



**Impact of the 13 Years of Guaranteed Education Programme
(13YGEP) on Employment Potential and Income: A Survey in Kandy
District of Sri Lanka**

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ABSTRACT

Teenagers who drop out of mainstream education face risks of unemployment and social exclusion. In Sri Lanka, many students who fail to qualify for further studies at the GCE O/L examination consequently dropout from school education. The 13 Years of Guaranteed Education Programme (13YGEP) is a vocational subject stream introduced to the school curriculum in 2017 providing a new pathway for the students who fail GCE O/L to learn vocational subjects at school. The purpose of this study was to evaluate the short-term impact of the new vocational programme on employment potential and income of the youngsters. Primary data were collected from a sample of 200 participants living in Kandy district. Data analysis was performed using Chi-Square tests of independence and graphical methods. The results suggest that the vocational programme does not have a statistically significant impact on early employment potential. However, 15 percent of the teenagers who acquired vocational education have perused self-employment, an outstanding progress which none of the school dropouts in the sample could achieve. The students who left school and perused employment early earn more compared to those who studied vocational subjects, indicating that work experience contributes to higher early-career income. While the students who completed the programme appreciate the benefits, those who left school do not regret the forgone opportunity. The results highlight the importance of facilitating and supporting those who complete the programme to start new businesses. This is the first ever empirical assessment of the impact of the 13YGEP which is specifically targeted at GCE O/L dropouts in Sri Lanka. The long-term outcomes of the programme should be further studied in larger scale to evaluate its effectiveness.

1. Introduction

Sri Lanka is one of the few countries where every child is entitled for free education from primary school to university level. The free education policy has significantly improved Sri Lankan education system resulting in a youth literacy rate of 99 percent, an extraordinary achievement for a developing country (Department of Labour, 2022). However, given the diversity of the children's interests and intellectual capabilities, some children can be left behind by any education system. One such problem in Sri Lanka is the relatively high dropout rate at General Certificate of Education - Ordinary Level (GCE O/L) examination. From 2017 to 2019, only 70 percent of the students who appeared for the GCE O/L examination have qualified for GCE A/L (Department of Examinations, 2021). The remaining 30 percent, i.e. approximately 100,000 children in 2019, have dropped out from conventional school education at the age of 16. As a remedial measure, the Ministry of Education initiated the 13YGEP as a new subject stream in the school curriculum of grades 12 and 13. This vocational subject stream was introduced as a pilot programme in 2017, and island-wide in 2019, enabling the students who fail at GCE O/L to learn vocational subjects at school. The programme aims to reduce the dropout rate after GCE O/L and keep the children at school for 13 years irrespective of their academic performance. It provides opportunities for the students who lack confidence in conventional subjects to proceed with school-centred education based on vocational subjects.

Vocational education and training (VET) refers to "qualifying educational paths that provide individuals with occupation-specific practical skills" (Rodríguez-Planas, 2015). As such, VET can improve the employability of the students who lack competence in conventional subjects and fail to perform well in conventional examinations. On the other hand, work-related skills and training are vital for economic growth of a country.

Hence, successive governments have continuously attempted to improve the quality, relevance, and accessibility of VET in Sri Lanka.

The Government Technical School established in 1893 marked the beginning of formal vocational education in Sri Lanka (Asian Development Bank, 2015). This institute which accommodated only 25 students at the beginning later expanded its operations over various technical and scientific disciplines. After independence, the vocational education marked a significant growth with 31 vocational training institutes established between 1956 and 1998. The Department of Technical Education and Training (DTET) established in 1965 served as the primary agency for administering the technical colleges until the National Apprentice Board (NAB) was established in 1971. Currently, the Tertiary and Vocational Education Commission (TVEC), established in 1991, serves as the apex body of the VET system in Sri Lanka. There are many public, private and non-government institutions such as Vocational Training Authority (VTA), DTET, German Technical Training Institute and National Youth Corps providing VET to both young and adult learners. VTA has the largest network of vocational training centres including 174 rural/regional vocational training centres, 22 district-level centres, and 8 national vocational training institutes. The DTET also operates 39 technical colleges throughout the country. The VET institutions annually enrol more than 150,000 students island wide. Conventionally, this setup and the programmes have targeted the students who fail at the two main general education examinations: GCE O/L and GCE A/L and leave mainstream education. Some earlier attempts to introduce VET to the school curriculum in Sri Lanka such as Handessa Rural Education Scheme in the 1930s were abandoned due to lack of demand and the misunderstanding of the purpose (Tilak, 1988). Thus, the 13YGEP is the first vocationally oriented programme integrated into the school curriculum enabling the

students to continue their studies at school together with peers who follow general education paths. The 13YGEP has 26 vocational subjects which are widely demanded in both emerging and traditional industries such as tourism, healthcare, fashion design, landscaping, food processing and electronics (Ministry of Education, 2021). All the subject areas included in the 13YGE programme are listed in Table 1. The students who enrol for the programme study a set of common subjects including information technology, citizenship, English, and entrepreneurship for a period of six months and follow an introductory course on vocational subjects and a career guidance programme for three months. After undertaking such studies in Grade 12, the

students can pursue National Vocational Qualification (NVQ) level 04 training at a vocational training institute accredited by the TVEC and relevant on the job training in one of the vocational subject areas. Thus, the programme provides a pathway leading to nationally recognized qualifications (Inayathullah, 2017). Though the 13YGEP which was initiated as a pilot programme is now implemented at national level, to the best of our knowledge, no study has been carried out on the impact and outcomes of the programme, particularly on employability. Since this is a programme with vocational subjects, the success of the programme is heavily determined by the employability and consequently the economic status of the youngsters, who complete the programme.

Table 1. Common and Vocational subjects in the 13YGEP (Source: Ministry of Education, 2021)

Common Subjects	Vocational Subjects
1. First Language Sinhala OR Tamil	1. Child Psychology & Care
2. Business English & Communication Skills	2. Health & Social Care
3. Aesthetic appreciation	3. Physical Education & Sport
4. ICT skills	4. Performing Arts
5. Skills related to Citizenry	5. Event Management
6. Health & life skills for social well-being	6. Arts and Crafts
7. Entrepreneurship skills	7. Interior Designing
8. Career guidance	8. Fashion Designing
	9. Graphic Designing
	10. Tourism and Hospitality Management
	11. Landscaping
	12. Applied Horticultural Studies
	13. Livestock Product Studies
	14. Food Processing Studies
	15. Aquatic Resource Studies
	16. Plantation Product Studies
	17. Construction Studies
	18. Automobile Studies
	19. Electrical & Electronic Studies
	20. Textile and Apparel Studies
	21. Metal Fabrication Studies
	22. Aluminium Fabrication Studies
	23. Art and Designing
	24. Environmental Studies
	25. Computer Hardware & Networking
	26. Manufacturing

The literature provides evidence that vocational training programmes for youth have different but positive impacts in different contexts (Barría and Klasen, 2016; Chakravarty et al., 2019; Miller, 2020; Bairagya, 2021). Hence it is worthwhile to study the early outcomes of the 13YGEP in the Sri Lankan context to understand how far the intended outcomes are being realised. Therefore, the main objective of this study was to evaluate the impact of the 13YGEP on the employment potential and income of the teenagers who followed it after failing the GCE O/L, compared to those who dropped out of school education following their failure at the GCE O/L. The key research question is whether the 13YGE programme has a significant impact on the employment potential and income. The hypotheses tested were (1) the teenagers who followed the 13YGEP are more employable than those who dropped out of school after failing the GCE O/L examination and (2) those who followed the 13YGEP earn a higher income than those who did not follow the programme. Additionally, the survey attempted to assess whether the students are satisfied with the vocational subjects made available to them and the contents and outcomes of their vocational subject preferences.

1.1 Literature Review

Little research has been carried out on the effectiveness of the VET programmes in Sri Lanka and on the impact of VET on employment potential and income of the Sri Lankan youth. Among the studies related to VET, Maurer (2012) who studied the historical developments of VET in Sri Lanka found that VET has been a political priority in the country and that institutions and policies are in place for the development of VET. Such developments were fortified by the government in response to the youth insurrection in 1971 which was primarily a result of youth unemployment and lack of opportunities for them (Asian Development Bank, 2015). Hence, the historical context of VET in Sri Lanka highlights the importance of

VET in reducing unemployment. A report published by the Asian Development Bank (2015) has identified improving the employability of VET graduates as the priority area for improving the Sri Lankan VET system. Only a few studies have investigated the impact of VET programmes on employability in Sri Lanka. For example, Krishnapillai (2021) who studied the impact of VET on employability among the individuals living in the Northern Province of Sri Lanka found that completion of a VET programme increases the probability of perusing employment by 17%. Dharmasiri (2022) found that VET programmes for prisoners benefit not only the inmates, but also the rest of the society.

In other comparable developing countries, studies on VET programmes have observed a significant positive impact on labour markets and income. Chakravarty et al. (2019) studied the impact of a large vocational training intervention on youth labour market in Nepal using a regression-discontinuity design. They found that the programme increased non-farm employment by 10 to 30 percent and improved monthly earnings, particularly among women who started self-employment at home. Barría and Klasen (2016) evaluated the impact of the VET system in Brazil known as SENAI and found that the system has improved labour market outcomes for young males. They also found that the SENAI system has encouraged labour mobility and thus facilitated a smooth passage from school to work. Bairagya (2021) studied the effects of formal vocational training on the income of rural Indians, who were self-employed. This study found that vocational training, particularly of a longer duration, has resulted in higher earnings. Miller (2020), who studied the experiences of young Cambodians who obtained vocational training on hospitality, identified the potential of such programmes to narrow the gaps in education and to support social and economic development in Cambodia. VET has improved career prospects, provided opportunities for meaningful work, and empowered the youth

to develop active citizenship in modern Cambodia. A study in Philippines found that graduates with VET at post-secondary level are more employable than both of those who studied up to secondary school and up to tertiary level (Vandenberg and Laranjo 2020). The study also revealed that those who obtained VET earn higher wages compared to those who pursued employment with secondary school qualifications.

It is generally accepted that the young people who acquire VET find employment faster than those who acquire general educational qualifications (Hanushek et al., 2016; Forester et al., 2016; McDonald and Korber, 2023). In addition to employability and income, VET has secured other benefits for individuals belonging to relatively disadvantaged groups and those who are more likely to suffer from poverty and social exclusion such as school dropouts, differently abled people, refugees, and even people with a criminal history. For example, VET has enabled the refugees not only to develop their trade skills but also to improve their professional language skills and has nurtured a feeling of inclusion and acceptance among them (Jeon, 2019; Dijk et al. 2022). Guo and Wabg (2020) found that students whose academic performance is lower can generate higher returns from VET than from high-school education. Lyn (2022) found that survivors of domestic violence who attended vocational training workshops had higher employment potential and that they had developed confidence. Mohammed and Mohamed (2015) found that VET reduces recidivism among prison inmates and facilitates positive transition to society after their release.

However, studies which compared the outcomes of VET and conventional school-based education have raised some concerns over the long-term outcomes of VET. According to Hanushek et al. (2016), even though the individuals who enter the job market with vocational training tend to secure employment earlier than those who

enter the job market with general educational qualifications, this early career advantage gained by the vocational graduates tend to decline over time and subsequently become a disadvantage for them at the age of 50. Shi & Di Stasio (2022) identified that vocationally educated individuals suffer higher losses from career interruptions because of their skills being relevant only to one specific profession, often in one specific industry.

Nevertheless, the literature provides compelling evidence that VET is both economically and socially beneficial for various groups, particularly for disadvantaged groups and for those who face the risk of being socially excluded and marginalized. However, the impact of VET can be affected by the institutional context and can vary across countries and communities, depending on the institutional context and structure of the VET programmes (Hanushek et al., 2016; McDonald and Korber, 2023). Hence, there is a dire need to evaluate the early outcomes of the VET programmes to understand how well they meet the preferences of the target groups and the socioeconomic conditions of the country such as local labour market trends and skill demands. Such understanding would enable the policy makers to revise and improve the VET programmes to suit the regional conditions better.

2. Materials and Methods

This study is based on primary data collected using a survey questionnaire. The survey sample consisted of 200 participants in 19-21 years' age group living in Kandy district, who have failed to qualify for GCE A/L at their first attempt in GCE O/L and have currently completed school education. The sample included 100 students who followed the 13YGEP after O/L and another 100 students who did not follow the programme after failing O/L. An online survey was conducted to collect data. Two separate questionnaires which included some common questions were used for the two groups of participants.

Each questionnaire was emailed to potential respondents until the required number of responses were received.

The major data items collected through the questionnaires were (1) After-OL = what the student did after O/L (13YGEP, Job, Another Course, O/L Again, Other), (2) Current-Status = current status of the participant (Employed, Self-Employed, Continuing Studies/Training, Other) and (3) Income = present monthly income of the participant (No-Income, Less Than 20000, 20000-40000, Above 40000).

The common questions/items included in both questionnaires were the participant's gender, age, education zone, year of the first attempt at GCE O/L, results obtained in the first attempt of GCE O/L, current employment

status, and current monthly income. Additional items included in the questionnaire distributed among those who followed the 13YGEP were subject area selected, subjects selected, and the level of satisfaction with the 13YGE programme. Additional items included in the questionnaire distributed among those who left school after GCE O/L were what the participant did after GCE O/L and what the participant now thinks about the decision not to follow the programme. The exact questions included in the questionnaires, which were translated to Sinhala (local language) and distributed among the participants, are given in the Appendix (some questions which were not analysed have been omitted). The composition of the sample is illustrated in Table 2.

Table 2. Demographics and GCE O/L performance of the students in the sample

	Number of students	
	Followed 13YGEP	Left school after GCE O/L
Male	58	54
Female	42	46
Age - 19 years	43	18
Age - 20 years	27	21
Age - 21 years	30	61
Obtained at least 1 A OR B grade	9	20
Obtained at least 6 C or better	1	2
Failed 1 or 2 subjects	49	50
Failed 3 or more subjects	39	51
Absent for at least 1 subject	6	8
Passed Maths with C grade	0	1
Passed Maths with S grade	43	15
Failed Maths	57	80
Passed English with C grade	0	3
Passed English with S grade	42	17
Failed English	58	77
Passed Science with C grade	7	1
Passed Science with S grade	62	60
Failed Science	31	39

The sample profile shows that the majority of the respondents have failed Mathematics (69%) and English (68%) at GCE O/L.

However, the percentages of students who failed three or more subjects, Mathematics and English are higher among the students

who left school after GCE O/L than among the students who followed the 13YGEP. Hence, though all the students in the sample were those who failed GCE O/L at their first attempt, the data shows that the performance of those who opted to follow the 13YGEP is slightly better than the performance of those who left school after GCE O/L

Data analysis was performed using quantitative methods. To identify the impact of the 13YGEP on employability and earnings, the data were analysed using MS Excel for graphical analysis and SPSS software for statistical analysis. The dependent variables Current-Status and Income as well as the independent variable After-OL were categorical variables (note that income data were collected using a set of income categories as listed above, rather than as numerical values). Hence, graphical analysis was performed initially and then a series of Chi-Square tests of independence were carried out to identify any significant associations between the variables. Chi-square test of independence is a widely used statistical test to identify any significant associations between categorical variables.

3. Results and Discussion

3.1 Current Employment Status

Figure 1 below shows the current employment status of the respondents. The employment rates were 46 percent and 70 percent respectively among the students who followed the 13YGEP and those who left school without following the programme. Interestingly, a significant 15 percent of the respondents who followed the programme are self-employed compared to none of those who did not follow the programme. This indicates that one key objective of VET, promoting entrepreneurship, has been achieved through the 13YGEP. Improved self-employment opportunities have been observed as a key outcome of vocational training programmes in other developing

countries such as Nepal and India as well (Chakravarty et al. 2019; Biragya 2021).

The Chi-Square test of independence was performed to examine whether there is an association between the 13YGEP and overall employability. Since some counts were less than 5, employed and self-employed categories were combined as employed and all others including those who are continuing studies/training were considered as unemployed. The test result showed that there is no significant association between the programme and employability. $\chi^2 (1, N = 200) = 1.79, p = .18$. Hence, according to the data collected, both of those who followed the vocational programme after failing GCE O/L and those who did not follow the programme are equally employable. On the job experience of those who leave school after O/L to take up jobs, may have compensated for the missed opportunity of vocational studies at school.

Other studies, for example, Chakravarty et al. (2019) and Vandenberg and Laranjo (2020) have found that those who received VET were more employable than those who did not receive any VET. The different result observed in this study may be a short-term trend, given that the respondents who have completed the 13YGEP have entered the job market very recently and possess only 1-2 years' experience. Though some studies have observed that vocationally trained individuals find jobs sooner than those who complete general educational qualifications (Hanushek et al., 2016; Forester et al., 2016), this study compared the vocationally trained students with school dropouts rather than those who complete general educational qualifications. Hence, the results may not be comparable. Our results suggest that those who dropout from school after O/L at the age

of 16 years and those who continue-learning vocational subjects at school for another two years, are equally employable. This result, however, complies with McDonald and Korber (2023) who showed that employers do not always prefer vocational education over general education and that their preference for the type of education can vary

depending on the type of job. They found that, for certain jobs, employers prefer vocationally qualified job candidates over those who possess tertiary level educational qualifications, but no such preference exists for secondary level vocational education (McDonald and Korber, 2023).

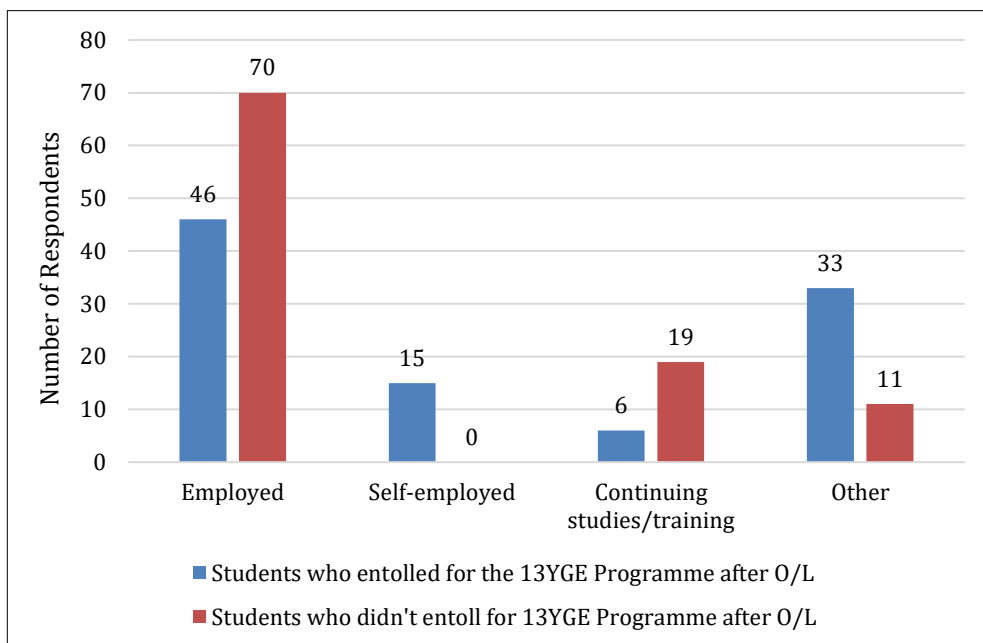


Figure 1. Current employment status

3.2 Current Monthly Income

Figure 2 below shows the current monthly income of the respondents. It shows that the monthly income of all the respondents is below Rs. 40,000 and about 30 percent of all the respondents have no income. The Chi-Square test of independence was performed to evaluate the relationship between the vocational training obtained through the 13YGE and monthly income. Again, the

categories with lower counts were combined to form three income categories as no income, 20,000 or less and from 20,001 to 40,000. The test result showed that there is a significant relationship between the two variables. Those who left school after O/L without enrolling for the 13YGE tend to earn a higher monthly income. $X^2 (1, N = 200) = 31.76, p = .00$. Possibly, these respondents' early entry into the world of work could have contributed to their higher earnings.

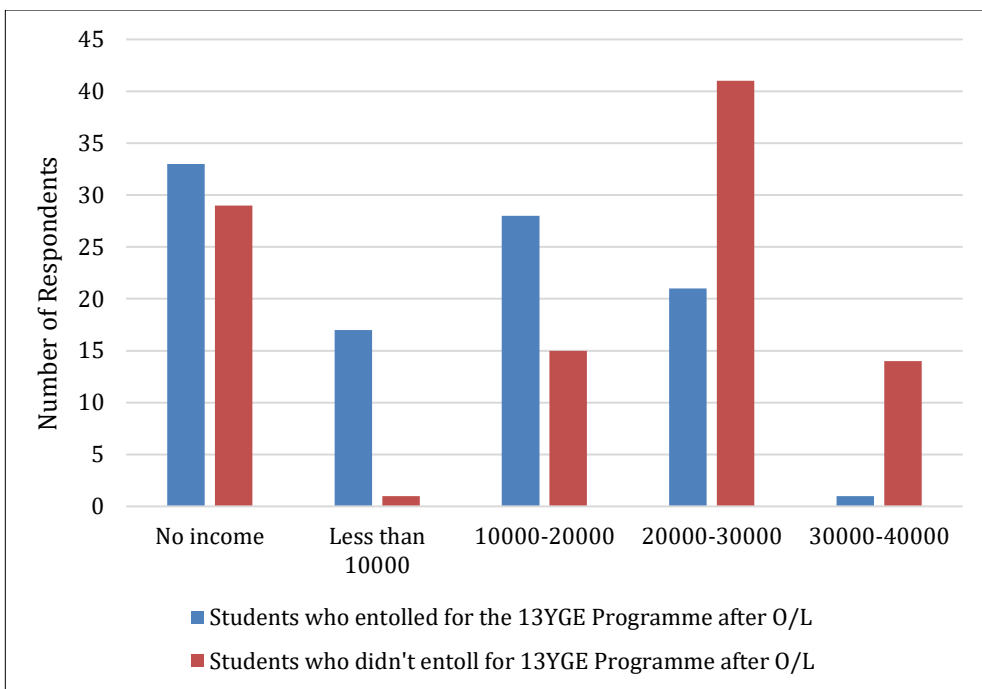


Figure 2. Monthly income

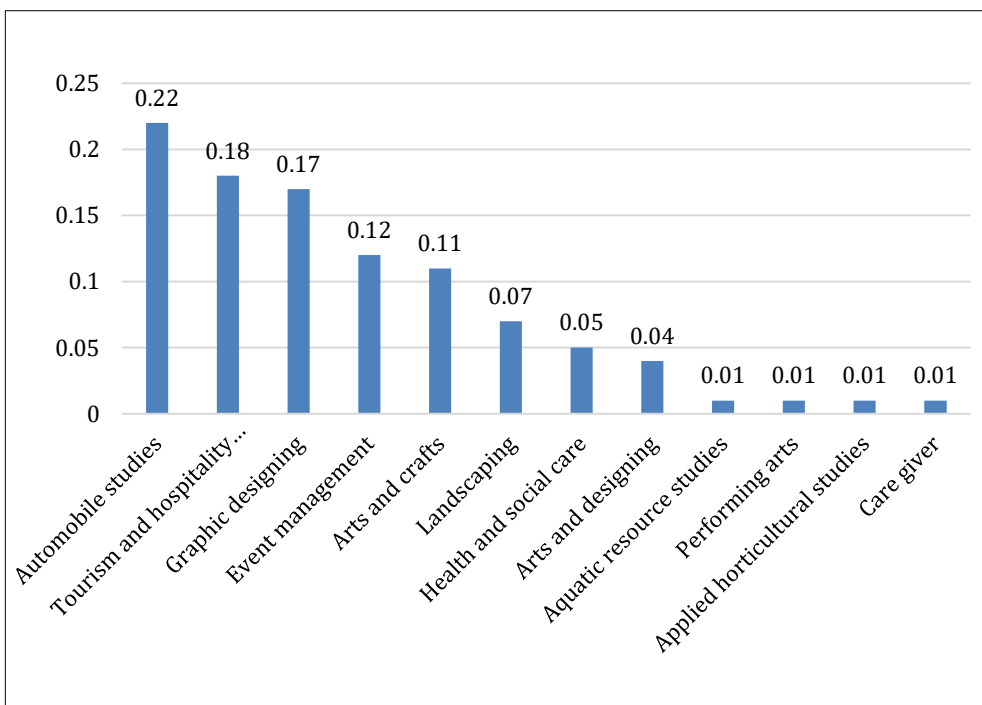


Figure 3. Vocational subject selections

Studies carried out in other countries such as India (Biragya, 2021) and Philippines (Vandenberg and Laranjo, 2020) have found that those who received VET earn higher incomes relative to those who entered the job market with secondary-level qualifications alone. Conversely, this study found lower income levels among the participants who completed the 13YGEP. However, this may also be a short-term outcome as mentioned above. Besides, the limited size and scope of the sample and the economic impacts of the COVID-19 pandemic could have distorted the results related to the association between the programme and income. The reported self-employment income figures may also be subjective estimates rather than proper calculations. They may also have been under-reported owing to the fear of losing some welfare benefits. From the students' perspective, having a source of income or an employment opportunity could have been one of the reasons for them to leave school after GCE O/L.

3.3 Vocational Subject Preferences

Figure 3 shows the subject areas selected by the students who followed the 13YGEP after O/L. The most popular subjects are automobile studies (22%), tourism and hospitality management (18%) and graphic designing (17%). The most popular subject area, automobile studies, is a traditionally recognised vocational subject offered in several vocational training programmes. It should be noted that out of the 26 subjects available, the respondents in the sample have selected only 12. Subjects such as food processing studies, electrical and electronic studies, computer hardware and networking studies, and textile & apparel studies which appear to be demanding have not been selected by any respondent.

The narrowly spanned subject choices indicate that some subject areas are not well-promoted. Otherwise, the students may not be aware of the economic and job-market

trends to be able to carefully select more demanding vocational subjects.

3.4 Views about the “13 Years Guaranteed Education Programme”

Figure 4 below shows the views of the respondents who followed the programme. Generally, the majority of them are satisfied with the programme and recommend it to other students who fail at GCE O/L. They have no regret about the forgone attempts at GCE O/L or the opportunities of following other courses. However, they have slightly divided views about the subjects included in the programme with 58 percent of the participants thinking that the subjects are appropriate and 42 percent of the participants uncertain. This result further emphasizes that there is some gap in the students' awareness on vocational subjects and potential employment opportunities.

On the other hand, 70 percent of the respondents who did not follow the 13YGEP think that their decision not to follow this programme was correct. This response is consistent with their higher earnings compared to those who opted to follow the 13YGEP. Their choices after GCE O/L are shown in Figure 5. It shows that 45 percent of the students who did not enrol for the 13YGEP after GCE O/L have entered the job market immediately. Hence their motive to leave school and find a job may be due to financial hardships.

They tend to have no regret about leaving school and finding a job. Another 44 percent of those who did not choose the programme had either repeated GCE O/L or followed another course and hence they have not left education and training though they left school. The remaining 11 percent (labelled as 'Other') could be a concern, and some of them had posted responses such as 'I got married', 'I have a three-wheel', and 'I am working in my father's retail shop' as what they did after GCE O/L.

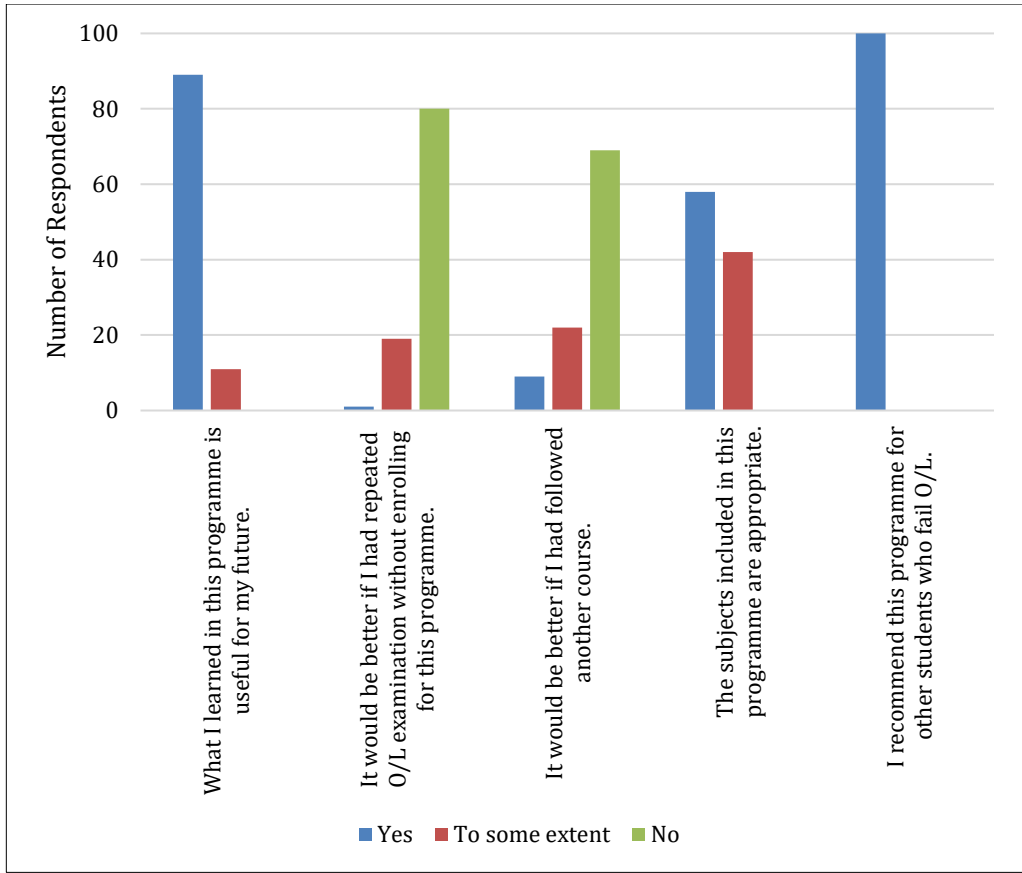


Figure 4. Views of the students about 13YGE programme

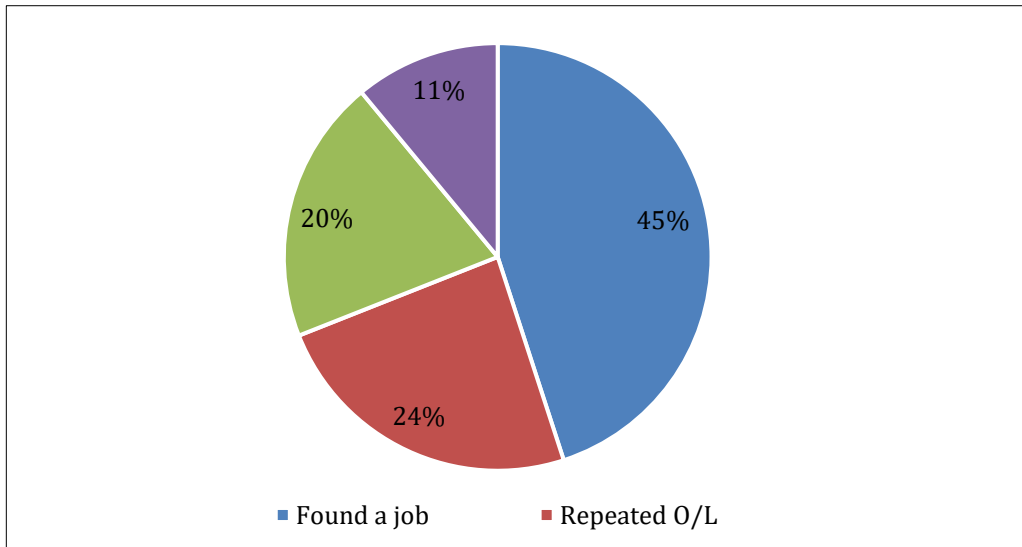


Figure 5. Students' choices after O/L (other than 13YGE)

4. Conclusion and Recommendation

The results of this survey found no statistically significant relationship between the 13YGEP and the employment prospects of the individuals in the selected age group. However, those who opted to leave school without following the programme tend to earn more compared to those who followed the programme. As such, they equate their on-the-job experience to VET. Interestingly, the students who followed the 13YGEP are more likely to pursue self-employment. This is an encouraging development which signals that the 13YGEP is on the right direction.

Vocational subject choices among the students, who follow the programme, are narrowly spanned with preference to traditional subjects such as automobile studies. Young people, who completed the 13YGEP, are generally satisfied and appreciate the outcomes. On the other hand, majority of the students, who have chosen to work after failing GCE O/L, do not regret the forgone opportunity of two more years at school studying vocational subjects.

Economic pressure compels the youth to overlook the benefits of VET and seek early employment. Hence some financial support for the needy students, particularly after GCE O/L, would retain more teenagers at school for 13 years. It is evident that the 13YGEP has contributed to the development of both vocational and entrepreneurial skills in youth which have motivated them to pursue self-employment. Continuous career guidance even after the completion of the programme and financial support for businesses start-up (e.g., business loans at concessionary interest rates) are highly recommended. The range of vocational subjects included in the curriculum of the 13YGEP can be further

diversified with most in-demand subject areas such as data analytics, logistics management, web development and the like to attract more school leavers. More subjects can be included targeting the fast-growing online job market.

The key limitations of this study were the limited geographical coverage (only one district), short-term experience with the programme, and the small sample size. The COVID-19 pandemic could also have had an impact on employability and income, particularly during the years 2020-2021. The self-reported income figures may not be accurate as the respondents may have under-reported income owing to the potential fear of losing certain welfare benefits. The reported income figures can be subjective responses rather than objective estimates. The survey questionnaires were relatively short and the student perceptions and suggestions about the teachers, teaching and learning facilities, and the subject contents (of both common and vocational subjects) were not considered. Despite those limitations, the outcomes of this small-scale survey have revealed noteworthy developments such as greater self-employment potential achieved over a short period of time. Thus, both the short-term and long-term outcomes of the programme should be further studied at large scale, over time.

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