

CONGRUENCE OF HUMAN RESOURCES PRODUCED BY UNIVERSITIES WITH EMPLOYMENT MARKET: Alignments, Mismatches and Way Forward



NATIONAL EDUCATION COMMISSION

1ST FLOOR, BLOCK 5,

BANDARANAIKE MEMORIAL INTERNATIONAL CONFERENCE HALL,

BAUDDHALOKA MAWATHA, COLOMBO 07, SRI LANKA

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Preface

The National Education Commission (NEC), established by the National Education Commission Act No. 19 of 1991 is a body corporate with the primary mandate to function as the apex policy formulation body of the education sector, and to engage in policy analysis and research, review the ongoing programme and plans with respect to education and undertake research on issues of importance. Going along with the mandate, the NEC has embarked on a series of research addressing some of the current issues faced by the education sector.

This volume deals with the research study gone into examine the extent of congruence of human resources produced by State universities/higher education institutions with the employment market. Many empirical studies highlighted that despite the low enrolment rate, graduates produced by State universities have continued to experience a significant degree of unemployment. These findings are in conformity with the findings reported by the World Bank/Sri Lanka Education Sector Assessment Report (2017) which stated that the *“employment rate of graduates in Sri Lanka is inversely correlated with the number of graduates in a given discipline. Graduates from crowded disciplines such as humanities and social sciences, struggle to find suitable employment opportunities. Some of them ultimately wind up with an employment opportunity distantly related to their fields of study. On the other hand, graduates of science, technology, engineering and mathematics (STEM) disciplines who are fewer in number find it easy to secure suitable employment opportunities in a relevant discipline immediately after graduation”*. Though the graduate unemployment, particularly among graduates of Humanities and Social Sciences, has been a continuing problem with adverse social repercussions, the general education system continues to prepare more students with GCE (A/L) qualifications in Arts stream and the State universities continue to admit largest percentage of new enrolments into HSS programmes, and thus continue to produce more of HSS graduates which record high unemployment rates compared to graduates of other disciplines particularly of STEM discipline which record higher employment prospects.

Therefore, this study was conducted with the aim of examining the degree alignment of human resources graduating from universities and employment market needs and demands with particular emphasis on identifying the alignments and mismatches with the view to propose the way forward to address this chronic national issue.

Prof. Harischandra Abeygunawardena

Chairman, National Education Commission

October 2023

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- Employers who responded to the questionnaire

for providing data and information for this nationally important exercise.

Abbreviations

DoE - Department of Examination

DCS - Department of Census and Statistics

GER - Gross Enrolment Rate

HEMS - Humanities, Education, Management and Social Sciences

HSS - Humanities and Social Sciences

MoE - Ministry of Education

NSHEI - Non-State Higher Education Institute

QAC/UGC - Quality Assurance Council of the University Grants Commission

SHEI - State Higher Education Institute

STEM - Science, Technology, Engineering and Mathematics

UGC - University Grants Commission

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Executive Summary

Despite the low enrolment rates, graduates from State universities face difficulties in finding employment. To analyse this issue, a study adopting the mixed research design approach was implemented in three phases: Phase I: Analysis of the university intake and output data, and trends in graduate employment; Phase II: Study of the relationship between the employment rates and the outcome of the quality assurance reviews; and Phase III: Study of employers' perceptions on university graduates.

Both primary and secondary data were used for the analyses. Secondary data were obtained from the Department of Census and Statistics (DCS), Ministry of Education (MoE), Department of Examination (DoE), University Grants Commission (UGC), Quality Assurance Council of the UGC (QAC/UGC) and were analysed for trends, frequencies, and percentages. A correlation analysis was performed between the graduate employment rates and the criteria-wise review scores of the four selected criteria using SPSS software. Employer perceptions of graduates were assessed via a questionnaire covering a sample of private-sector employers.

Analysis of secondary data on university admission (1940 - 2020) revealed that State universities historically enrol a higher number of undergraduates into Arts (humanities and social sciences), Management and Commerce study programmes compared with Science and Technology study programmes. This pattern parallels closely with the number of students sitting for the G.C.E. (A/L) examination and the number of qualifying for university entry from different study streams which have historically been skewed towards Arts and Commerce streams. As of the School Census Report (2020) of MoE, out of 2,932 schools that offer GCE (A/L) streams, only 1,000 schools (34.1%) offer all four streams (i.e. Science, Arts, Commerce, and Technology), while 1,932 (65.89%) schools offer only Arts and Commerce streams. As a result, for example in 2021, out of the total number of students (236,035) who sat for the G.C.E. (A/L) examination, 140,868 students were from Arts and Commerce streams while only 90,524 students were in Science and Technology streams. As of UGC data (2021), enrolment into Arts, Management and Commerce study programmes accounted for 43.2% of intake, while the rest of the disciplines, mostly Science and Technology study programmes accounted only for 56.8% of the total undergraduate enrolment. Consequently, State universities turn out more graduates in the disciplines of Humanities and Social Sciences (HSS). Secondary data analysis also showed that graduate unemployment has continued over the years with an increasing trend from 1992 to 2020. In 2019, graduates from the crowded HSS disciplines experienced the lowest average employment rate (30%) compared to graduates of Science, Agriculture, and Management disciplines achieving average employment rates were 74%, 63%, and 68%, respectively.

Analysis of Quality Assurance Review Reports revealed that the majority of the HSS study programmes/clusters received "C" or "D" grades for Criteria 3 (Programme Design and Development), Criteria 4 (Course/Module Design and Development) and Criteria 5 (Teaching and Learning) except for Criteria 7 (Student Assessment and Awards). On the other hand, most of the Management, Agriculture, and Medicine study programmes/clusters received relatively high grades (A or B) for Criteria 3,4,5, and 7, suggesting that the study programmes in HSS have not adopted the best practices prescribed to a satisfactory level and reached the quality standards stipulated by the QAC/UGC.

Analysis of the employer survey results reveals majority of the companies that responded to the survey (representing 60% of the respondents) are engaged in service provision which includes IT, Finance and Banking. Therefore, the frequency of graduate recruitments in the areas of IT (56%) and Accounting/Auditing/Finance (42%) in the sample of this study is comparatively higher than that of the other areas of employment. Employers indicated that they prefer to recruit graduates in the fields of Computer Science/IT (44%), Engineering (38%), Management and Commerce (32%), and Technology (32%). Consequently, the recruitment of Arts graduates is comparatively low (6%). This survey further reveals that the type of institution and the level of qualification (SLQF Level 5 or Level 6) seem to be less relevant for recruitment, by and large. Moreover, 30% of employers are willing to recruit non-graduates for a graduate-level job if the applicant has a professional qualification or a professional qualification combined with either or both of work experience and on-the-job training. This survey further illustrates that employers rate the 21st century skills of non-State graduates higher than the State graduates, especially with regard to communication skills. This suggests that study programmes in State universities do not produce graduates adequately equipped with the employability skills demanded by the world of work.

Therefore, this study suggests that both the general education sector and State universities have not been sufficiently responsive to the trends in the labour market demands that mirror the transformation taking place in the Sri Lankan economy as well as in the global context, and continue to follow historical trends in educational offerings and traditional approach in curricula contents and teaching and learning approaches, and thus continuing to produce human resources which are not in congruence with labour market needs. Therefore, both the general and higher education sectors must take decisive measures to address this chronic, national issue. These include expanding opportunities for senior secondary students at the general education level to pursue STEM subjects and the universities adjusting university student admission policy and practices to expand admission to STEM study programmes while reforming study programmes curricula and teaching-learning approaches, particularly in the humanities and social sciences study programmes to turn out graduates who are more attuned with the employment market trends and signals.

There are no shortcuts to address this issue. The *“root cause (s) of the illness/issue must be addressed while dealing with symptoms to address the recurrent unemployment of university graduates, particularly of those of HSS discipline”*. As emphasized by the NEC in 2022, in its recent policy document, the National Education Policy Framework (2020-2030)¹ this misalignment has to be addressed by a multipronged approach.

¹ National Education Commission (2022). *National Education Policy Framework 2020-2023 (Full Text)*. <https://nec.gov.lk/national-education-policy-framework-2020-2030/>

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Chapter 1: Introduction

Tertiary education plays a pivotal role in fuelling the socio-economic development and progression of any country. Therefore, successive governments have given priority to further expansion of the higher education sector with a view to supplying the human capital equipped with higher order skills required to cater for the socio-economic development of the country. Despite these efforts, the participation of youth (18-23-year age cohort) in tertiary education has continued to remain low in Sri Lanka compared to other middle-income countries². World Bank data revealed that though the gross enrolment rate (GER) in tertiary education has gradually improved over the previous decade, rising from 16.3% to 21.6% (2010-2020), access to higher education still remains low. Even in the year 2020/2021, State universities, the primary providers of higher education were able to admit only 43,882 students out of 194,366 students (22.58%) who qualified from G.C.E. (A/L) examination for university admission which was equivalent GER of 7.20%³.

Ironically, despite the low enrolment rate, graduates produced by State universities have continued to experience a significant degree of unemployment. As per the tracer study conducted by the University Grants Commission in 2017⁴, 65.5% of the graduates were employed, 32.2% were unemployed and a minor percentage (2.4%) were engaged in voluntary work. This study, further revealed that unemployment is more prevalent among the graduates from humanities, education, management and social sciences (HEMS) disciplines compared to the graduates from STEM disciplines (i.e. Science, Technology, Engineering and Mathematics). These findings are in conformity with the findings reported by the World Bank/Sri Lanka Education Sector Assessment Report⁵ which stated that the employment rate of graduates in Sri Lanka is inversely correlated with the number of graduates in a given discipline. Graduates from crowded disciplines such as humanities and social sciences, struggle to find suitable employment opportunities. Some of them ultimately wind up with an employment opportunity distantly related to their fields of study. On the other hand, graduates of science, technology, engineering and mathematics (STEM) disciplines who are fewer in number find it easy to secure suitable employment opportunities in a relevant discipline immediately after graduation.

Studies relating to graduate employment have revealed that among many other factors, particularly the type of specialization and employability skills (*commonly referred to as soft, transferable or generic skills*) among university graduates as the factors that determine employment rates. Jayasinghe and Suraweera (2020)⁶ in their study which examined the factors affecting the employability of graduates

² Aturupane, H., Millot, B., Wang, L., & Allak, M. (2009). Towers of Learning: Performance, Peril and Promise of Higher Education in Sri Lanka. The World Bank.

³ Statistical Digest on Education 2022/2023. National Education Commission. <https://nec.gov.lk/category/publications/statistical-digest/>

⁴ University Grants Commission. (2017). Tracer study of graduates, Universities in Sri Lanka.

⁵ Dundar, H., Millot, B., Riboud, M., Shojjo, M., Aturupane, H., Goyal, S., & Raju, D. (2017). *Sri Lanka Education Sector Assessment: Achievements, Challenges, and Policy Options*. World Bank. <https://doi.org/10.1596/978-1-4648-1052-7>

⁶ Jayasingha, D. G. M. S., & Suraweera, S. M. B. L. (2020). An Analysis of the Factors Affecting the Graduates' Employability in Case of Rajarata University of Sri Lanka. *IRE Journals*, 3(12), 10-24.

with an emphasis on graduates of Rajarata University of Sri Lanka concluded that the discipline of specialization, English proficiency, and soft skills together with experience as the most influential factors of graduate employability. Herath and Ranasinghe (2011)⁷ studied the perception of private sector employers towards recruiting business graduates and concluded that the employers were dissatisfied with the graduates as most of them were deficient in required ICT skills, English language proficiency and practical knowledge in their chosen disciplines. Besides the above studies, many other studies too have concluded that there appears to be a mismatch between the competency profiles of graduates produced by universities and labour market requirements^{8,9,10}.

The desired competency profile that the employers most commonly look for graduates of higher education encompasses a wide array of skills and graduate attributes. These include – communication skills (*i.e. the ability to convey information effectively through any medium*), motivation (*i.e. ability to take action independently and continually progress towards his/her own goals*), leadership (*i.e. ability to take charge of a project or initiative within a team*), reliability (*i.e. The ability to be dependable and trustworthy*), desire and ability to learn on the job and follow instructions, team work (*i.e. ability to work collaboratively with others towards a common goal*), self-management (*i.e. ability to manage his/her time and prioritize tasks effectively*), emotional intelligence (*i.e. ability to understand and manage your own emotions and those of others*), analytical skills (*i.e. ability to deconstruct information into processable pieces to draw conclusions*) and often involves using other skills – *such as conceptual skills / logical reasoning, creativity, research and critical thinking skills*), and adaptability (*i.e. ability to adjust to new situations and environments*)¹¹.

1.1. Significance of the Study

Having recognized the importance of fostering greater congruence between human resources output from higher education sector and the employment market needs and demands, and as a part of the continuing policy analysis and research agenda, the NEC has decided to conduct a study to assess the degree of congruence of human resources produced by universities with employment market in terms of the alignment among three main factors: quality of input coming into universities; value addition process taking place at university level and graduate attributes; and market needs and demand.

The findings of the study will be beneficial in formulating recommendations for making a way forward to address the chronic issue of graduate unemployment. In particular, the study results will be useful to policy makers and planners as well as the managers of general and higher education sectors/institutes to figure out how they can address the misalignments, gaps and shortcomings of curricula/study programmes, both at general and higher education levels.

⁷ Herath, H. M. T. S., Ranasinghe, A. (2011). Labour Market Prospects for Business Graduates in Sri Lanka. *International Journal of Social Science and Humanity*, 1(1), 26–30. <https://doi.org/10.7763/ijssh.2011.v1.5>

⁸ Ambepitiya, K. R. (2016). Employability of Graduates of Public and Private Management Education Institutes: A Case Study of Two Institutes in Sri Lanka. *OUSL Journal*, 11, 113-133. <https://doi.org/10.4038/ouslj.v11i0.7346>

⁹ Chandrakumara, D. P. (2014). *Employability of New Graduates in Sri Lanka: Implications for Policy Development*. Discussion Paper No.195. Graduate School of International Development, Nagoya University.

¹⁰ Ranasinghe, A., & Logendra, R. (2015). Graduate Employment, Employable Attributes and Attribute Gap in Developing Countries: A Case Study from Sri Lanka. <https://www.researchgate.net/publication/279704564>

¹¹ <https://uk.indeed.com/career-advice/finding-a-job/employability-skills>

Chapter 2: Research Approach

This study hypothesises that graduates' (*i.e., the products of higher education*) success in the employment market is contingent upon three main factors: quality of the university applicants (*i.e., inputs; that is the aptitude and outlook of incoming students*); the quality of value addition process at the university level and graduate attributes (*i.e., study programme curricula and delivery which determine graduate competencies and outlook*); and the availability of employment opportunities (*i.e., market needs and demand for products with higher learning*). If any one of the above three factors that influence graduate employment is suboptimal, and/or not in alignment, then the graduates will be either unemployed or under employed.

2.1. Objectives

The specific objectives of the study are;

- i) to identify trends in student enrolment in G.C.E. (A/L) study streams, university student intake and graduate output, and trends in graduate employment,
- ii) to analyse the relationship between the employment rate and the quality of the study programmes (as indicated by the outcomes of the quality assurance reviews), and
- iii) to ascertain the employers' perceptions on university graduate competencies in terms of the job market requirements.

2.2. Research Design

The study adopted qualitative and quantitative research methods and implemented in three phases: Phase I- Study trends in student enrolment in G.C.E. (A/L) study streams, university student intake and output and trends in graduate employment; Phase II - Analysis of the relationship between the employment rates and the outcome of the quality assurance review; and Phase III - Assessment of employers' perceptions on university graduates.

2.3. Data Collection

Phase I: Secondary data required for Phase I were obtained from numerous government agencies including the Ministry of Education (MoE), University Grants Commission (UGC), Department of Examination (DoE), Department of Census and Statistics (DCS), and State universities. Data on the number of students who sat for G.C.E. (A/L) examination from 2005 to 2020 were obtained from the DoE whereas the data on school types and their distribution for the period from 2005 to 2020 were obtained from the Annual School Census Reports of the MoE. Graduate employment data from 1992 to 2020 were obtained from the DCS. Data obtained from UGC was used to generate the trends in graduate intake and output from 1980 to 2020. Graduate employment data (2019) obtained from universities were used for analysing the employability of graduates of different disciplines.

Phase II: Data required for Phase II were gathered from the Quality Assurance Council of the University Grants Commission (QAC/UGC). Review outcomes were used to analyse the relationship between study programme review outcomes and employability rates of graduates of respective study programmes. Four out of the eight quality criteria which are considered as having direct relevance to graduate employability were chosen for analysis, and the selected criteria were; Criteria 3: Programme Design and Development; Criteria 4: Course/Module Design and Development; Criteria 5: Teaching and Learning; and Criteria 7: Student Assessment and Awards.

Phase III: Data required for Phase III were collected through a questionnaire comprising both open-ended and close-ended questions administered online. Questionnaires were administered to 561 reputed employers registered in the Ceylon Chamber of Commerce. However, only 50 employers responded to the questionnaire.

2.4. Data analysis

Phase I: Secondary data collected from different sources were analysed for studying trends, frequencies, and percentages.

Phase II: A correlation analysis was performed between the graduate employment rates and the criteria-wise review scores of the four selected criteria using SPSS software.

Phase III: Data in relation to the responses of employers to the questions posed were entered into a Microsoft Excel sheet and exported to IBM SPSS Statistics 20 software to obtain descriptive statistics. The reliability of the questions was analysed using Cronbach's Alpha. The assessment of employer satisfaction with respect to employability skills (i.e. 21st century skills) of graduates among State and non-State universities was statistically analysed using T-test.

Chapter 3: Results

3.1. Phase I: Analysis of the university intake and output data, and trends in graduate employment

3.1.1. Number of students submitted for G.C.E. (A/L) examination and distribution of schools which offer G.C.E. (A/L) education

The number of students sitting for the G.C.E. (A/L) examination from 2005 to 2021 is depicted in Fig. 1A. As shown in the figure, the number of students sitting for the G.C.E. (A/L) examination has historically been skewed towards Arts and Commerce streams. For an example, in 2021, out of total number of students (236,035) who sat for G.C.E. (A/L), 89,646 (37.98%) were in Arts stream whereas 51,222 (21.70%), 66,155 (28.03%), 24,369 (10.32%) and 4,643 (1.97%) students were in Commerce stream, Science and Technology stream, and other streams, respectively¹². As of this data, the Arts and Commerce streams account for approximately 60% of students compared to 40% of students in Science and Technology streams.

The above pattern appears to be closely related to the distribution of types of schools. For example, as shown in Fig. 1B, in 2020, there were 2932 schools offering G.C.E. (A/L) classes and out of that only 1000 schools (1AB schools) offer all 4 streams of education (Science, Maths, Arts, and Commerce), while 1932 schools (1C Schools) offer only Arts and Commerce streams¹³. This shows that 65.9% of schools offering G.C.E. (A/L) in Sri Lanka offer only Arts and Management streams. Hence majority of the G.C.E. (A/L) students appear to pursue Arts and Management stream by default.

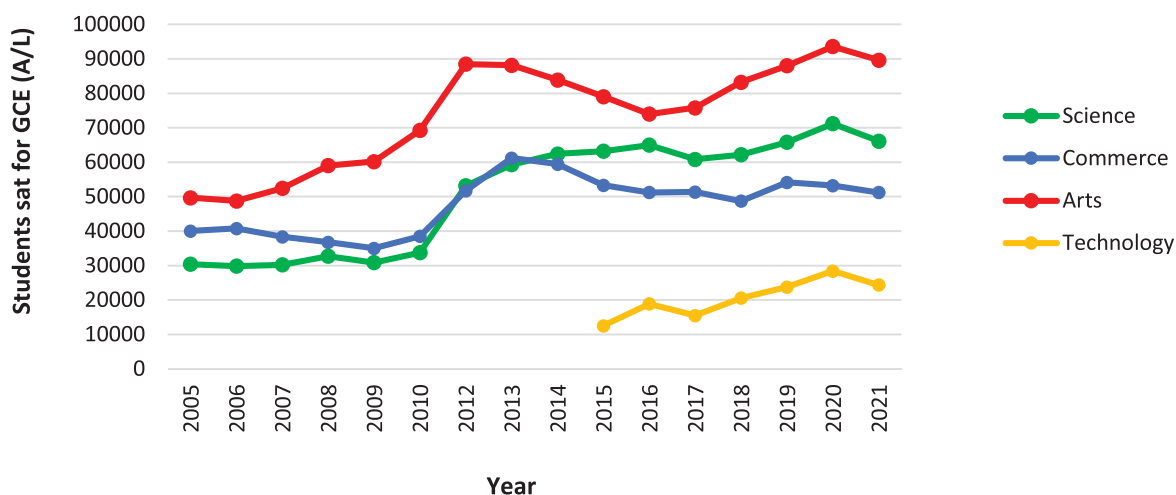


Figure 1A: Number of students sat for G.C.E. (A/L) examination from 2005-2021

(Source: Ministry of Education)

¹² Department of Examination (2021). *G.C.E.(A/L) Examination 2021. Performance of Candidates*. https://www.doenets.lk/images/resources/STAT/AL2021POC-Rev-1_1671814563246.pdf

¹³ Ministry of Education (2020). *Annual School Census of Sri Lanka*. <http://www.statistics.gov.lk/Education/StaticInformation/SchoolCensus/2020>

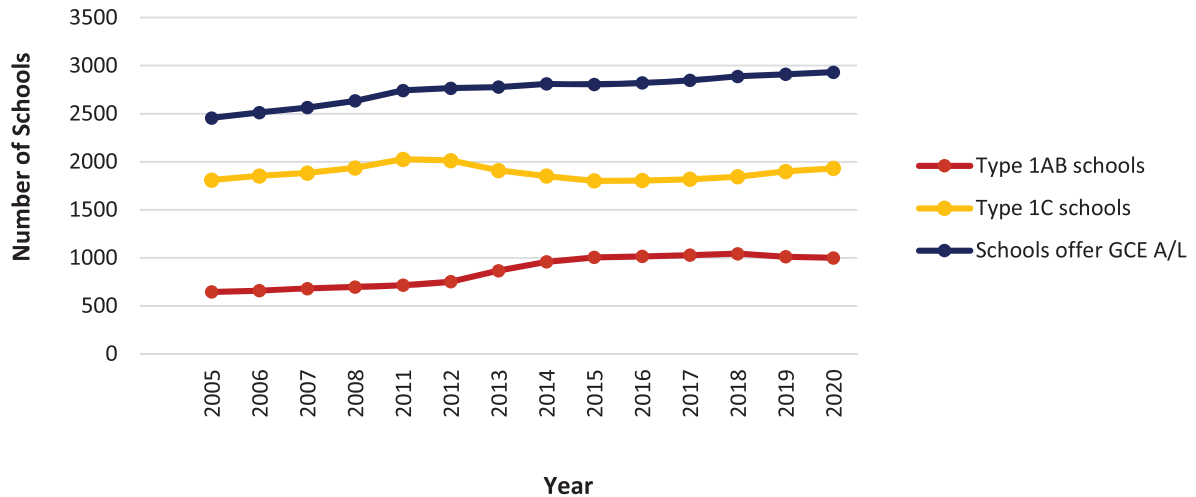


Figure 1B: Type of schools from 2005-2020

(Source: Ministry of Education)

In addition to this limitation, it appears that the shortage of science and mathematics teachers, particularly in economically underdeveloped areas compels the students to enrol in the Arts and Commerce streams. Further to that, some of the students opt for Arts and Commerce streams due to their fear of following Science and Mathematics while a smaller fraction may opt for Arts and Commerce streams instead of STEM disciplines to enhance their chances of getting into a university¹⁴.

3.1.2. Trends in undergraduate intake by academic stream

The trend in undergraduate intake into State universities by academic stream from 1980 to 2021 is given in Fig. 2. As depicted in Fig. 2, universities enrol a greater proportion of students into humanities and social sciences (HSS) disciplines compared to other disciplines, particularly to STEM of study programmes. The next highest number was enrolled in Management, and Science study programmes and the lowest numbers were admitted into professional study programmes including Engineering, Medicine, Dental Science, Veterinary Science, Allied Health Sciences, Computer Sciences, Technology and Architecture.

The trend in university enrolment by disciplines was critically reviewed by Dundar *et al.* (2017)¹⁵ and reported that student enrolment was low for the subjects which have crucial importance in economic development such as STEM disciplines – such as science (including medicine), technology, engineering and mathematics. This report has further mentioned that Sri Lanka was ranked first of 106 countries

¹⁴ National Education Commission (2022). *National Education Policy Framework 2020-2023 (Full Text)*. <https://nec.gov.lk/national-education-policy-framework-2020-2030/>

¹⁵ Dundar, H., Millot, B., Riboud, M., Shojo, M., Aturupane, H., Goyal, S., & Raju, D. (2017). *Sri Lanka Education Sector Assessment: Achievements, Challenges, and Policy Options*. World Bank. <https://doi.org/10.1596/978-1-4648-1052-7>

for the proportion of students who study arts and humanities and ranked at 79th position out of 99 countries for the proportion of students who study science and engineering. Moreover, according to this report, the student enrolment for engineering alone fared even worse, ranking at 92nd position out of 103 countries, and concluded that this pattern of undergraduate enrolment would have a detrimental impact on the graduate employment rates and also on the country's economic development.

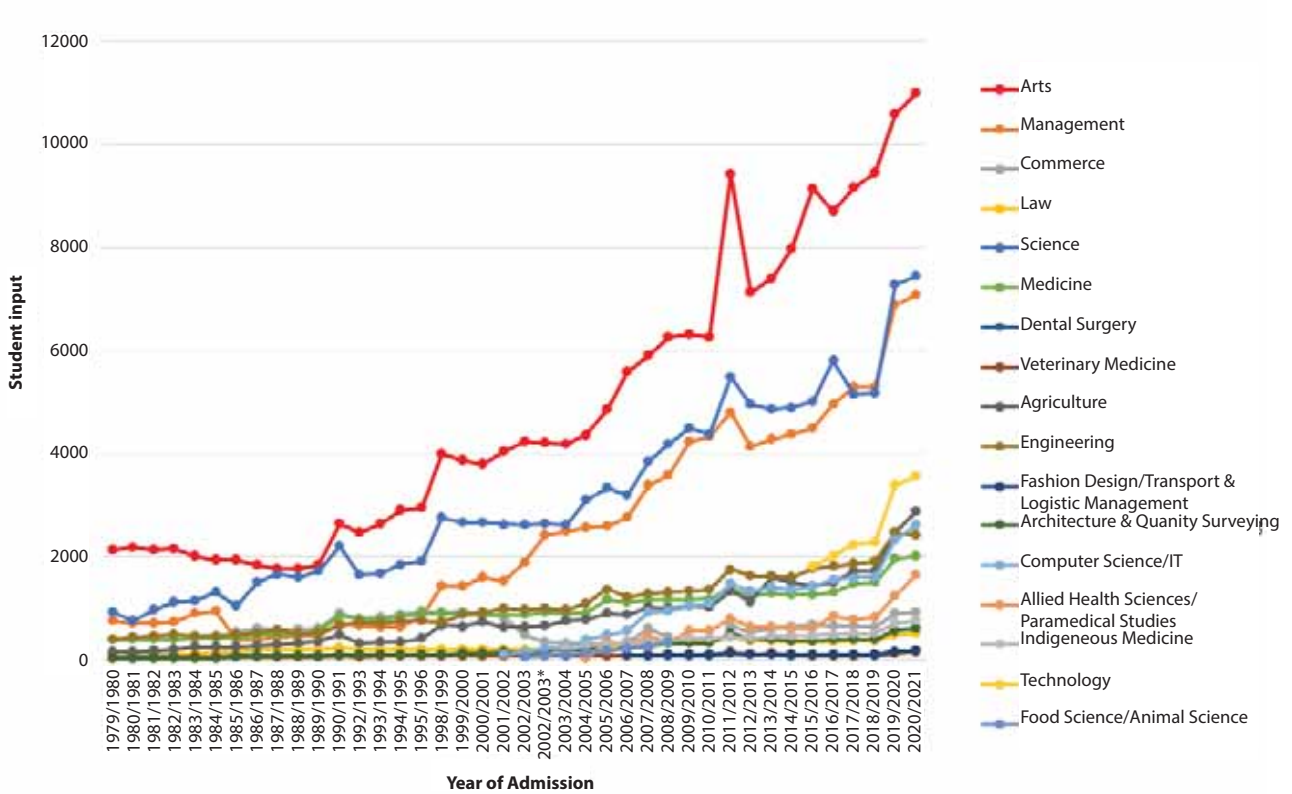


Figure 2: Undergraduate intake in State universities from 1980-2021
(Source: UGC)

3.1.3. Trends in graduate output by academic stream

Graduate output in State universities by academic stream from 1980 to 2021 is illustrated in Fig. 3. As expected, in parallel to the undergraduate intake, the output in the academic streams of Arts, Management and Science is also high. As per UGC statistics (2021)¹⁶, out of a total of 21,477 graduates produced, the arts stream recorded the highest output of 7,945 graduates (36.99%), followed by 3,307 in management and commerce (15.40%), 3,133 in science (14.59%), and 889 in agriculture (4.14%).

¹⁶ University Grants Commission. (2022). Sri Lanka University Statistics. https://www.ugc.ac.lk/downloads/statistics/stat_2022/Chapter%204.pdf

This continuing trend of producing higher outputs in HSS study programmes which have continuously recorded high unemployment rates would certainly aggravate the employability issues of university graduates.

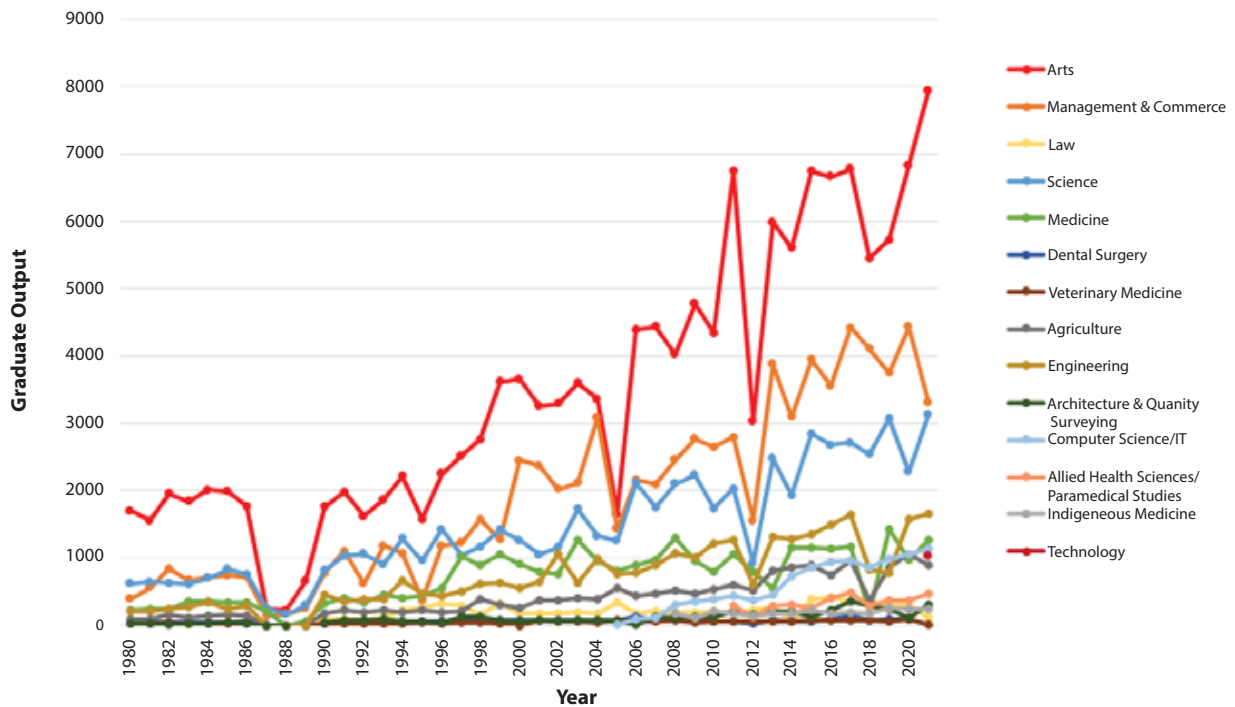


Figure 3: Graduate Output in State universities from 1980-2021

(Source: UGC)

3.1.4. Analysis of trends in graduate unemployment (1992-2020)

In Sri Lanka, the unemployment rate has decreased from 14.2% in 1992 to 5.2% in 2020 (Figure 4A) while the GDP has increased from 9.70 billion USD in 1992 to 85.35 billion USD in 2020 (Figure 4B). This is consistent with Okun's law, which predicts a negative relationship between economic growth and unemployment¹⁷.

¹⁷ Niranjala, S. A. U. (2019). Examining the Effects of Unemployment on Economic Growth in Sri Lanka (1991-2017). *Journal of Economics and Sustainable Development*, 10(20), 34-39. <https://doi.org/10.7176/jesd/10-20>

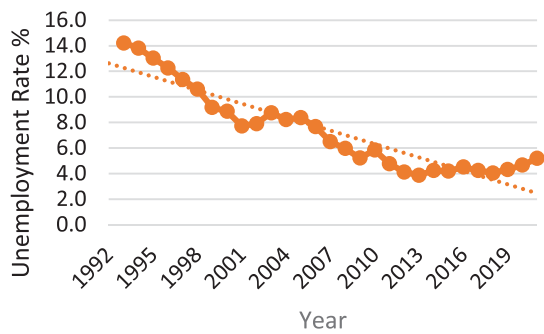


Figure 4A: Unemployment rate (% of total labour force) in Sri Lanka 1992-2020

(Source: World Bank data, <https://data.worldbank.org/indicator/SL.UEM.TOT.L.ZS?locations=LK>)

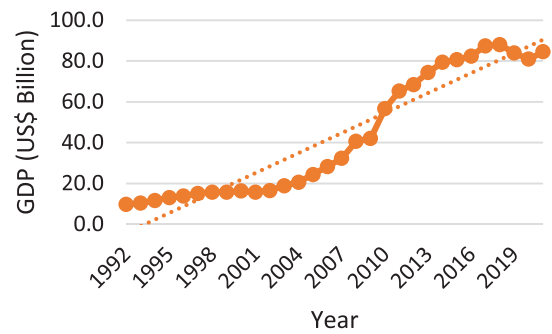


Figure 4B: Gross Domestic Product in Sri Lanka 1992-2020

(Source: World Bank data, <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=LK>)

Despite the decline in total unemployment rate, as depicted in Fig. 5, there has been a rising trend in graduate unemployment rate from 1992 to 2020 with intermittent dips. Based on the secondary data obtained from the Department of Census and Statistics, the rate of unemployment among graduates rose from 5.8% in 1992 to 8.1% in 2020 with noticeable dips. These dips can be attributed to Graduate Employment Schemes offered by successive governments to unemployed graduates.

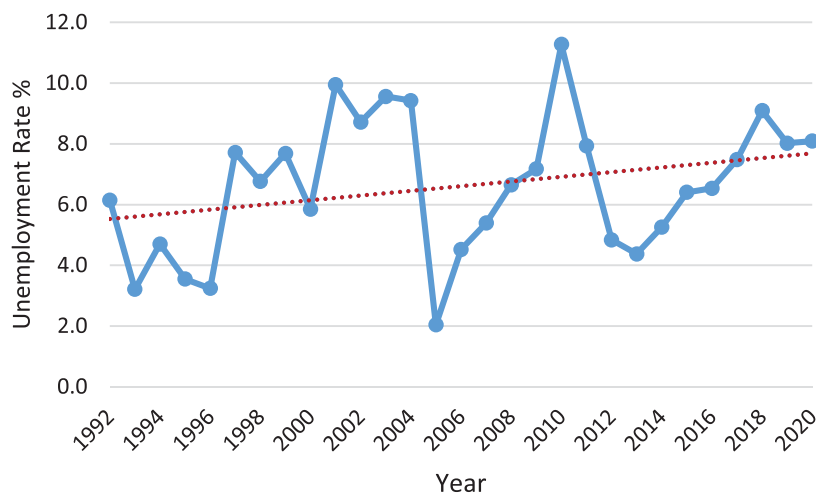


Figure 5: Graduate Unemployment rate in Sri Lanka 1992-2020

(Source: Department of Census and Statistics)

3.1.5. Trends in graduate employment by discipline, faculty and university

3.1.5.1. Graduate employment rate by discipline

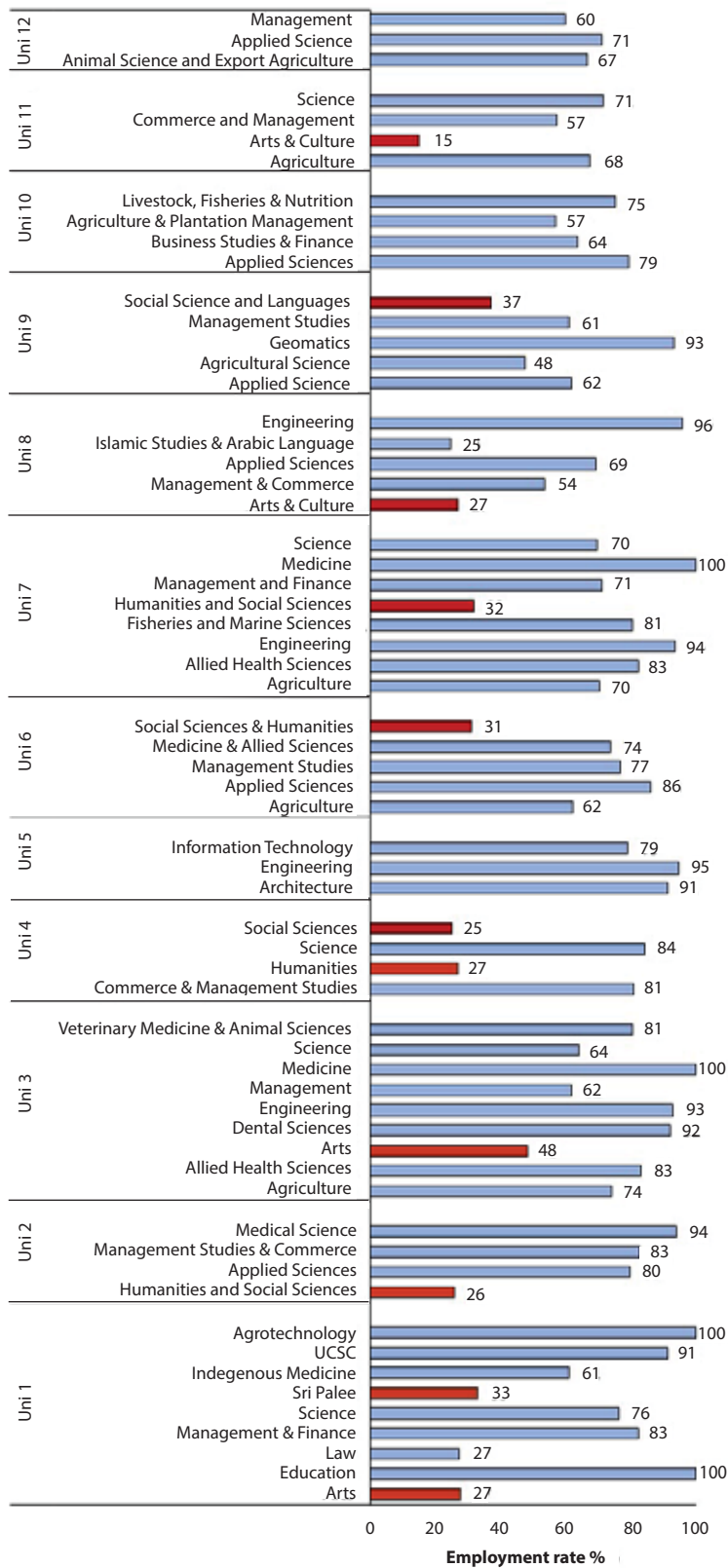


Figure 6: Graduate employment rates in 2019 by discipline, faculty and university

The current study attempted to collect graduate employment data in year 2019 (based on data collected from graduates at the time of when they turn up for their convocations) from all State universities. However, only 12 universities provided the study programme-wise employment data which are illustrated in Fig. 6. As evident from the data, the graduates who pursued STEM disciplines had a higher rate of employment than the graduates who pursued HEMS disciplines. In all universities, graduates of engineering, IT/computer science, medical, dental, veterinary science and architecture study programmes had recorded high employment rates ranging from 80% to 100% by the time they turn up for the convocation (usually held 3 - 6 months after they completed study programme). However, the survey revealed that among STEM disciplines, the graduates of Science and Agriculture study programmes reported a relatively low employment rate. Among the HEMS graduates who pursued HSS disciplines recorded the lowest employment rate throughout all universities while the graduates who pursued management or education study programmes earned relatively high employment rates.

3.1.5.2. Graduate employment rate by faculty

Average graduate employment rates by faculties in year 2019 are illustrated in Fig. 7. It is apparent that the graduates who pursued professional degree programmes such as medicine, dental, veterinary medicine, engineering, computer science/IT and architecture recorded high employment rates with mean employment rates of 94%, 85%, 98%, 92%, 81%, 83% and 91%, respectively (Fig. 7). Despite belonging to STEM disciplines, graduates who pursued non-professional degrees such as science (average of 74%) and agriculture (average of 63%) recorded moderately low employment rates. Similarly, graduates of Management faculties also recorded a fairly low average employment rate (68%) and graduates of Arts/Humanities and Social Science faculties reported the lowest average employment rate (30%).

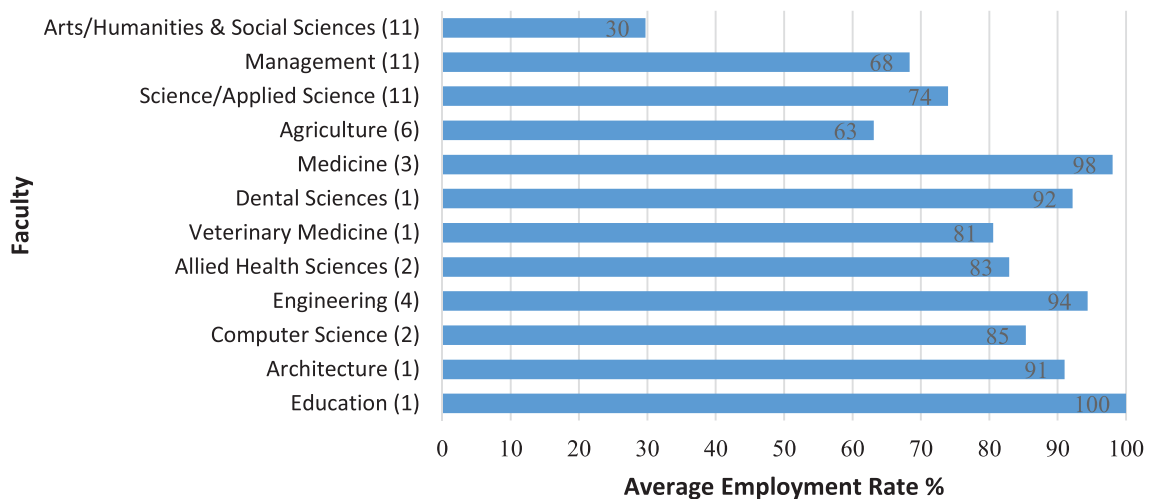


Figure 7: Average graduate employment rate (2019) by faculties

(Note: The number of faculties were given in parentheses)

Tracer study on graduate employability conducted by the UGC (2017) demonstrated a similar pattern of employment rates among STEM and HEMS graduates. Architecture and IT/Computer Science graduates were fully employed while the others who pursued STEM related disciplines including Allied Health Sciences, Engineering, Science and Agriculture had an employment rate between 82% to 95%. Among the HEMS disciplines, Arts (45.6%) and Performing Arts (37.1%) streams had lower employment rates while the Management Stream (71.9%) had a comparatively high employment rate. It also stated that graduates of the Education Stream who are small in number had achieved full employment status as they were absorbed into the teaching profession from time to time by the Ministry of Education and Provincial Ministries of Education.

3.1.5.3. Employment rates of Arts, Management, Science and Agriculture Faculties and the variation of employment rate among Universities

Analysis was done to compare university and faculty-wise employment rates of graduates of disciplines which recorded comparatively low employment rates. Table 1 summarizes the faculty-wise employment rates in Arts, Management and Science Faculties and the corresponding response rate. These faculties depicted a considerably low employment rates compared to the faculties of Medical, Dental, Veterinary, Engineering and Computer Science/IT.

Table 1: Faculty-wise employment rates in Arts, Management and Science Faculties (2019)

University	Arts / HSS		Management		Science/Applied Science		Agriculture	
	Employment rate%	Response Rate%	Employment rate%	Response Rate%	Employment rate%	Response Rate%	Employment rate%	Response Rate%
Uni 1	27	86	83	94	76	97	-	-
	¹ 33	81	-	-	-	-	-	-
Uni 2	26	86	83	97	80	95	-	-
Uni 3	48	5	62	35	64	48	74	65
Uni 4	² 27	41	81	41	84	41	-	-
	³ 25	41	-	-	-	-	-	-
Uni 6	31	96	77	94	86	98	62	99
Uni 7	32	96	71	97	70	97	70	93
Uni 8	27	84	54	95	69	92	48	97
Uni 9	37	98	61	100	62	100	-	-
Uni 10	-	-	64	98	79	97	57	97
Uni 11	15	83	57	94	71	70	68	84
Uni 12	-	-	60	79	71	93	-	-

(Note: 1 - Sri Palee campus, 2- Dept. of Humanities, 3 - Dept. of Social Sciences)

As shown in Table 1, the graduates of Arts faculties of all universities had employment rates below 50%, which was the lowest rate recorded among all the faculties. However, eight of the eleven Arts faculties had response rates of more than 80% for this survey, while the others had response rates of less than 50%, indicating that the student participation in the university employment survey conducted concurrently with the convocation was unsatisfactory in some universities and faculties. Graduates from five of the eleven Management faculties secured employment rates ranging between 71% to 83% while the rest had recorded relatively lower rates ranging from 54% to 64%. Moreover, graduates of Science/Applied Science faculties recorded a comparatively higher employment rate (ranging between 62% to 86%) than the graduates of Agriculture faculties (ranging between 48% to 74%).

The above results show that the employment rates varied not only among the disciplines but also among the universities. This was evident among Management faculty graduates in various universities. As shown in Table 1, Uni 1 and Uni 2 reported the highest employment rate of 83% while Uni 7, 8, 9, 10 and 11 reported comparatively low rates of 54%, 61%, 64%, 57% and 60% respectively. Most of these universities which recorded low employment rates are located away from metropolitan areas and students of these universities may lack the opportunities to obtain supplementary qualifications offered by professional institutions which are often regarded as an advantage in securing an employment. Another possibility for this variation might be the quality of study programmes offered by universities. As given in Table 1, disparities in employment rates were also observed among graduates of Arts, Science and Agriculture faculties of different universities. Among Science faculties, the highest employment status of 86% was recorded in Uni 5 whereas the lowest value of 62% was recorded in Uni 8. Similarly, among Agriculture faculties, Uni 3 had the highest employment rate of 74%, while Uni 7 had the lowest rate of 48%. Tracer study of graduates conducted by the UGC (2017)¹⁸ also reported similar variations in employment rates among graduates of different disciplines produced by different universities.

¹⁸ University Grants Commission. (2017). Tracer study of graduates, Universities in Sri Lanka

3.2. Phase II - Analysis of the relationship between the employment rates and the outcome of the quality assurance review

3.2.1. Analysis of study programme review outcomes in Arts, Management and Agriculture programmes/clusters

Study Programme Review Reports available at the QAC/UGC (2017 to 2019) were analysed to determine whether there was a relationship between the quality assurance review outcome and the employment rate. Grades assigned for each criteria based on the scores allocated for programmes/clusters in Programme Review Reports of Arts, Management and Agriculture study programmes were given in Table 2.

Table 2: Grades received for each criterion and the respective percentages for Arts, Management, Agriculture and Medicine programmes/clusters

		Number of programmes (% of the programmes received each grade)							
Programme	Grade	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8
Arts (64 Programmes)	A ⁹	13(20%)	17(27%)	3(5%)	8(13%)	2(3%)	7(11%)	19(30%)	6(9%)
	B ¹⁰	20(31%)	21(33%)	7(11%)	9(14%)	13(20%)	6(9%)	31(48%)	8(13%)
	C ¹¹	26(41%)	16(25%)	19(30%)	22(34%)	16(25%)	34(53%)	5(8%)	16(25%)
	D ¹²	5(8%)	10(16%)	35(55%)	25(39%)	33(52%)	17(27%)	9(14%)	34(53%)
Management (64 Programmes)	A	22(58%)	26(68%)	15(39%)	20(53%)	14(37%)	17(45%)	24(63%)	13(34%)
	B	11(29%)	6(16%)	13(34%)	11(29%)	13(34%)	10(26%)	10(26%)	10(26%)
	C	2(5%)	4(11%)	5(13%)	4(11%)	5(13%)	6(16%)	1(3%)	11(29%)
	D	3(8%)	2(5%)	5(13%)	3(8%)	6(16%)	5(13%)	3(8%)	4(11%)
Agriculture (12 Programmes)	A	9(75%)	10(83%)	5(42%)	4(33%)	6(50%)	5(42%)	10(83%)	3(25%)
	B	3(25%)	2(17%)	5(42%)	4(33%)	5(42%)	4(33%)	1(8%)	6(50%)
	C	0(0%)	0(0%)	2(17%)	4(33%)	1(8%)	3(25%)	0(0%)	3(25%)
	D	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	1(8%)	0(0%)
Medicine (8 Programmes)	A	4(50%)	4(50%)	3(38%)	4(50%)	1(13%)	2(25%)	3(38%)	4(50%)
	B	3(38%)	3(38%)	2(25%)	2(25%)	4(50%)	4(50%)	3(38%)	2(25%)
	C	1(13%)	0(0%)	1(13%)	0(0%)	2(25%)	3(38%)	1(13%)	1(13%)
	D	0(0%)	1(13%)	2(25%)	2(25%)	1(13%)	2(25%)	1(13%)	1(13%)

Note:

- (1) Criteria 1 - Programme Management;
- (2) Criteria 2 - Human and Physical Resources;
- (3) Criteria 3 - Programme Design and Development;
- (4) Criteria 4 - Course/Module Design and Development;
- (5) Criteria 5 - Teaching and Learning;
- (6) Criteria 6 - Learning Environment, Student Support and Progression;
- (7) Criteria 7 - Student Assessment and Awards; and
- (8) Criteria 8 - Innovative and Healthy Practices
- (9) Very Good, (10) Good, (11) Satisfactory, (12) Unsatisfactory

For the analysis, four criteria among the eight criteria that cover the key aspects of a study programme, namely, Criteria 3: Programme Design and Development; Criteria 4: Course/Module Design and Development; Criteria 5: Teaching and Learning; and Criteria 7: Student Assessment and Awards were considered as having direct relevance to graduate employability. As shown in Table 2, most of the Arts study programmes/ clusters received “C” and “D” grades for Criteria 3, 4 and 5. Out of 64 Arts study programmes/clusters 30% of the programmes received “C” grades and 55% received “D” grades for Criteria 3. Similarly, for Criteria 4, 34% of the programmes received “C” grades whereas 39% of the programmes received “D” grades. Then for Criteria 5, 25% and 52% of the programmes received “C” and “D” grades respectively. These results reveal that the Arts study programmes/clusters received relatively lower scores for the majority of employment-related criteria dictating that those study programmes have failed to adopt the best practices prescribed and hence not reached the expected level of standards prescribed for these criteria. On the other hand, Management, Agriculture, and Medicine programmes/clusters which recorded relatively high employment rates received relatively higher scores for Criteria 3, 4 and 5 indicating that the study programmes had adopted the best practices prescribed and attained higher quality standards compared to those of Arts study programmes/clusters. However, more than 75% of the study programmes in all disciplines listed in Table 2 received “A” or “B” grades for Criteria 7: Student Assessment and Awards.

The analysis in Table 2 shows that the quality assurance data are a credible indicator of graduate employability. The programmes with better grades (A and B), particularly for criteria related to the curriculum design, course curricula and teaching and learning methods have higher employability and programmes with lower grades have comparatively lower employability (Fig. 7). Section 3.2.2 below further elaborates the relationship between quality of study programme (as reflected in quality assurance outcomes) and employability.

3.2.2. Relationship between programme review outcome and employment rates

The current study also attempted to study the correlation between the study programme-wise employment rates with the scores received for Criteria 3, 4, 5 and 7 from the study programme reviews. Unfortunately, the degree-wise employment data were not available to compare with the programme review outcomes as most of the universities focused on collecting only faculty-wise employment data during the survey carried out at the time of the annual convocation. In some instances, degree-wise data were available in universities, but the programme review scores were not available for individual programmes. Therefore, it was not possible to obtain a complete data set for this analysis.

Nonetheless, the study team was able to collect a complete data set from the Faculty of Arts of the University of Colombo for the years 2018, 2019 and 2020. The average employability data of those years were analysed against programme review scores. Correlation between employment rate of graduates of the Faculty of Arts and Criteria 3,4,5, and 7 are given in Table 3.

Table 3: Correlation between employment rate of graduates of the Faculty of Arts in one university and Criteria 3,4,5, and 7

	Criteria 3 (Programme Design and Development)	Criteria 4 (Course/ Module Design and Development)	Criteria 5 (Teaching and Learning)	Criteria 7 (Student Assessment and Awards)	Average score for Criteria 3,4,5, and 7
Employment rate	Pearson Correlation 0.532	0.690*	0.735*	-0.576	0.544
	Sig.	0.140	0.040	0.024	0.104
					0.130

A strong positive significant correlation was observed between employment rate and the scores obtained for Criterion 4 (Course/ Module Design and Development) and Criterion 5 (Teaching and Learning). However, the correlation between employment rate and the scores of Criterion 3 and Criterion 7 was not significant. Even Criterion 3 should have produced a significant result if not for the limitations imposed by the small sample. However, Criterion 7, as observed both in this analysis and in Table 2 has produced a result that cannot be explained in the same manner. The reason it cannot be explained in the same way is that higher QA grades in assessment should have produced better quality graduates with higher employability rates. Nevertheless, that is not shown in the Criterion 7 data in both Table 2 and Table 3. This limited information, nevertheless suggests that the course/module design and development, and teaching and learning have a significant influence on employment rate of graduates produced by a study programme.

3.3. Phase III - Assessment of employers' perceptions on university graduates

3.3.1. General profile of the sample

The study team decided to consider only the private sector employers in the survey as the most of employers in the Public sector have no discretionary power in selecting employees as the prospective recruits are coming through various employment schemes offered by the Government. Therefore, the targeted employer population was private institutions. Out of 561 reputed employers registered in the Ceylon Chamber of Commerce only 50 employers responded to the questionnaire. Fig. 8 gives the classification of employers by function.

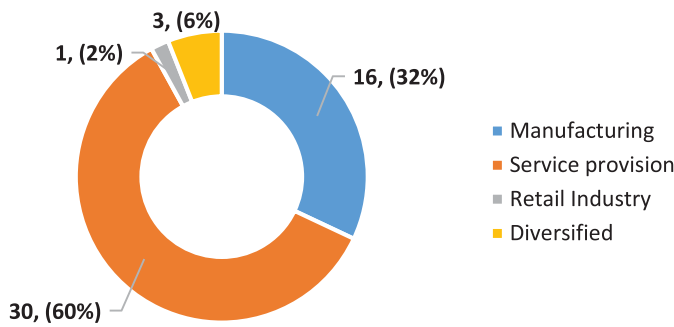


Figure 8: Classification of employer responses based on the industry type

Majority of companies that responded to the survey are engaged in service provision, representing 60% of the respondents. This sector includes businesses that offer services such as IT, Finance and Banking. The manufacturing sector is also well-represented in the survey, with 32% of the companies responding. Manufacturing typically involves the production of physical goods, such as machinery, electronics, or consumer products. However, the retail industry which involves the sale of goods to consumers through various channels is less represented in the survey, with only 2% of respondents. The diversified category includes 3 companies, constituting 6% of the respondents. These companies have operations in multiple sectors or industries, making them diverse in terms of their business activities.

3.3.2. Status of graduate recruitment

All the employers in the sample prefer recruiting graduates to their workforce. Table 4 depicts the percentage of graduates recruited in the last 5 years (2018-2022) compared to the total staff recruited. The data indicates that employers have diverse recruitment practices. A considerable portion of employers (57.1%) hired between 0-25% of their staff as graduates, indicating that a majority of employers have a relatively low proportion of recent graduates in their workforce. Besides that, a notable proportion of employers (22.4%) hired 76%-100% of their staff from graduate level qualified people., suggesting that some organizations have fully integrated recent graduates into their workforce. However, the decision to recruit graduates will largely depend on the nature of work that an employer is engaged with.

Table 4: Percentage of graduates recruited in the last 5 years compared to the total staff recruited in last 5 years

Percentage of graduates in the cohort of employees recruited in last 5 years	Employer count	Employer %
0-25%	28	57.1%
26%-50%	7	14.3%
51%-75%	3	6.1%
76%-100%	11	22.4%

This survey further provides information about the frequency of graduate recruitment across various fields/specialities of employment. The information given in Fig. 9 demonstrates that 56% of employers frequently recruit graduates in the field of IT. The second highest preference can be observed in the field of Accounting/Auditing/Finance (42%), followed by the field of Quality Assurance/Quality

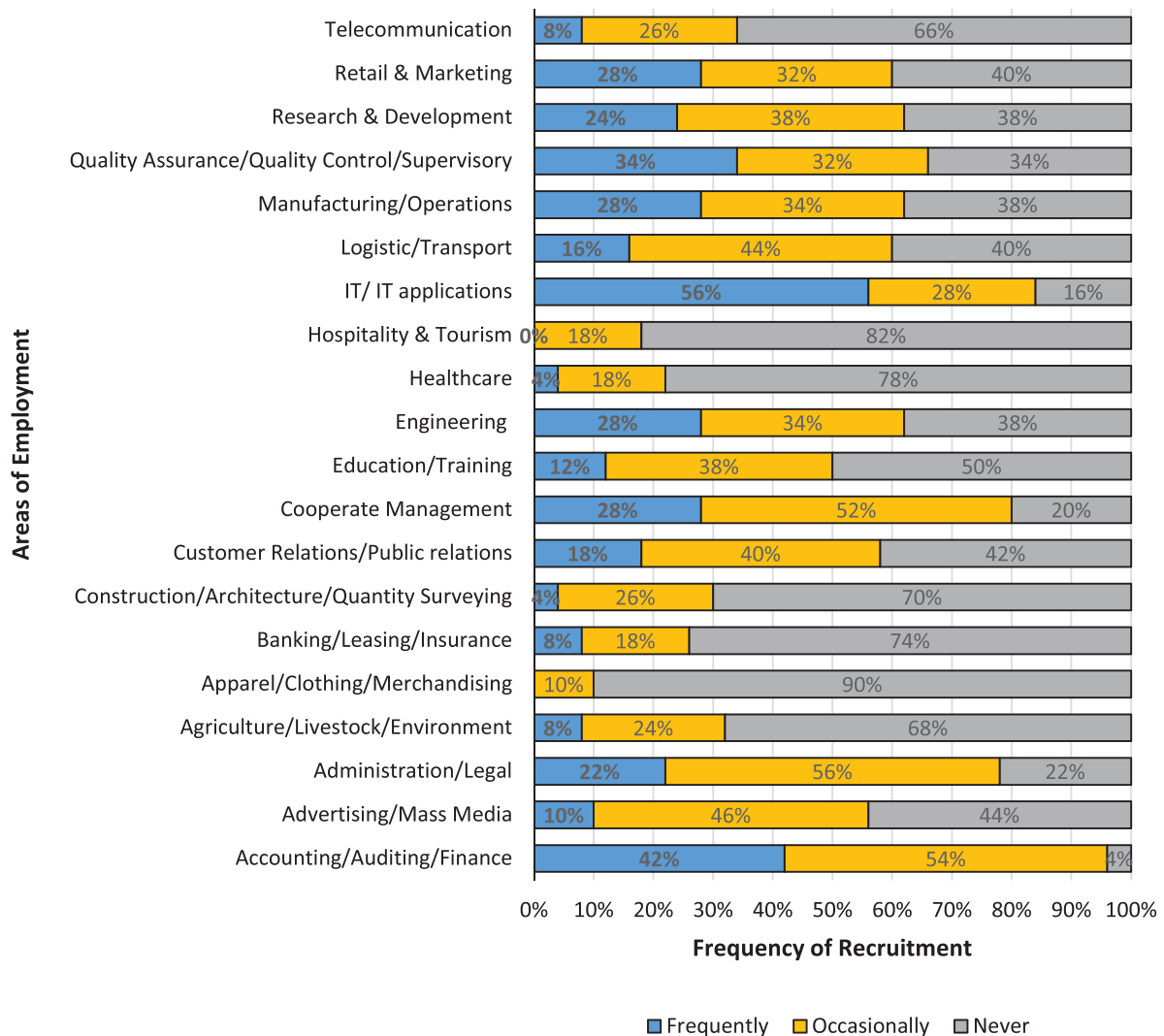


Figure 9: Frequency of graduate recruitments for various areas of employment

Control/Supervisory (34%). The employers' preference for recruiting graduates from other areas is rather low. The reason is attributed to the nature of work undertaken by the companies in this particular sample. For instance, 66% of the employers responded that they never recruit graduates from the field of telecommunication. This is not due to the lack of job opportunities in the field of telecommunication but rather the limited participation of telecommunication employers in this particular survey.

3.3.3. Recruitment by degree programme

The responses of the employers when asked about the fields of specialization of graduates they recruited during the last 5 years are summarized in Fig. 10. It can be noted that Computer Science/IT (44%), Engineering (38%), Management and Commerce (32%), and Technology (32%) are the fields where employers most frequently recruit graduates. However, a moderate level of recruitment can be observed in the fields of Law (18%), Science (16%), and Agriculture (12%). Based on the responses, Fig. 10 confirms that considerably fewer job opportunities were offered to Arts graduates. This may stem from one or both of the two possible reasons; First, the nature of work of the companies in the sample engaged is such that the subject specialization done by Arts graduates may not fit with their needs and the other may be that the HSS graduates deficient of knowledge and skills that they are looking for.

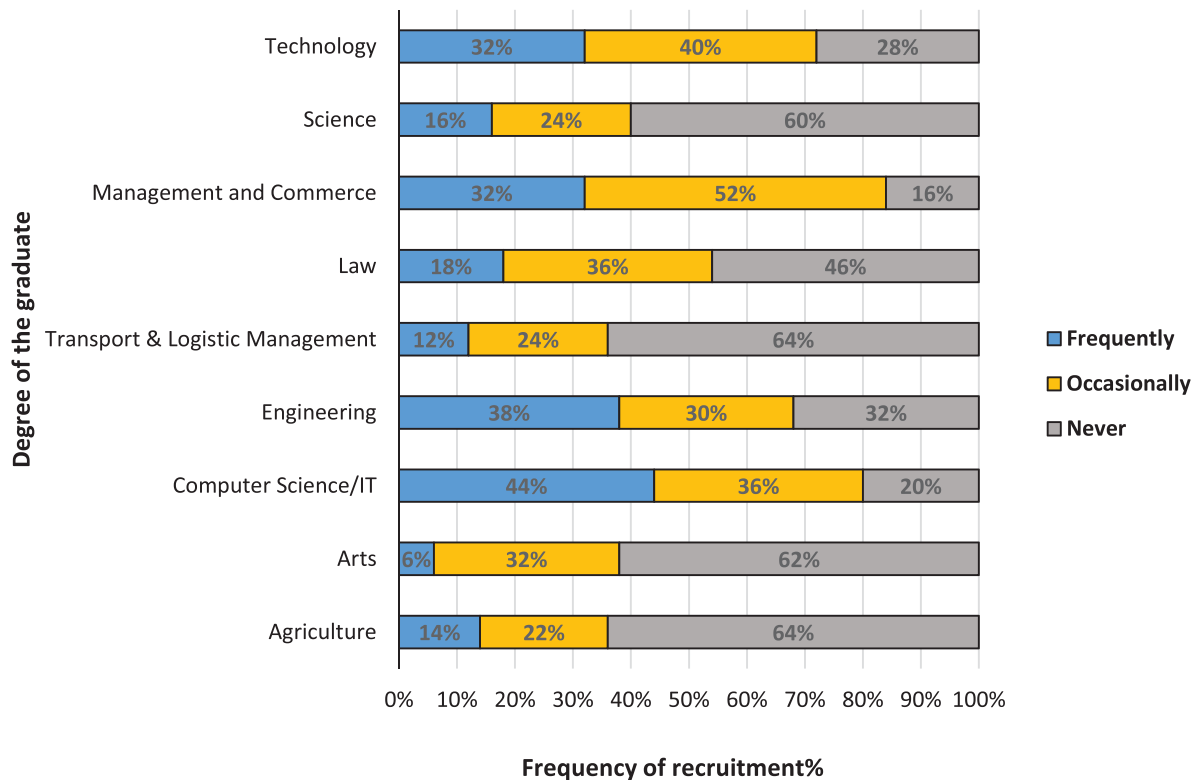


Figure 10: Frequency of graduate recruitments with respect to the degree of the graduate

3.3.3.1. Recruitment of Arts/ Management/Science Graduates

Secondary data given in Phase I, reveals a low level of graduate employability in the fields of Arts, Management and Science. Hence, a query was posed to the employers regarding their preference given in recruiting Arts/Management/Science graduates. As illustrated in Fig. 11, 80% of the employers have no aversion to employ either Arts, Management or Science graduates whereas only 20% of the employers categorically stated that they do not prefer to recruit such graduates into their workforce. Although a majority of these employers have no antipathy towards recruiting Arts graduates (Fig 11), the frequency of recruiting Arts graduates is less as illustrated in Fig 10.

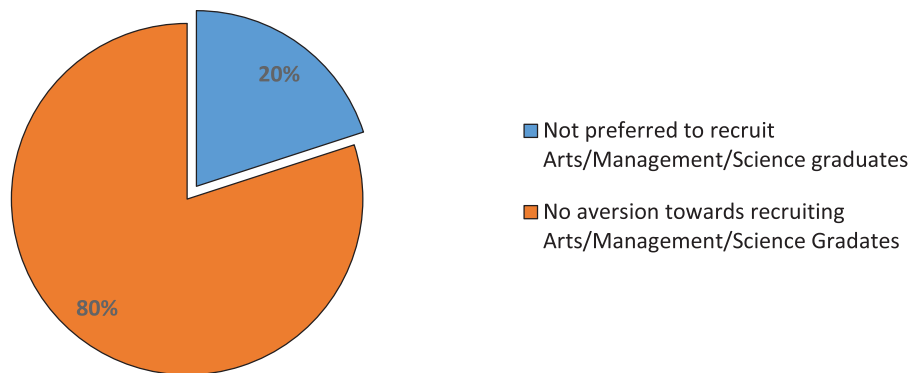


Figure 11: Employer’s views on recruiting Arts/Management/Science graduates

Fig. 12 shows the analysis of the preferences of employers for recruiting graduates in the fields of Arts, Management and Science (accounting for 80% of the preferences). As illustrated, employers have shown a low preference for recruiting Arts graduates, with 70% indicating them as “Least Preferred”, while only 8% consider them “Highly Preferred”. In contrast, management graduates are highly preferred by 73% of employers, and moderately preferred by 28%.

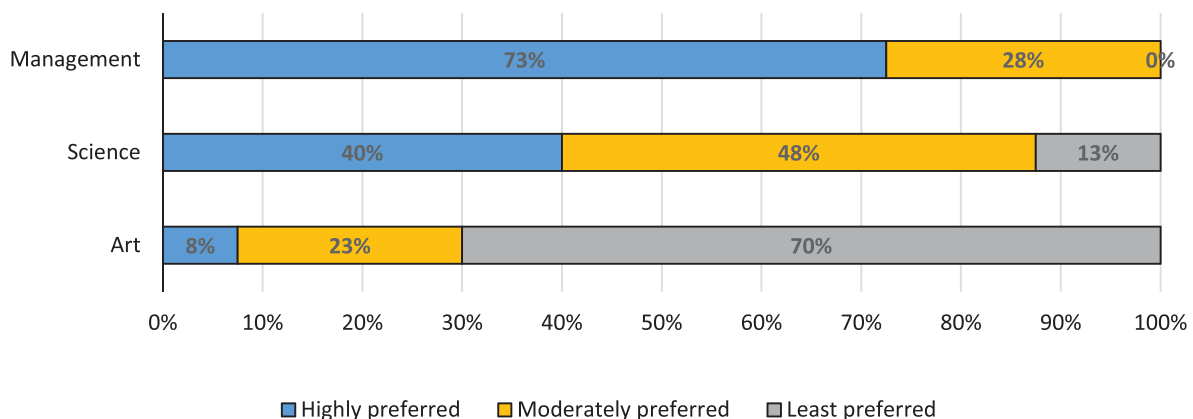


Figure 12: Employers’ level of preference in recruiting Art, Management and Science graduates to their workforce

Table 5 summarizes the views of the employers with regard to their preference in recruiting graduates in the fields of Arts, Management and Science graduates. The majority of employers who did not prefer to employ Art graduates stated that the reason for their non-preference is that their fields of specialization have no relevance to their workplace. Besides that, they stated that graduates are often deficient in most of the employability skills they are looking for. Since the majority of employers of the sample were mainly from the IT and management fields, these findings give an indication to managers of Faculties of HSS on what reforms are to be introduced into their study programmes, particularly in areas such as study programme design, curriculum layout and course/module curricula and teaching-learning-assessment methods to improve employability of their graduates. Obviously, these reforms should be aimed at providing opportunities to HSS undergraduates through their core and non-core academic programmes to acquire a whole array of higher level competencies that the marketplace is looking for and the employability skills, mainly the English language communication skills, critical thinking, analytical and conceptual skills, ICT skills, leadership and managerial skills. One immediate intervention in this regard may be the provision of opportunities for them to read for certificate-level programmes in ICT, management and English language, etc., perhaps, through the Open Distance Education Unit/Centre of the respective universities to earn a supplementary academic qualification while reading for their core programme.

Table 5: Employers' views on their level of preference in recruiting Arts, Management and Science graduates to their workforce

Arts		
Level of preference	Employers' Views	No. of Respondents
Highly preferred	Prefer to recruit as their skills, and competencies are related to the work conducted by the company	3
Moderately preferred	Recruit only for relevant positions	3
	Their creative reasoning and adaptability	1
	Their educational background helps to train them in the relevant fields	2
Least preferred	Their specialities/skills are not related to the work conducted by the company	18
	Poor outlook - weak personality and poor attitude	1
	Lack of employability skills - inadequate competencies in language, ICT, management skills, etc.	1
	Not respond to the question	10
	Not preferred at all	10
	Total	50

Science		
Highly preferred	Prefer to recruit as their skills, and competencies are related to the work conducted by the company	14
	They tend to learn quite fast and get adapted to the corporate environment	1
	Possess wide-array of employability skills that are more related to industry workplace needs	1
Moderately preferred	Recruit only for relevant positions	17
Least preferred	Least preferred as their specialities/skills are not related to the work conducted by that company	3
	Not responded to the question	4
	Not preferred at all	10
	Total	50

Management		
Highly preferred	Prefer to recruit as their specialities and competencies are related to the work conducted by the company	27
	They tend to learn quite fast and get adapted to the corporate environment	1
	Good outlook - good personality, positive attitude and potential to grow	1
Moderately preferred	Recruit only for relevant positions	10
	Not responded to the question	1
	Not preferred at all	10
	Total	40

This analysis shows that employers look for graduates equipped both with knowledge and skills related to their core work and a wide array of employability skills - mostly communication, ICT skills, positive outlook (i.e. personality, etiquette, positive thinking, etc.), etc.

3.3.4. Recruitment of graduates by type of institution

Employers were asked about their preferences for graduates coming from different types of Higher Education Institutes (HEIs), i.e. State HEIs (SHEIs) vs non-State HEIs (NSHEIs). As depicted in Fig. 13, employer preference is slightly higher for Graduates from SHEIs (66%) compared to the preference given for graduates from NSHEIs (60%).

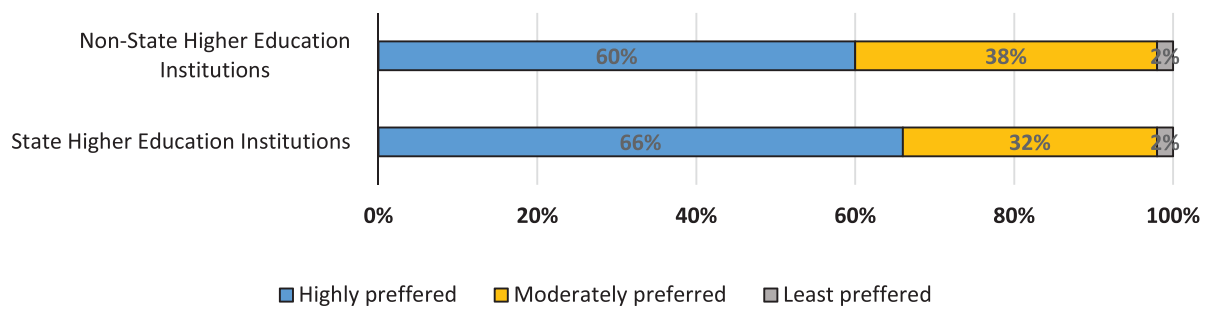


Figure 13: Employers’ level of preference in recruiting graduates from state and non-state universities

When inquired about their preference for recruiting graduates from different State universities most employers (62%), as shown in Fig. 14 said that they are happy to recruit graduates from any state university provided the graduates satisfy the selection criteria and possess the required employability skills.

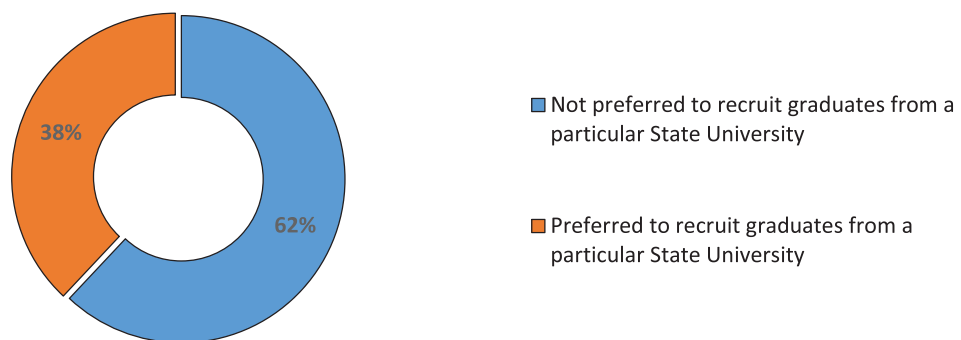


Figure 14: Employers’ preference in particular State university when recruiting graduates

However, 38% of the employers said that they have a preference for a particular university/universities when recruiting graduates. They prefer graduates from urban-based universities as their outlook is better and are more attuned to working in corporate environments. This is perhaps due to the impact of the metropolitan environment within which the urban universities are located on the students and also due to the opportunities provided to students to acquire supplementary qualifications (from external or internal modes) while engaging in their undergraduate study programmes.

3.3.5. Recruitment of graduates by the level of qualification

Employers were questioned about their preference in recruiting graduates based on their level of qualification. As shown in Fig.15, a majority of the employers (74%) expressed an equal preference for either qualifications of SLQF 5 or SLQF whereas 20% indicated a preference in recruiting graduates with SLQF 6 qualification. However, only 6% of the employers favoured recruiting graduates with SLQF 5 qualification. Thus, it appears that the level of qualification (SLQF Level 5 or Level 6) seems to be immaterial for recruitment into private-sector employment.

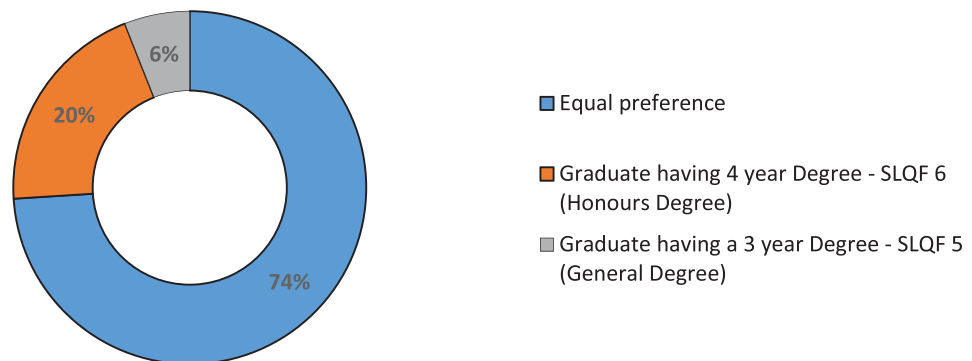


Figure 15: Employers' preference in recruiting graduates based on their level of qualification

3.3.6. Recruitment of a non-graduate for a graduate-level job category

A query was posed to the employers regarding their preference in recruiting non-graduates for a graduate-level job. The findings reveal that a majority of employers (70%) are willing to employ a graduate for a graduate-level job. However, 30% of employers expressed their willingness to recruit a non-graduate for a graduate-level job (Fig. 16) provided they have professional qualifications and/or on-the-job experience.

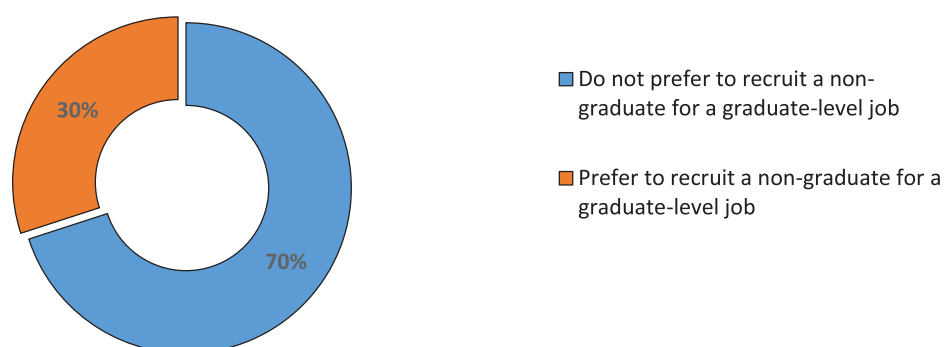


Figure 16: Employers' preference in recruiting a non-graduate for a graduate-level job category

The breakdown of the reasons given by the employers who recruit non-graduates for graduate-level jobs is given in Table 6. The three instances where employers go for non-graduate for a graduate level job are; i) a non-graduate who has professional qualifications, ii) a non-graduate who has professional qualifications and work experience, and iii) a non-graduate who has professional qualifications, work experience and on-the-job training. This shows that professional qualification is a must for a non-graduate to assume a graduate-level job. As such, on-the-job training and work experience on their own are insufficient to replace a university degree. This provides evidence for the unique role that a graduate is expected to play in the workplace. Hence the role played by the universities in producing graduates to the world of work is unique, irreplaceable and indisputable.

Table 6: Employers responses for their preference in recruiting a non-graduate for a graduate-level job category

Type of employee	Reason for recruitment
Non-graduate with Professional Qualifications	Skills matter the most
AND	Willingness to give opportunities for non-graduates
Non-graduate with Work Experience	Non-graduates with sufficient experience, with professional qualifications are easily adaptable in the job environment.
AND	
Non-graduate with On the Job Training	They tend to remain with the organization and as such the investment in training them is not a loss.
	As a part of the job requirements; more preference is given by IT industry to hire of skills than for educational experiences
	More competent with positive attitudes
Non-graduate with Professional Qualifications	Most of them have the passion and desire to deliver results
AND	
Non-graduate with Work Experience	Trainable and have appetite to learn and master the skills
	Easy to groom them as they have previous experience
Non-graduate with Professional Qualifications	They possess the required knowledge and competencies in meeting the requirements of business
	Positive attitudes and adapts well with corporate environment
Non-graduate with Work Experience	Nil
Non-graduate with On the Job Training	Nil

3.3.7. Level of satisfaction with the graduate recruits in relation to the employability skills (as specified by SLQF competencies)

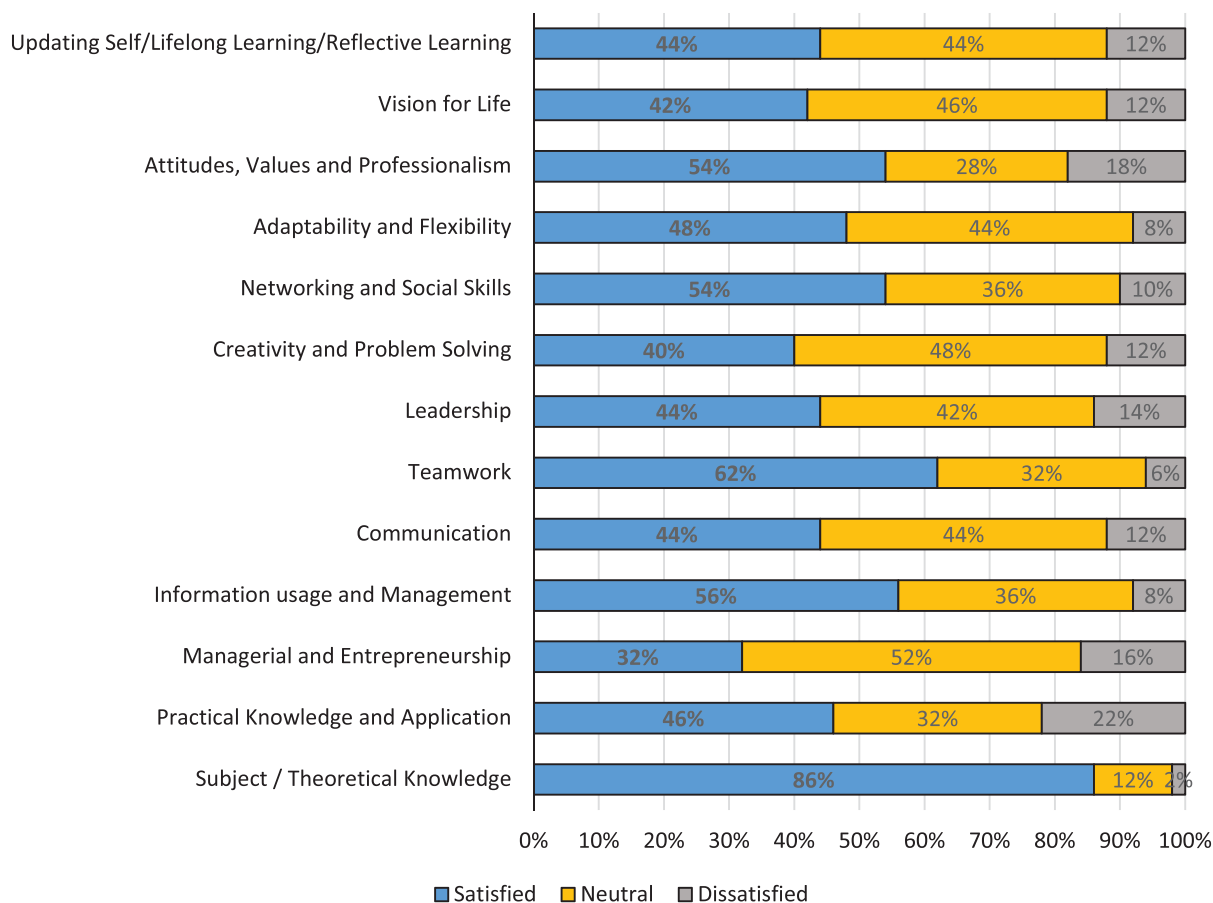


Figure 17: Employers’ level of satisfaction with the graduate recruits in relation to the SLQF competencies

According to Fig. 17, the graduates do have the required subject and theoretical knowledge adequately. However, all the other abilities which are often defined as employability skills have received neutral and dissatisfied responses as has when combined assume a higher proportion. Most improvement is needed in Managerial and Entrepreneurship (52%+16%=68%), Creativity and Problem Solving (60%), Vision for life (58%), Communication (56%), Reflective learning (56%) and Practical knowledge and Application (54%).

3.3.8. Level of satisfaction with the State and non-State university graduate recruits in relation to employability skills

As illustrated in Fig. 18 employers are satisfied with the performance of both State and non-State graduates. Though the level of satisfaction with non-State graduates appears to be higher when compared with that of the graduates of State universities, this difference was statistically significant ($p < 0.005$) only with communication skills.

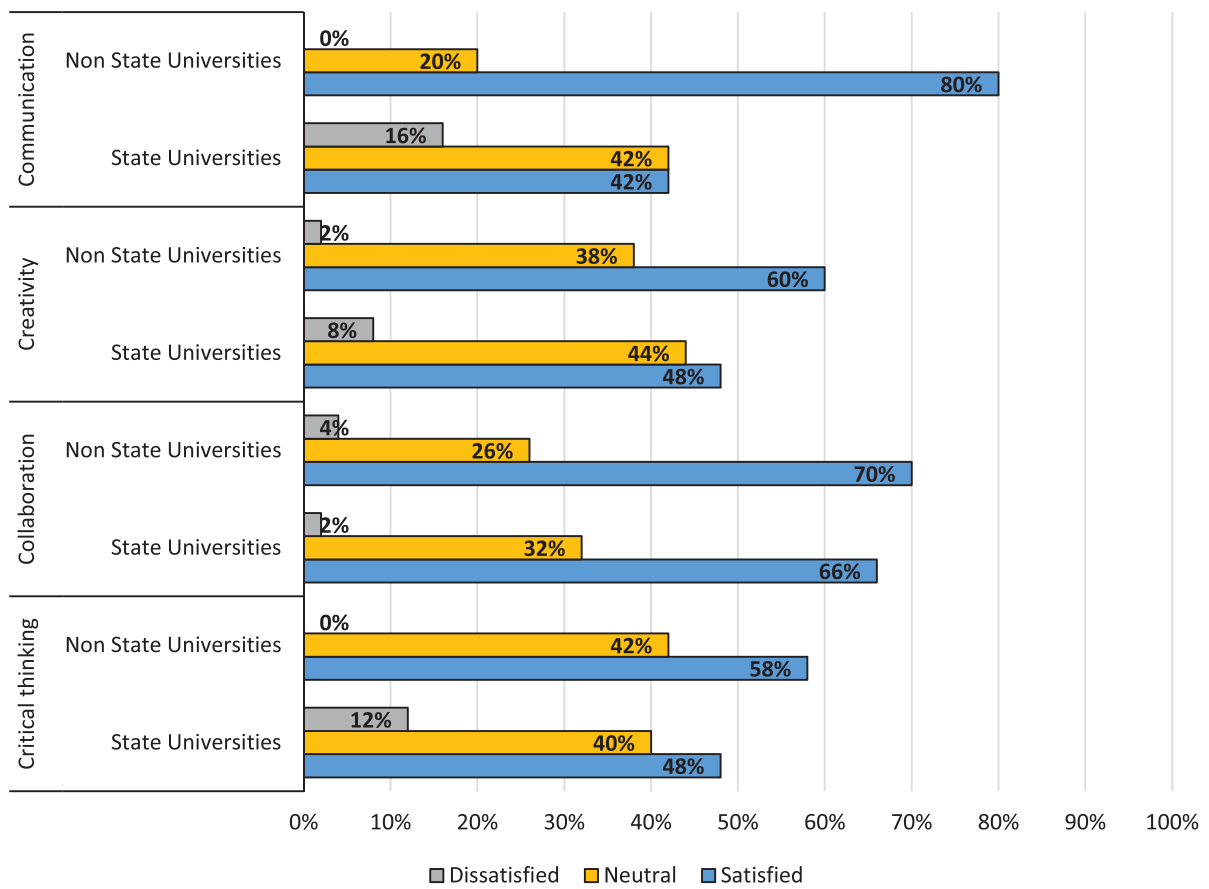


Figure 18 : Employer' satisfaction on employability skills (21st century skills) of State and non-State university graduates

3.4. Limitations of the study

The authors, however, wish to state that they were faced with few limitations in conducting the study and hence drawing inferences. Most significant was the non-availability of the degree-wise breakdown of the university employment data. Another constraint was the recent downturn of the economy that made it difficult to compare the recent employment data with the past data as it may not reflect the real trend over the years. The other constraint was the small sample size of employers which we had no control, and as a consequence there was over representation of certain fields of employment while under representation of certain other fields of employment.

Chapter 4: Discussion and Conclusions

Discussion

By looking at the results of the study and in collaboration with the findings of other studies/reviews given above, one could interpret that though graduate unemployment has been an issue over the past few decades, it has mostly been a phenomenon among graduates of humanities and social sciences. This appears to be the result of socio-economic reforms that followed immediately after independence that were enacted under the influence of political power groups. As highlighted by many past studies, graduate unemployment was not an issue until the mid-1960s owing to the low graduate output and the ability to integrate them into public sector employment such as in administrative, teaching, health and engineering services¹⁹. Warnapala (2011)²⁰ pointed out that the change in the medium of instruction from English to vernacular languages or *Swabasha* (both Sinhala and Tamil) in secondary school education system since early 1950s had indeed resulted in a large number of students graduating from upper senior secondary level in *Swabasha* stream, and this increase too has paralleled with the expansion of university education with concurrent adoption of *Swabasha* medium of instruction at the university level. Along with that, the number of universities too was expanded from one - University of Ceylon at Peradeniya with one campus in Colombo - to three universities upgrading two well-known *Bhiksu Pirivenas* to university status. As a result, the annual student enrolment was doubled by the end of the 1960s. It was reported that the number of students in Arts stream of studies increased from 436 (49% of total intake) in 1958 to 5345 (84.1% of total intake) in 1965. As a result, the graduate output too had increased, and in the absence of parallel reforms in university education (i.e., in terms of fields of studies, study programme design and development and course curricular designs and development, teaching-learning methods, assessment methods, etc.), as well as the structure of the economy, which predominantly remain as a closed economy in which the State remains as the primary employer. In the absence of any significant growth of the private sector, the capacity to absorb the large outputs of graduates became an issue, and the end result was the recurrent unemployment of educated youth. By 1969, around 14,000 university graduates were unemployed. According to Dudley Seers Report of the International Labour Office (1971), approximately two-thirds of Arts graduates were unemployed, and a majority of them were from rural settings who followed study programmes in social sciences and humanities disciplines²¹.

Unfortunately, all successive governments have adopted the approach of “*treating the symptom rather than the root cause of the illness/issue*”, to deal with graduate unemployment. Graduate unemployment has become a major social issue highlighted in the political stage at successive general elections. As a fulfilment of election pledges given at general elections, successive governments since 1970s have taken steps to absorb unemployed graduates, particularly the graduates of crowded HSS fields in large numbers

¹⁹ Samaranayake, G. (2016). Expansion of university education and graduate unemployment. *Social Affairs: A Journal for the Social Sciences*, 1(4), 15–32. https://socialaffairsjournal.com/images/Journal_Downloads/Archives/2016_Spring/2.Expansion-of-University-Education-Graduate-Unemployment-and-the-Knowledge-Hub-in-Sri-Lanka--Samaranayake.pdf?type=file

²⁰ Warnapala, W. A. W. (2011). *The making of the system of higher education in Sri Lanka: An evaluative Study*. Associated Newspapers of Ceylon Limited, Colombo.

²¹ Seers, D. (1971). *Matching Employment Opportunities and Expectations: A Programme of Action for Ceylon*. International Labour Office, Geneva.

into public service. The first cohort of unemployed graduates was recruited as development assistants in 1970²². This scheme was repeated in every 5 years or so, and in the year 2021, 65,000 unemployed graduates were recruited under the graduate scheme, marking the largest group of unemployed graduates absorbed into the public sector so far²³. Thus, it can be concluded that recruitment into public service in 2005, 2012 and 2021 may be responsible for intermittent reductions or dips in unemployment rates depicted in Fig. 5 of the Chapter 3.

The primary root cause, as shown by the results of this study and discussed above, is the structural misalignment that prevails at the general education system level. Despite the recognition of the value of promoting STEM education, the general education system has failed to make structural reforms to provide wider opportunities for students to pursue STEM disciplines. The structure and distribution of senior secondary schools have historically been skewed towards providing G.C.E. (A/L) education in Arts and Commerce streams by default rather than by free choice and thereby producing a high percentage of the G.C.E. (A/L) qualifiers in Arts and Commerce stream compared to the percentage of students in STEM disciplines. As one-third of the Senior Secondary schools offer G.C.E. (A/L) classes in all 4 streams – science and maths, arts, commerce and technology and two-thirds of schools offer only Arts and Commerce, a majority of the G.C.E. (A/L) students appear to pursue Arts subjects not because of their free-will but because absence of opportunities for as well as shortages of teachers Science and Mathematics. Further, as of university admission data, the highest percentage of G.C.E. (A/L) students become qualified to enter universities is recorded by the G.C.E. (A/L) Arts stream and from the qualified, the Arts stream records the highest percentage of students admitted out of qualifiers compared to the qualifiers of Science stream except the technology stream which was introduced recently where number enrolled is still very low²⁴. This is also perceived as an another reason for many GCE (O/L) qualifiers to opt for Arts stream at GECE (A/L) as many students appear to perceive it is easy to secure university admission in Arts stream.

The second root cause is misalignment that occurs at the level of university admission. Parallel to the production of large number of GCE (A/L) qualifiers in Arts streams on annual basis by the general education system, the University system in Sri Lanka has continuously been admitting the highest percentages of incoming students into HSS disciplines despite the graduates of HSS programme experiencing high unemployment. Moreover, despite the universities expanding the science-based and professional study programmes, particularly in STEM disciplines, the annual increase of student intake in terms of headcounts into these disciplines has proportionately been lower than the increasing influx of incoming students into HSS fields. As highlighted by WB sector review report (Dundar *et al.* 2017)²⁵, the trend in university enrolment of students in disciplines which have crucial importance in economic

²² Singam, K. (2017). Review on Graduates' Unemployment in Sri Lanka and the Globe. *Global Journal of Human Social Science: Linguistics & Education*, 17(8), 42–52. https://globaljournals.org/GJHSS_Volume17/5-Review-on-Graduates-Unemployment.pdf

²³ Ranaweera, K. (2021, September 10). Budget 2022 cannot afford perceptual illusions. *Daily FT Online*. <https://www.ft.lk/columns/Budget-2022-cannot-afford-perceptual-illusions/4-722866>

²⁴ Statistical Digest on Education (2022/2023). National Education Commission. www.nec.lk

²⁵ Dundar, H., Millot, B., Riboud, M., Shojjo, M., Aturupane, H., Goyal, S., & Raju, D. (2017). *Sri Lanka Education Sector Assessment: Achievements, Challenges, and Policy Options*. World Bank. <https://doi.org/10.1596/978-1-4648-1052-7>

development such as the sciences (including medicine), technology, engineering and mathematics (i.e. STEM disciplines) has been rather low compared to those disciplines, particularly in humanities and social science which have continually recorded low employment rates.

The third root cause is the failure of the universities, particularly the Faculties of Humanities and Social Science to add value to these large number of HSS undergraduates. When inquired from the employers about the fields of specialization of graduates they recruited during the last 5 years, they confirmed that significantly less job opportunities were offered to Arts graduates compared to the graduates of STEM fields such as Computer Science/IT, Engineering, Management and Commerce, and Technology, Science, and Agriculture. When asked about the reason for not preferring Arts graduates, most employers stated that their knowledge and skills are not relevant to the work conducted by that company. Further, they stated that the Arts graduates are grossly deficient in employability skills – such as communication, ICT, initiative, leadership, managerial skills, etc., along with poor outlook. As highlighted previously, the results of the correlation studies between the outcomes of quality assurance reviews and employment rates revealed that only a few Humanities and Social Science study programmes have adopted prescribed best practices in reforming their study programmes, particularly the adoption of outcome-based education and student-centred learning approach (OBL-SCL approach; *i.e. tailor the study programme curriculum based on the outcomes expected by the employment market and deliver it more student-centred learning approach*) instead of traditional input-based, teacher-centred approach (*i.e. tailoring study programme curriculum based on the conventional inputs as decided by the in-house experts of the subject disciplines and delivered mostly on teacher-centred approach*). A majority of HSS faculties appear to be less responsive to reforms and thus continue to turn out a product, a graduate whose competency profile is totally misaligned with the needs and demands of the employment market. The fact that those HSS study programmes that have adopted the modern curricular design and development approach, the outcome-based, student centred-teaching and learning (OBL-SCL) approach attained satisfactory graduate employment rates vindicates that with proper curriculum reforms including adopting modern teaching-learning and assessments methods would certainly improve the quality of undergraduate education, and employability of HSS graduates. Regrettably, many of the HSS study programmes have not adopted the best practices prescribed by the QAC/UGC to enhance the quality and relevance of study programmes offered by them to a satisfactory level and reach the stipulated quality standards. This deficiency among many other contributory factors appears to have adversely affected the employment rates of graduates who followed HSS study programmes.

Conclusions

Based on the findings detailed in Chapter 3 and the above discussion, the following inferences could be made with respect to the three objectives of the study.

Firstly, although there seems to be a relationship between the large proportion of G.C.E. (A/L) students in the Arts stream and the high intake of students in the HSS study programmes in universities, that alignment is indeed an artificially created relationship. The large proportion of G.C.E. (A/L) students in the Arts stream compared to STEM streams is not created by the free-will of the students. Rather, it is because of the limited choices available for students of G.C.E. (A/L) grades with regards to study streams, as the educational provision is skewed towards the Arts and Commerce streams of education resulting from the long-standing structural deformity that prevails in the distribution of schools, i.e., only 1/3 of the schools

which offer G.C.E. (A/L) studies have all 4 streams (i.e., Science, Arts, Commerce and Technology) while 2/3 of the schools offer only Arts and Commerce streams. Similarly, the large intake of students into HSS study programmes by the universities is a result of following historical trends without making evidence-based adjustments and reforms in both university admission and curricula of HSS study programmes. With an annual increase in university intake by a percentage of the previous year's intake, a large influx of students befalls into already crowded HSS study programmes. So, both these occurrences that occur by default have created an incidental relationship, rather than being carefully planned one designed to accommodate the large influx Arts students into universities.

Secondly, there is a positive relationship between the quality of the study programme and the graduate employability rate. The results of the correlation studies between the outcomes of quality assurance reviews and employment rates revealed that those study programmes that adopted the prescribed best practices in study programme design and development, course/ module design and development, and teaching-learning have attained satisfactory graduate employment rates. Results of the study, also revealed that only a few HSS study programmes have adopted prescribed best practices in reforming study programmes and curricula. Instead, most of the HSS faculties have continued to practice conventional, input-based programme designs and course curricula development and teacher-centred delivery approach.

Thirdly, there is an incongruence of university output, particularly those from State universities, with the job market demand, both in quantity and quality. Quantitatively, there is an incongruence between the large university intake into HSS study programmes and the modest opportunities available for HSS graduates in the employment market. However, the employers' survey, though small in sample size, indicates that there is no major aversion to Arts graduates by the employers, provided those graduates have the right competencies, particularly employability skills and better outlook. There also seems to be no major employer bias toward metropolitan universities. This leaves with the proposition that even within the HSS domain if study programmes adopt the right educational principles in designing relevant and quality programmes and adopt a more student-centred delivery approach, no matter whether these programmes represent HSS and/or are from non-metropolitan universities, healthy graduate employment rates can be achieved. This is further proved to be right by the fact that HSS study programmes that have achieved high quality and standards (i.e., high quality assurance ratings for key aspects such as curriculum design, and teaching and learning) have recorded acceptable employment rates as shown in the correlation studies.

In conclusion, the results of the study suggest that both the general education sector and many of the study programmes in State universities, particularly the HSS Faculties have not been responsive to the trends in the labour market demands that mirror the transformation taking place in the Sri Lankan economy as well as in the global context, and continue to follow historical trends in educational offerings which follow traditional approach in curricula contents, teaching and learning and assessments. Thus, they continue to produce human resources which are not in congruence with labour market needs and demands.

Chapter 5: Way Forward

As shown by the results and highlighted in the discussion and the inferences and conclusions drawn, there exists a misalignment between the human resources produced by the universities in terms of quantity and quality and employment market needs and demands. This misalignment appears to be more with the Arts graduates who pursued humanities and social sciences disciplines in their undergraduate study programmes.

As shown by this study, misalignment stems from several root causes; firstly, the general education system does not provide enough opportunities for senior secondary level students to study in STEM disciplines, and by doing so most of the students by default are pushed to read for GCE (A/L) in Arts stream. Second root cause is the Sri Lankan universities' continuing enrolment of highest percentage of GCE (A/L) Arts stream qualifiers into study programmes in HSS disciplines, despite having chronic unemployment among Arts graduates. Third root cause is the failure of universities, particularly the programme managers of HSS study programmes to modernize curricular of HSS study programme, to prepare students to compete in the competitive employment market., and hence they continue to turn out of graduates who sadly lack most of the employability skills that the modern day employer is looking for.

As emphasized above, this misalignment has to be addressed by a multipronged approach. The NEC in 2022, in its recent policy document, the National Education Policy Framework (2020-2030)²⁶ has prescribed seemingly rational and practicable policies and strategic activities to address this long standing issue. The key interventions recommended by the NEPF (2020-2030) are:

- i) Implement a more simplified school classification system such as Primary Schools (Gr. 1– 5), Junior Secondary schools (Gr. 1-11/Gr. 6-11), and Senior secondary schools (Gr. 1-13/Gr. 6-13) and establish and/ensure there will be at least one Senior Secondary School in each Education Division functioning as the National Schools status offering all 4 streams of education (Science, Commerce, Arts, and Technology) at Grades 12 and 13, while primary and junior secondary schools functioning as feeder schools to senior secondary schools.
- ii) Expand Bachelor's degree level training opportunities at universities in disciplines with high employability, particularly in STEM fields so as to produce a professional workforce for emerging local and international job markets. In this regard, the NEPF (2020-2030) recommends that the Ministry of Education together with the UGC shall make a policy decision that future expansion of enrolment in the State and non-State HEIs shall be focused mainly on the STEM (science, technology, engineering and mathematics) study programmes.
- iii) Universities to take steps to allow greater flexibility in study programme curricula, particularly those of non-professional study programmes to allow sufficient flexibility for students to customize a study programme by selecting supplementary/optional courses from a

²⁶ National Education Commission (2022). *National Education Policy Framework 2020-2023 (Full Text)*. <https://nec.gov.lk/national-education-policy-framework-2020-2030/>

“multidisciplinary basket of non-core courses” to suit his/her choice for promoting employability in the “world of work”. In this regard, universities/faculties shall offer foundation and advanced courses in disciplines/subjects as supplementary programmes/courses that would widen the competency profile of undergraduates and allow students of any discipline/faculty to sign up and follow such courses.

- iv) All universities to provide opportunities to undergraduate to acquire supplementary qualifications at a nominal fee while reading for their core study programmes. This opportunity may be offered through the Centres of Open and Distance Learning operating in most universities. These programmes may include courses leading supplementary qualification at Certificate or Diploma level in a chosen speciality such as IT, English, Business Management, etc. while reading for their respective undergraduate study programmes.
- v) All universities must take steps to update academic programme curricular at periodic intervals so as to produce graduates equipped with employability skills demanded by emerging employment markets.

There are no shortcuts. The *“root of cause (s) of the illness/issue must be addressed while dealing with symptom to address the recurrent unemployment of university graduates, particularly of those of HSS discipline”*.

