consent and confidentiality of information provided ensured. Further participants have given right to withdraw in the interview process at any time.

Table 1. Categories of the respondents

Categories of respondents based on the type of organization	Number of respondents
Private limited liability company	138
State Organization	45
Sole Proprietors	50
Partnership	5
Institutes (State & Non state)	30
Total number of respondents	268

3. Results

Interviewees' responses were analyzed, elucidated, extended and added the questions on career choice which provides more rich data. Analysis of the content of the interviewees' answers were carried out according to the thematic analysis. "Thematic analysis is a qualitative research method that can be extensively used across a range of epistemologies and research questions" Nowell et al., (2017, p.2). Further Braun and Clarke (2012, p.57) stated that "Thematic analysis is a method for systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set". This analysis indicates the collective and joint experiences of respondents. Thematic analysis has conducted according to the six steps established by the Braun and Clarke (2006) and these six steps are familiarization with the data, generating initial codes, searching for themes, reviewing potential themes, defining and naming themes and producing report or writing up. Steps one to five are discussed in results section (defining and naming themes -appendix 2 and 3) and employers' perspective and institutes' perspective on new graduates are conversed in the discussion section.

The researcher first familiarizes with the data by reading and rereading the transcripts of interviews and submerged with the data and compared with the research questions. Rather than simply reading the words the researcher read the words actively, logically, and critically (Braun and Clarke, 2012). For example, respondent number 3 and 120 are not so certain about various disciplines they recruit new graduates. Respondent's answer indicated that lack of knowledge on organizational practices and it indicated the communication issues from the organization side too. These initial observations provide fruitful ground for analyzing. The researcher created the initial codes at second stage. Evidently, thematic analysis contains the exploration and recognition of frequent subject matter that cover across a whole interview or set of interviews (DeSantis & Ugarriza, 2000). Thematic analysis can be identified as qualitative expressive approach which is primarily described as "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006, p.79). It has been suggested that thematic analysis, as a flexible and useful research tool, provides a rich and detailed, yet complex, account of the data (Braun & Clarke, 2006).

Thematic analysis can be led within both realist/essentialist and constructionist research paradigms, even though the outcome and focal point will be dissimilar for each (Braun & Clarke, 2006). It has also been noted that both research philosophies are mainly based on that researcher wants to discover actual conduct, perspective, view point, or real motivations, emotions of the individuals being studied, or to discern event occurrence (Have, 2004). Thematic analysis can be identified as a process of coding qualitative information. Codes or categories are labels or names for assigning elements of meaning to the expressive or inferential information collected throughout a study. Codes generally are attached to different size word, phrases, sentences or whole paragraphs, related or unrelated to a specific situation (Basit, 2003).

Interviews were coded and brief explanation of coded is depicted in Table 2 and Appendix 1. Codes appeared from the analysis of interview data, which came from themes and sub themes. Interview questions were associated with the research questions and ideas coded distinctly for each interview question. Braun and Clarke (2012) stated that some codes mirror respondents' linguistic patterns and ideas; others elicit the conceptual and theoretical framework of the study. For instance, respondents' (Respondent no.144) reply on way forward for the university education to improve the employability and graduates job satisfaction described the respondent's language pattern (for example response was "make good people") should improve the respondent's language and information on employability skills and university education which specified the theoretical framework of the research. It is vital that codes answer the research question. For example, need to gain more practical skills, develop soft skills, develop attitudes are the codes for interview question "what is your perception on employability skills of new graduates"? Aforementioned codes are looking for answers for research question, "How the psychological

paradigm shift leads to students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka".

Table 2. Coding scheme for interview questions (Institutes)

Interview question	Employers' response code
When you enroll students, do you have English language test?	English Language, Selection test
Do you have extra curricular activities for students? and if so, what are they? (E.g. Cricket, Basketball, sports meet etc	Extracurricular activities, Relationship between extracurricular activities and selecting students
In your opinion, what is the main factor that students consider when selecting any programme	Content of the programme parents' choice peer pressure Programme fee A/L Qualification)
In your opinion, what is the main factor that students consider when selecting your institute	Reputation Infrastructure parent's choice peer pressure closer to home discipline
Why the students are selecting this particular foreign university?	either academic prog parents motivation student motivation desire to go abroad
What are the marketing strategies that you use to attract students?	Paper advertisements TV programmes Social media marketing Digital marketing)
In your opinion what is the most decisive internal process of students choice?	enrollment process, learning teaching process
In your institute, whether students select more STEM	Science, Technology, Engineering, Mathematics Humanities, Education, Management
Do you have both general and honours degrees conducted in your institute?	General/ Hons
whether students prefer general or honours degrees	
What is your general view of students' preference?	

Do you see a disparity of student choice and parents' choice about selecting an institute?	Yes No
Do you see a disparity of student choice and parents' choice about selecting the area of study?	Yes No
What are the problems that student encounter while studying?	language difficulties, financial problems, cultural issues
With slow learners what kind of extra support you provide for their studies?	extra classes
Do you provide career guidance to students?	Yes No
Do you offer internships for students?	Yes
If so, what are the degree programmes you offer internships?	No
Explain about your learning teaching methods you use	lecture discussions, project method, problem solving
After the graduation how soon, students find employment	one month 3 months 6 months one year more than one year
Explain about your assessment and evaluation methods	continuous assessments, mid semester examinations and final examination etc.
How do you explain current status of your institute's infrastructure?	Excellent/ good average, classrooms well equipped with multimedia/smart boards etc.
How do you explain your institute's reputation and programme reputation?	Excellent/ good average,
What is the response you get from students/is it positive, moderate or negative	positive, moderate negative
How do you recruit your lecturers?	looking for class for first degree, experiences etc.
How do you gauge the influence the students will have in their higher education choice by?	Parents Siblings Teachers Friends Others

Do you think parents have a clear understanding about selecting the best pathway that suits their strengths and weaknesses?	Yes
	No

Source: Developed by Authors based on Hashimoto-Martell et al., 2011

Phase three is searching for themes and where the codes transpose to themes. De Santis and Ugarriza claimed (2000 as cited in Nowell et al., 2017). “A theme is an abstract entity that brings meaning and identity to a recurrent experience and its variant manifestations. As such, a theme captures and unifies the nature or basis of the experience into a meaningful whole” (p.362). A theme captures rather important data which connect with the research question and represents some level of marked or significance answer in the data set (Braun & Clarke, 2006). Themes were connected with the research questions for example patterned data viz. career choice, university choice, academic discipline, tertiary education in Sri Lanka. Further responses created some important areas, specifically communication skills, attitude problems, lack of soft skills, lack of soft skills. Braun and Clarke (2012) stated that crucial characteristic in this stage is that in what way themes related with another theme and create a story.

Fourth stage is revising possible themes and it is recurring process, developing and reviewing themes harmonized with coded data and whole data set. At this stage the researcher needs to consider whether he/she is reviewing code or theme, quality of the theme, which include in this theme, whether it is meaningful to assist the theme and whether the data is varied (Braun & Clarke, 2012). Therefore, in view of consistency between data and research questions the researcher analyzed the data and identified the themes. Hence the potential themes identified are as follows, academic disciplines, professional qualifications, evaluation test, soft skills, cocurricular activities, way forward. Defining and specifying themes are phase five and in this stage the researcher should evidently clear about the theme and be exact. Themes were identified as in Appendix 2 and 3 for the employers’ interviews and for the interviews in institutes respectively.

4. Discussion

Unlike in quantitative study, researchers do not complete their analysis of the study and compose the report. Writing and analysis are altogether interlaced in qualitative research from casual composing of notes and memos to the more formal forms of analysis and report composing (Braun & Clarke, 2006, 2012). Analysis has conducted according the two interview types which conducted with employers and institutes.

4.1 Employers’ Perspective on Demand for New Graduates

Analysis considered on the demand for the new graduates from the employers and based on the employers interviews, themes are discussed (as in appendix 2) namely academic disciplines, professional qualifications, evaluation test, soft skills, co-curricular activities, digital skills, areas of IT, matching the graduates’ skills and background to their job and responsibilities, affiliations/networking with the institutes, whether directly hiring the newly qualified graduates after completion of their degree programmes, whether the organization offer internships to students and type of internship programme, visit institutes and provide career, guidance/opportunities, participate in curriculum revisions in institutes or with other state authorized bodies, issues with the newly recruit graduates, number of vacancies in the organization, how often organization recruit, kind of levels of positions they recruit, whether the organization prefer male or female recruits, graduate or non-graduates, finally the organization’s perception on employability skills of new graduates, the way forward for the university education (or higher education) to improve the employability and graduates’ job satisfaction.

When analyzing academic discipline, it should be noted that, most employers are interested in management and technology disciplines however that depends on the position that employer recruit new employees. One respondent mentioned that

“We are recruiting and interested in all the areas for instance Science, Technology, Engineering, Mathematics, Humanities, Education, and Management, depend on the position and main objective of the organization as well”.

Similar responses given to the theme “professional qualification” since some organizations are looking for professional qualifications viz chartered accountancy, AAT, professional marketing qualification from SLIM and professional HR qualification from CIPM be subject to the job role. Further, almost all the employers would like to have Advanced Level qualification for their newly recruits, one respondent emphasized that

“We like to have Advanced Level qualification for our new recruits however this condition is not applied for manual jobs”.

Employers are concerned on level of English language skills and therefore greater number of respondents mentioned that they expect excellent English language skills from the candidate. Then again some have stated that good or average English Language skill is sufficient for them. One respondent stressed this by saying that *“sometimes person who got good or average English-speaking skill will do the job”*.

Furthermore, at the recruitment stage some employers are not conducting evaluation tests. Neither academic nor practical test for the majority of new recruits. Nevertheless, some employers are conducting academic tests and practical test for positions like management trainees and technical officers respectively. Many of the employers have stated that under the theme of “soft skills” that they expect good communication skills from the candidate. According to Klaus et al. (2008) “Communication skills or lack thereof can make or break your career” (p.52). Moreover, soft skills training which classically concentrate on communication and leadership skills are regarded as required skills (Klaus et al., 2008). Similarly other respondents have mentioned that they would like candidates to possess interpersonal skills and leadership skills on top. A few numbers of respondents stated they would like candidates to have more soft skills including communication skills, interpersonal skills, leadership skills, taking initiative, flexibility, adaptability, having right attitude etc. Another respondent highlighted that *“more soft skills the better”*. Analysis revealed that unlike the soft skills, co-curricular activities are unneeded for the candidates or new recruits though some employers prefer the co-curricular activities for their new recruits. On the other hand, most employers preferred their candidates to have digital skills and IT skills.

One respondent stressed that they prefer their candidates to possess *“minimum of one year experience in Information Communication Technology (ICT) sector plus technical knowledge of network, PC hardware”*.

Most respondents (employers) revealed that they do not have (their organization or industry) a system to match graduates’ skills and background to their job and responsibilities. Further some organizations do not have affiliations or networking with the institutes where others are networking with the institutes. Networking or affiliations make easy for them to recruit new graduates. Therefore, organizations neither affiliate with institutes nor networking with them noticeably do not directly hire the new graduates after completion of their degrees. Further, some employers provide the internships and while others not. Intern ships varied from 2 to 6 months. Additionally, some organizations visit institutes and provide career guidance. Many of the respondents stated that they do not participate in curriculum revision in institutes. Hence a few employers involve with curriculum revision. Some of the respondents have mentioned that new graduates have an attitude problem, lack of communication skills and lack of leadership skills.

It should be noted that employers recruit from senior level to technical levels in the originations. Almost all the candidates stated that they prefer to recruit both males and females. And one respondent stated that they consider *“only skill of the person, no gender preference”* However, on one hand, some organizations who engage with Costume jewelry business mentioned that they prefer male recruits, and the reason is *“easy to work with them”*, On the other hand organizations where they provide early childhood care mentioned, they like more females. It indicated that gender preference sometimes subject to the area of work. Similarly, when recruiting new employees some prefer graduates, and some prefer non graduates whereas it depends on the job. Nevertheless, one respondent emphasized that having a professional qualification is vital for either graduate or non-graduate *“we like graduates or non-graduates with professional qualifications”*.

Majority of the employer’s perception was that graduates need to develop themselves in terms practical skills and soft skills. Some of the respondents’ comments were that *“students’ (new graduates) soft skills need to be enhanced”* (respondent number 118), *“improve personal attitudes”* (respondent 141), *“improve practical skills”*. another respondent mentioned *“we should improve their skills through new training programmes to adapt to workplace”* (Respondent no.2).

At the employers interviews, some of the crucial respondent’s comments for the theme “way forward for the university education” are as follows, *“improve practical knowledge”*, *“change the education system”*, *“conduct awareness programmes to educate them about required skills for the job”*, *“offer apprenticeship”*, *“improve education level”*, *introducing practical training for each degree programme will improve the employability of graduates’*.

Further another respondent emphasized that *“research evidence indicates a significant mismatch between the skills graduates possesses and those required by the employers, despite the high rates of unemployment and looks at the formal and informal methods used by the employers to assess graduates’ employability skills as a part of their recruitment process”* (Respondent no. 116).

It is clear that interviews with the employers revealed that new graduates need to improve their practical skills, practical knowledge and specifically soft skills on top. Further, internships, apprenticeships or programmes for

new graduates are required to improve their employability. On the other hand, way forward for the education need to look at more practical aspects of education, hands on experience and experiential learning. Further not only knowledge but also attitudes and skills of the graduates should be developed.

4.2 Executives (Institutes) Perspective on New Graduates

Based on the interviews conducted with the executives in the institutes, analysis can be discussed under several themes (as in appendix 3). Some of the themes are as follows: Enrolling language, extracurricular activities for students, the main factor that students consider when selecting any programme, main factor that students consider when selecting institute, main factors that students select particular foreign university, the marketing strategies that institute use to attract students, students' choice, whether students select more STEM (Science, Technology, Engineering, Mathematics) or HEM (Humanities, Education, Management) programmes, Whether both general and honours degrees conducted in institute, disparity of student choice and parents' choice about selecting an institute, disparity of student choice and parents' choice about selecting an area of study, the problems that student encounter while studying etc.

Almost all respondents from the institutes mentioned that enrolling language for the programmes can be identified as English. Some institutes check whether the students have extracurricular at admission stage however it was not recognized as mandatory requirement. Further when selecting an educational programme, most influential factor can be identified as content of the programme. Nevertheless, as mentioned by the respondents, parents' choice and peer pressure also matters when students selecting educational programme. Conversely reputation can be identified as a main factor that students consider when selecting institute. Additionally, peer pressure also influences when selecting an institute. Further, academic programme, parents' motivation and desire to go abroad are the main factors that students select a foreign university. Interview questions designed to obtain respondents' views on marketing strategies since it attracts the students. Hence according to the respondents, paper advertisements, TV programmes and social media marketing are the prominent marketing strategies which attract students to institute. Furthermore, when discussing decisive internal process in the institutes, all most all the respondents have mentioned that learning teaching process is very vital. According to the interviews conducted, it is revealed that more students select HEM (Humanities, Education and Management) programmes rather than STEM (Science, Technology, Engineering and Mathematics) programmes. Many institutes conduct honours degrees instead of general degrees. However, some institutes have general degrees. Further it appeared that students prefer honours degrees when compared to general degrees. Though some institutes emphasized that they conduct good general degrees in addition. One respondent mentioned "*We have more honours degrees, but some general degrees like BA English got good demand*".

Further, majority of respondents from the institutes have mentioned that there is a disparity of student choice and parents' choice about selecting an institute, along with disparity of student choice and parents' choice about selecting the area of study. Noticeably, some students face problems while studying. Respondents revealed that lack of English language skills, financial issues and cultural issues are the problems that student encounter while studying. Many institutes are providing support for slow learners namely extra classes, additional assignments and extra language classes. Almost all the institutes provide career guidance to students and internships on top. One respondent who was executive in one of the private institutes emphasized that in some programmes internships are embedded in the curriculum and whereas others, it is not a mandatory to have internships namely degrees in humanities.

"Internship programmes are included in our Management and engineering degree programmes but some humanities degrees we don't have an internship as such, then again BEd degrees have their teaching practicum".

However, it indicated that for teaching degrees (Bachelor of Education degrees -BEd) it is compulsory to have their teaching practice. According to the responses given it is noted that lecture discussions can be identified as a widely used learning teaching method. Lecture discussion method bring out substantial student learning outcomes and "discussion method as an analytic tool to help students dissect and discover their way to solutions to real-life problems" (Ying, 2020, p.258). In addition to lecture discussion, respondents from the institutes have mentioned the project method and problem-solving are extensively used methods.

When analyzing the theme "After the graduation how soon, students find employment" respondents answers are varied. Very few of the respondents have mentioned one month and some more respondents have mentioned it takes young graduates to find a job from three months to six months.

Moreover, another respondent stressed that "*finding a job for new graduates may be varied from on one month to one year, however it depends on the individual skills as well*". Another respondent mentioned that "*with the*

internships our students get more opportunities, sometimes permanent positions as well". Therefore, it should be noted, that students get more opportunities with their internship programmes.

When analyzing on assessment and evaluation methods in institutes nearly all respondents have mentioned that they have continuous assessments and final examinations. According to the respondents' view, current status of institute's infrastructure is good or excellent. One respondent from private higher education institute emphasized that,

"We have all the facilities, all the lecture halls have A/C and multimedia some lecture rooms we have smart boards" however one respondent from the state university mentioned that *"some lecture halls we don't have A/C, but multimedia is available"*.

According to the responses, Institutes reputation and programme reputation are generally regarded as good albeit falling short of being classified as excellent or average. Furthermore, that students have a positive or moderate image on institutes rather than negative image. However, it should be noted that interviews have conducted with the executives in the institutes and not with the students. Therefore, only ideas and views of the institutes have considered, elaborated and analyzed in this study. When recruiting lecturers some institutes consider not only first class passes of the lecturers but also second upper class division passes as well. Influence of the students will have in their higher education choice differ by parents, siblings, teachers, friends etc. Respondents mentioned that some parents have a clear understanding of their child about selecting the best pathway that suits their strengths and weaknesses however some do not have a clear idea. One respondent stressed that, *"some parents haven't got a clue but some are ok. I think siblings help a lot"*.

5. Conclusion

Conclusion can be discussed under the two main areas, namely Employers' perspective on demand for new graduates and Institutes perspective on supplying new graduates. According to the analysis of the study, views and ideas of employers summarized and concluded under the demand side of the employability whereas institutes expectations and their perspectives on student learning and their desires concluded under the supply side expectations.

5.1 Employers' Perspective on Demand for New Graduates

When recruiting employers may be more interested in management or technology areas however that depends on the objectives of the organization. Employers are interested in professional qualifications, yet it varies due to the different areas of work and objectives of the diverse organizations. Moreover, employers are concentrated more on English language skills and basic A/L qualification on top. Employers found that new graduates have issues with the practical skills, attitude problems and soft skills. Further compared to co-curricular activities of new graduates, their soft skills, digital and ICT skills are decisive. Furthermore, majority of employers, do not possess a mechanism to match graduates' skills and background to their job and responsibilities. Further some organizations do not have affiliations or networking with the institutes. Internships are provided by some employers and duration of the internship varied from 2 to 6 months. It is extensively approved that placements and internships are extremely effective which is helping young people to decide on career choices, giving them with very valuable information about their development through education and transformation to work (Mann & Dawkins, 2014).

Many of the employers do not participate in curriculum revision in institutes. Hence a few employers involve with curriculum revision, and this might lead to mismatch of curriculum with demands of existing labour market demands (Liyana, 2014). Employers are recruiting from senior level to technical levels in the originations and nearly all of them prefer to recruit both males and females regardless the candidate's gender. Furthermore, irrespective of graduate or non-graduate employers prefer their candidates to have a professional qualification since it helps the related work. Employers emphasized those new graduates required to improve their practical knowledge, skills, and soft skills. Further internships, apprenticeships or programmes for new graduates are required to improve their employability. Way forward for the education is that students need to focus more on practical aspects of education, purposeful learning experience and experiential learning. Moreover, it was highlighted that not only knowledge but also attitudes and skills of the graduates should be developed.

5.2 Institutes Perspective on Supplying New Graduates

Institutes perspective on supplying new graduates and expectations commenced with that students' expectations. Students are regularly register for the programme in English medium programmes. Possessing extracurricular is not a mandatory requirement in institutes. On one hand when selecting an educational programme, most influential factor can be identified as content of the programme, parents' choice and peer pressure also matters when students

selecting an educational programme. On the other hand, reputation can be identified as a main factor when selecting an institute. Additionally, peer pressure also influences when selecting an institute. Further, academic programme, parents' motivation and desire to go abroad are the key factors that students select a foreign university. The prominent marketing strategies which attract students to institute are paper advertisements, TV programmes and social media marketing. Furthermore, when discussing decisive internal process in the institutes, learning teaching processes highlighted as very vital. More students select HEM (Humanities, Education and Management) programmes rather than STEM (Science, Technology, Engineering and Mathematics) programmes. Many institutes conduct honours degrees instead of general degrees and students prefer honours degrees when compared to general degrees though some general degrees have good demand. Further there are disparities of student choice and parents' choice when selecting an institute and area of the study. However, students encounter some problems while studying which might impact on their careers. These problems are lack of English language skills, financial issues and cultural issues. Many institutes provide not only career guidance and internships but also support for the slow learners too. Lecture discussions, project method and problem-solving methods are extensively used learning teaching methods in the institutes which brings significant learning outcomes.

After the graduation students find employment within one month to six months, however this depends on the individual skills. Further some graduates get more opportunities with their internship programmes. Almost all the institutes have continuous assessments and final examinations. Further, institutes have (both state and non-state) good or excellent infrastructure. Moreover, institutes believed that students view on institute and programmes reputation are regarded as good and that they have a positive or moderate image on institutes rather than negative image. When recruiting lecturers some institutes consider not only first class passes of the lecturers but also second upper class division passes as well. Effect of the students will have in their higher education choice differ by parents, siblings, teachers and friends and study revealed that only some parents have a clear understanding of their child about selecting the best pathway that suits their strengths and weaknesses.

5.3 Concluding Remarks

This study is a qualitative analysis in relation to psychological paradigm shift in Students' demand and enrolment for various academic disciplines in the tertiary education in Sri Lanka. Objectives of the study are to explore the student demand side aspects for various academic disciplines and to explore the student supply side expectations for various academic disciplines in Sri Lanka. By exploring these two sides employer of new graduates and institute perspective regarding undergraduates have been analyzed and hence paradigm shift of what parents' aspirations, choice of curricular, or disciplines/subject areas were discussed. Based on the findings of the study, it is clear that new graduates have issues with the practical skills, attitude problems and soft skills. Many employers, neither possess a mechanism to match graduates' skills and background to their job and responsibilities nor participation in curriculum revision in institutes. Hence a few employers involve with curriculum revision, and this might lead to mismatch of curriculum with demands of existing labour market demands. Parents, siblings, teachers and friends have effects on students' choice when selecting higher education disciplines. Only some parents have a clear understanding of their child about selecting the best pathway that suits their strengths and weaknesses.

Considering above factors study concluded that paradigm shift or fundamental change in approach in higher education is needed and affect the higher education fulfillments in great extent. Hence students' needs to gain and focus more on practical aspects of education, purposeful learning experience and experiential learning. Moreover, not only knowledge but also attitudes and skills of the graduates should be developed. Conversely, authorities need to concentrate on guiding students to find their career aspirations based on their skills or develop mechanism to find out higher education aspirations based on the different student choices ahead.

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Appendix 1

Coding scheme for interview questions (employers)

Interview question	Employers' response code
Do you recruit newly qualified graduates?	1) Yes 2) No
When recruiting, what are the disciplines mainly you	1) Science, 2) Technology,

interested in?	<ol style="list-style-type: none"> 3) Engineering, 4) Mathematics 5) Humanities, 6) Education, 7) Management
When recruiting, what are the academic qualifications you expect from fresh graduates?	<ol style="list-style-type: none"> 1) A/L, 2) Diploma/ 3) Degree/ 4) Postgraduate
When recruiting, what are the professional qualifications you expect from fresh graduates?	<ol style="list-style-type: none"> 1) Chartered Accountancy 2) Association of Accounting Technicians (AAT) 3) Marketing qualification (from Sri Lanka institute of Marketing (SLIM) or Chartered institute of Marketing (CIM -UK) 4) HR qualification (from Chartered Institute of Personnel Management (CIPM)
What is the level of English language skill that you expect from the candidate?	<ol style="list-style-type: none"> 1) Excellent/ 2) Good/ 3) Average
Do you have test to measure newly recruits' knowledge, attitude and skills?	<ol style="list-style-type: none"> 1) academic test/ 2) practical test/ 3) psychometric test)
What are the soft skills that you expect from candidates?	<ol style="list-style-type: none"> 1) Communication skills/ 2) leadership skills, 3) interpersonal skills, 4) taking initiative/ 5) flexibility
What digital skills is your enterprise/company looking for from the graduates	ICT skills
What are the areas of IT you looking for?	<ol style="list-style-type: none"> 1) Networking 2) PC 3) Hardware
Does your enterprise/company/industry have a system to match graduates' skills and background to their job and responsibilities?	<ol style="list-style-type: none"> 1) Yes 2) No
Are you looking for extracurricular activities/achievements from the candidates	<ol style="list-style-type: none"> 1) Yes 2) No
Do you have affiliations/networking with the institutes? If so,	<ol style="list-style-type: none"> 1) Yes 2) No

Do you directly hire the newly qualified graduates after completion of their degree programmes?	1) Yes 2) No
Do you offer internships to students?	1) Yes 2) No
What type of internship programme you offer?	Management Trainee
Do you visit institutes and provide career guidance/opportunities?	1) Yes 2) No
Do you participate in curriculum revisions in institutes? Or with other state authorized bodies namely MOE (Ministry of Education)/TVEC (Tertiary Vocational Education Commission) /NAITA etc.	1) Yes 2) No
To what extent you participate/contribute to those curriculum revisions?	1) To a great extent 2) To some extent 3) To less extent 4) Not at all
Do you have issues with newly recruit graduates?	1) Attitude problems, 2) lack of soft skills etc./ 3) lack of communication skills/ 4) lack of leadership skill
How many vacancies you have right now?	1) Less than 5 2) 5 to 10 3) 10 to 20 4) More than 20
How frequently you are recruiting?	1) Monthly 2) When vacancy occurred
What kind of levels of positions you recruit?	1) senior/ 2) middle level/ 3) technical)?
Do you prefer male or female recruits? Why? (reasons)	1) Male 2) Female 3) Both
Do you like graduate or non-graduates? Why? Reason	1) Graduates 2) Non-graduates

What is your perception on employability skills of new graduates?	1) Need to gain more practical skills. 2) Develop soft skills. 3) Develop attitudes.
In your opinion, what is the way forward for the university education (or higher education) to improve the employability and graduates' job satisfaction?	1) Organizing workshops, 2) Company visits

Source: Developed by Author based on Hashimoto-Martell et al., 2011

Appendix 2

Codes and themes (Employers interviews)

Code	Themes
Science, Technology, Engineering, Mathematics Humanities, Education, Management	Academic disciplines
Chartered Accountancy Association of Accounting Technicians (AAT) Marketing qualification (from Sri Lanka institute of Marketing (SLIM) or Chartered institute of Marketing (CIM - UK) HR qualification (from Chartered Institute of Personnel Management (CIPM)	Professional qualifications
Excellent Good Average	English skills
Academic test Practical test Psychometric test	Evaluation test
Communication skills Leadership skills Interpersonal skills Attitude Flexibility Taking initiative Creative and innovative	Soft skills
Sports Aesthetic activities	Co-curricular activities
ICT skills	Digital skills
Networking PC Hardware	Areas of IT
Yes No	match graduates' skills and background to their job and responsibilities

Yes No	have affiliations/networking with the institutes
Yes No	Directly hire the newly qualified graduates after completion of their degree programmes?
Yes No Management trainee	offer internships to students and type of internship programme
Yes No	visit institutes and provide career guidance/opportunities
Yes No	participate in curriculum revisions in institutes? Or with other state authorized bodies namely MOE (Ministry of Education)/TVEC (Tertiary Vocational Education Commission) /NAITA etc.
To a great extent To some extent To less extent Not at all	extent you participate/contribute to those curriculum revisions?
Attitude problems, lack of soft skills etc./ lack of communication skills/ lack of leadership skill	issues with newly recruit graduates?
Less than 5 5 to 10 10 to 20 More than 20	Number of vacancies in the organization
Monthly When vacancy occurred	How often organization recruit
senior/ middle level/ technical)?	kind of levels of positions you recruit?
Male Female both	prefer male or female recruits
Graduates Non-graduates	reasons Do you like graduate or non-graduates?
	Why? Reason

Need to gain more practical skills.	your perception on employability skills of new graduates
Develop soft skills.	
Develop attitudes	the way forward for the university education (or higher education) to improve the employability and graduates' job satisfaction?
Organizing workshops,	
Company visits	

Source: Authors developed

Appendix 3

Codes and themes (Institutes interviews)

Code	Themes
English Language	Enrolling language
Extracurricular activities, 2) Relationship between extra-curricular activities and selecting students	Extra-curricular activities for students
Content of the programme parents' choice peer pressure Programme fee A/L Qualification	the main factor that students consider when selecting any programme
Reputation Infrastructure parent's choice peer pressure closer to home discipline	main factor that students consider when selecting institute
either academic prog parents motivation student motivation desire to go abroad	main factors that students are selecting this particular foreign university
Paper advertisements TV programmes Social media marketing Digital marketing	the marketing strategies that institute use to attract students
enrollment process, learning teaching process	most decisive internal process of students' choice?
Science, Technology, Engineering, Mathematics Humanities, Education, Management	whether students select more STEM or HEM programmes

General/ Hons	Whether both general and honours degrees conducted in your institute
Yes No	whether students prefer general or honours degrees disparity of student choice and parents' choice about selecting an institute
Yes No	disparity of student choice and parents' choice about selecting the area of study
language difficulties, financial problems, cultural issues	the problems that student encounter while studying
Extra classes, extra assignments, language classes	Support for slow learners
Yes No	provide career guidance to students
Yes No	offer internships for students
lecture discussions, project method, problem solving	degree programmes you offer internships learning teaching methods
one month 3 months 6 months one year more than one year	After the graduation how soon, students find employment
continuous assessments, mid semester examinations and final examination etc.	assessment and evaluation methods
Excellent/ good average, classrooms well equipped with multimedia/smart boards etc	current status of institute's infrastructure
positive, moderate negative	response from students
Looking for first class, 2 nd upper Experience	recruiting lecturers

Parents	the influence of the students will have in their higher education choice by
Siblings	
Teachers	
Friends	
Others	
1)Yes	parents have a clear understanding of their child about selecting the best pathway that suits their strengths and weaknesses
2)No	

Source: Authors developed

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