

Tertiary and Vocational Education Commission



Research Cell

Influencing Policy & Practice of TVET in Sri Lanka

TRACER STUDY ON THE EMPLOYABILITY OF TECHNICAL COLLEGE GRADUATES WHO HAVE FOLLOWED THE NATIONAL CERTIFICATE OF ENGINEERING CRAFT PRACTICE (NCECP) COURSES OF ELECTRONICS, INDUSTRIAL ELECTRICIAN, FITTER MACHINIST AND GAS & ARC WELDER IN TECHNICAL COLLEGES 2005.

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Upon the great effort by the Tertiary and Vocational Education Commission to develop a research culture in Technical Vocational Education and Training sector in Sri Lanka, this attempt to study the employability of Technical College graduates was undertaken. The sample frame of the study was those who have followed the National Certificate of Engineering Craft Practice (NCECP) courses in Electronics, Industrial Electrician, Fitter Machinist and Gas and Arc Welder in 2005. It created an interface of know how of backformation of students of the particular stream. It was immense the support and assistance have been received by different parties right through this study. Their contributions have been important in so many different ways which we acknowledge with gratefully.

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Term	Definition
<i>DTET</i>	- <i>Department of Technical Education and Training</i>
<i>TVET</i>	- <i>Technical Vocational Education and Training</i>
<i>NCECP</i>	- <i>National Certificate of Engineering Craft Practice</i>
<i>TCs</i>	- <i>Technical Colleges</i>
<i>CoTs</i>	- <i>Colleges of Technology</i>
<i>NVQ</i>	- <i>National Vocational Qualification</i>
<i>SPSS</i>	- <i>Statistical Package for Social Science</i>
<i>PASW</i>	- <i>Predictive Analytics Software</i>
<i>NGOs</i>	- <i>Non Governmental Organizations</i>

ABSTRACT

As there was a huge demand for technically skilled people in both local and International labour Markets, the number of Technical Colleges increased to 38 which are spread island wide. The Department of Technical Education and Training has become the major provider of Technical Education to the students who are unable to achieve a stable position after schooling. Around 48 courses are conducted in Commerce, Engineering, and Trade streams with the hope of making talented and qualified technicians to the global industry.

National certificate of Engineering Craft Practice courses (NCECP) were introduced in 1987. As an impact of the modernization of apprentice draftsmanship course which had been conducted in early 1960s, National Certificate of Engineering Craft Practice courses started to conduct since the year 2000. At the beginning, the courses were conducted in 28 Technical Colleges out of 38. It was intended to fulfill the requirements of the industry and business with the introduction of this new course. At the completion of one year or two year, full time courses, graduates will be issued the certificate.

Even though the demand for these courses is still high it is doubtful whether the competences they obtained from Technical Colleges would cooperate with current industry needs.

Through this study the attempt is to find out the employability of graduates who have followed National Certificate of Engineering Craft Practice (NCECP) courses of Electronics, Industrial Electrician, Fitter Machinist and Gas & Arc Welder in Technical colleges 2005.

The study confined mainly to find out whether the graduates are employed, relevancy of the course they followed to find the jobs that they do and the satisfaction of their wages. Moreover, it is expected to forward the findings to the policy makers and the curriculum developers.

LIST OF CONTENT

Chapter Title	Page
Acknowledgement	II
Acronyms and Abbreviations	III
Abstract	IV
List of Contents	V
List of Tables	VII
List of Figures	VIII
1. INTRODUCTION	1
1.1. Historical background:	1
1.2. Problem Statement:	2
1.3. Objectives:	2
1.4. Scope:	2
1.5. Rationale:	2
2. LITERATURE SURVEY	4
2.1. Tracer study of Technical College graduates 1995-1996:	4
2.2. The employment profile of graduates:	4
2.3. The relevance and adequacy of training for competencies required in work contexts (objective 2):	6
2.4. Tracer Study on the students who have followed National Certificate of Engineering Craft Practice course which was introduced in year 2000:	9
2.5. Recommendations of the study;	9
3. STUDY METHODOLOGY	11
3.1. Rationale for methodology:	11
3.2. An opportunity:	12
3.3. A challenge:	12
3.4. The contribution of tracer studies to educational research and evaluation:	13
3.5. Tracer Studies and research in general:	13
3.6. What is to be traced?	14
3.7. Principles and guidelines for doing Tracer Studies:	15
3.8. Designing a Tracer Study:	15

3.9.	Objectives and hypotheses:	16
3.10.	Where do the research questions come from?	16
3.11.	Outcomes and indicators	16
3.12.	Informants/respondents	17
3.13.	Interviews and questionnaires:	17
3.14.	Surveys:	17
3.15.	Qualitative or quantitative?	17
3.16.	What variables should explore?	18
3.17.	To compare or not to compare:	18
3.18.	Socio-demographic/socio-economic aspects:	18
3.19.	Population and Sample Frame:	18
3.20.	Research Methodology:	21
3.21.	Conceptual Frame work:	22
3.22.	Study limitations:	22
3.23.	Data Collection	23
3.24.	Data Analysis:	24
4.	DATA ANALYSIS	25
4.1.	Method of data collection and analysis:	25
4.2.	Analyzing the demographic data:	25
5.	CONCLUSION AND RECOMMENDATION	43
	REFERENCES	48
	APPENDICES	49

LIST OF TABLES

	Page	
Table 3.1	Enrollment of Students – Course Wise	19
Table 3.2	Sample frame	19
Table 3.3	Technical Colleges and Courses	20
Table 4.1	Gender	25
Table 4.2	Age	26
Table 4.3	Districts	27
Table 4.4	Divisional Secretariat	27
Table 4.5	Ordinary Level	28
Table 4.6	Advanced Level	29
Table 4.7	Technical Education	30
Table 4.8	Analysis of Results	31
Table 4.9	Status of Employment	32
Table 4.10	Main Industry	33
Table 4.11	Total Income	34
Table 4.12	Time spent until the job	35
Table 4.13	Effectiveness of the course for find a job / self employment	36
Table 4.14	Sufficiency of theoretical and practical knowledge for the job	36
Table 4.15	Satisfaction of the employer on the course followed	37
Table 4.16	Duration of unemployment	38
Table 4.17	Main reasons for unemployment	39
Table 4.18	Course of further education	40
Table 4.19	Awareness of NVQ system	41
Table 4.20	Effectiveness of the course for further education	42

LIST OF FIGURES

	Page	
Figure 3.1	Conceptualization and Operation	24
Figure 4.1	Gender	25
Figure 4.2	Age	26
Figure 4.3	Districts	27
Figure 4.4	Ordinary Level	29
Figure 4.5	Advanced Level	29
Figure 4.6	Technical Education	30
Figure 4.7	Analysis of Results	31
Figure 4.8	Status of Employment	32
Figure 4.9	Main Industry	33
Figure 4.10	Total Income	34
Figure 4.11	Time spent until the job	35
Figure 4.12	Effectiveness of the course for find a job / self employment	36
Figure 4.13	Sufficiency of theoretical and practical knowledge for the job	37
Figure 4.14	Satisfaction of the employer on the course followed	37
Figure 4.15	Duration of unemployment	39
Figure 4.16	Main reasons for unemployment	40
Figure 4.17	Course of further education	41
Figure 4.18	Awareness of NVQ system	41
Figure 4.19	Effectiveness of the course for further education	42
Figure 5.1	Employment - Sector Wise	43
Figure 5.2	Status of employment	44
Figure 5.3	Adequacy of the knowledge gained from the course	45
Figure 5.4	Awareness of NVQ system	46

CHAPTER 01 - INTRODUCTION

1.1 Historical background:

In 1893 the Technical Education of Sri Lanka was set up with 25 students in a renovated coffee store closer to the then, terminus of the Government Railway at Maradana named as Technical School. Classes were conducted in a limited space which contained a small workshop, laboratory and lecturer room.

As there was a huge demand for technically skilled people in both local and International labour Markets, the number of TCs increased to 38 which are spreaded island wide. The Department of Technical Education and Training has become the major provider of Technical Education to the students who are unable to achieve a stable position after schooling. Around 48 courses are conducted in Commerce, Engineering, and Trade streams with the hope of making talented and qualified technicians to the global industry.

National certificate of Engineering Craft Practice courses (NCECP) were introduced in 1999. As an impact of the modernization of apprentice draftsmanship course which had been conducted in early 1960s, National Certificate of Engineering Craft Practice courses started to conduct since the year 2000. At the beginning this was conducted in 28 Technical Colleges out of 38. It was intended to fulfill the requirements of the industry and business with the introduction of this new course. At the completion of one year or two years, full time courses, graduates will be issued the certificate.

Even though the demand for these courses is still high it is doubtful whether the competences they obtained from Technical Colleges would cooperate with current industry needs. Basically the modern information technology changes the technology and the capacities of industries rapidly, amidst the industries growth it is observed that the content of these particular courses still remains the same as the beginning.

Other than Technical Colleges, there are number of institutions in different sectors (i.e. Government, Semi government, Private, NGOs) conduct these courses, but it confronted some issues related to the standard of the courses such as accepted level of course content and duration, entry qualifications, validity of the certificate. As well as the mismatch in between the industry needs and the graduates of these institutions is affected.

For avoiding these circumstances, National Vocational Qualification (NVQ) System was introduced for the TVET Sector by the TVEC. According the laddering system up to Level 7 helps students to posses degrees related to the technical education and vocational training. To endue level 1 to 4, Technical Colleges and other institutions are authorized. Level 5, 6 are presented by Colleges of Technology and the degree or level 7 is presented by the University of Vocational Technology.

Through this study the attempt is to find out the employability of graduates who have followed National Certificate of Engineering Craft Practice (NCECP) courses of Electronics, Industrial Electrician, Fitter Machinist and Gas & Arc Welder in Technical colleges 2005.

The study confined mainly to find out whether the graduates are employed, relevancy of the course they followed to the jobs they do and the satisfaction of their wages. Moreover it is expected to forward the findings to the policy makers and the curriculum developers. Based on these findings it assists for decision making according to different perspectives. i.e. Altering the curriculum according to the industry needs, graduates prospects.

1.2 Problem Statement:

Are all the graduates of NCECP courses from technical colleges in 2005 being employed according to the said fields?

Objectives:

2. Study to what extent the graduates are employed after their graduation under these courses.
3. Find out the relevancy of the course with their employment.
4. Examine the extent of satisfaction with their wages.
5. Analyze the intention for further education under the NVQ system.

1.4 Scope:

Perspective of this research study is to unveil;

- The level of employability of the students (Employment /Self employment/ Unemployment/ Underemployment).
- Satisfaction of students about the courses and income.
- Intention for higher studies.

1.5 Rationale:

Though, number of tracer studies have been conducted by the DTET covering up with broad area according to the scope of the establishment, necessity of a monitoring of Engineering Craft Courses is immense. As long as trace out the level of employability of other courses this is essential even. Hence, the demand derives from the industry for the skilled person in said streams is rather high. But the lack of studies committed regarding this streams, stimulate the interest of carrying on this study. Another factor, stressing the interest is declining enrolment of these courses.

In the year 2002 a Traer Study has been done on graduates from the Technical Colleges. It has been touched the overall circumstances related to all streams. Therefore there was no surface to deal with the deep factors affecting the productivity of courses. Another study committed related to the National Certificate of Engineering Draftsmanship Courses on 2004. Its dimension was to find out the conditions of graduates. Based on these grounds, researching about the factors related to these courses, will be effective, to find solutions for shortfalls of these courses. Therefore it is significantly positive to conduct a tracer study on the employability of the students followed the courses of electronic, Industrial Electrician ,Fitter machinist and Gas & Arc Welding in Technical colleges in the year 2005.

It has been already started to conduct NVQ level 5 and 6 in the college of technology Galle and Maradana in the streams of welding and Mechatronics. To follow Mechatronics the opportunity is given for students who were on the level 4 of the streams of Electronics, Electrical and Fitter Machinist. To follow the welding course for level 5,6 the opportunity is given for the students who were on the level 4 of the stream of welding. Another intention of the study is to promote these students up to the graduate level.

CHAPTER 02 - LITERATURE SURVEY

2.1 Tracer study of Technical College graduates 1995-1996:

In this chapter, drawing on the findings of the study of Technical College graduates of 1995 and 1996, conclusions and suggestions are presented. The main objective of this study was to ascertain the internal and external efficiency of courses offered by Technical Colleges. The actual employment of graduates, the relevance and adequacy of the training for competencies required in work contexts, and the overall quality of graduates as per industry's requirements were the indicators identified, to ascertain the internal and external efficiency of the courses. The profile of the employment status of graduates by employment sector and income from employment, by the variables, gender of graduates, year of graduation (1995 and 1996), course completion category (passed or referred), course category (20 selected courses) has been presented in detail, in chapter 3. (Sections 3.1-3.6 and 3.11-3.15). The relevancy and adequacy of training for competencies required in work contexts, and the overall quality of the graduates, as perceived by graduates themselves and a small sample of their employers, and ascertained by detailed analysis of data in chapter 3, has been presented in sections 3.7-3.10. The main findings presented in chapter 3 are summarized, and conclusions and suggestions based on the findings of the study are presented in this chapter.

2.2 The employment profile of graduates:

The overall percentage of employment of graduates is 55 percent, in the combined category of wage and self-employment, with 49 percent in fixed wage and 6.1 percent in self-employment

The totally unemployed comprise 34 percent, with 11 percent engaged in various part-time activities; the overall female unemployment rate is 64.3 percent. Of the 74.4 percent graduates who had not been able to secure employment even for a short spell, 66.3 percent are females (see also, section 3.16: p. 28, profile of female graduates).

The sector-wise employment of Technical College graduates indicates that the private sector (46.6 percent), government sector (32.6 percent), Corporations and Authorities (13.3 percent) have provided employment for the vast majority, with the two employment categories clerical (n.309), Physical Science and Engineering Associate Professionals (n.298) absorbing the highest numbers, respectively. A comparison of the percentage figures of employment of Technical College graduates with national labour force trends (Annual Report, Central Bank, 2000), the year in which the present data was collected, indicate that graduates' employment in the private sector is only slightly higher than the national average for the year (43.2 percent); significantly higher in the government sector, relative to the national average of 13.6 percent; and, significantly lower, in self-employment, for which the national average is 27.6 percent. The national employment ratio of those in the broad age category 20-

34 averages to 70.1 percent, whereas for Technical College graduates, 92.4 percent of whom fell within the age category of 21-35, the employment average is 55 percent. Calculated as a percentage of those participating in the labour force, the national unemployment average of those in the broad age category of 20-39 is 22 percent whereas for the Technical graduates, (whose ages range from 17-35, with the age of 7.4 percent of the total number unrecorded) and calculated as a percentage of total number in sample, it is as high as 34 percent.

A slightly higher percentage of those who have completed training (50.8) than those who have referred (45.5) are wage employed, and similarly, self-employed. There is a significant difference in this pattern, by year of graduation.

In the course category, the average rate of wage employment is 49 percent, the average for full-time self-employment is 6 percent, and in the combined category of wage and self-employment, the average rate stands at 55.4 percent. There is a significant difference categories of employment by course completion.

The first objective of this research was to ascertain to what extent Technical College graduates are employed in the fields in which they have obtained training of the total number (n.1806) employed, 84 percent are employed in their respective fields of training. Of the 20 courses selected for study, the Machinist, Electrician and Draughtsman course record the highest of over 70 percent employment in the combined category of wage UK self-employment, in their respective fields (Table 3.3); in 10 other courses, over 60 percent, and in 2 other courses, over 55 percent employment in the respective field is recorded. Below average employment percentages are indicated in 5 courses, Masonry, Stenography and the three courses clustered as 'other'.

On the average, 10.7 percent graduates in the combined course category are in other fields of employment (Table 3.3); a higher than average percentage of graduates of 3 courses. English for Commerce Industry, Secretarial, and Mechanical Fitter are in other fields of employment, with the percentages of graduates of Masonry, Draughtsman and Stenography courses in other fields of employment, bordering on the category average.

The unemployment statistics can be considered another indicator of 'to what graduates are employed in the fields in which they have obtained training'. Relative to the average percentage of unemployment in the combined course category (34 %) the graduates of the three courses combined as 'other', Secretarial, Gas & Arc Accounting, and Stenography record above average unemployment. Students who have followed Refrigeration & Air-conditioning, Wood Mechanist, English for Commerce Automotive, Plumbing and Radio & T. V recorded over 30 percent unemployment.

The profile of self-employed graduates in the sample (Table 3.21) deserves further scrutiny, for the courses offered by Technical Colleges should ideally enhance self-employment capability of youth. Approximately 12.4 percent of the sample are self-employed in the two categories, 'full-time' and 'additional to principal employment'. The occupational group that records the highest number of graduates (37.8 percent) in self-employment is Technical Draughtsman; the next highest self-employment category (18.6 percent) are Electrical Engineering Technicians. The two other occupational groups that follow, by percentage employed are Carpenters and Joiners, and Motor vehicle mechanics & fitters. The reason for being self-employed, of nearly half the number self-employed is 'failure to obtain employment in government sector'. Only 10.2 percent adduced 'higher income' as reason for being self-employed; however, the income levels of the full-time self-employed, in the different wage categories, relative to those of wage earners, do not indicate a significant disparity (Table 3.25). A significant proportion of those who engage in self-employment in addition to a main occupation are in the highest income category (Table 3.26). Lack of capital, difficulties in marketing and insufficient knowledge (Table 3.27) are difficulties encountered by graduates, who are in self-employment.

The time lag between completion of training and commencement of employment (objective 3) can be considered an indicator of the market demand for products of that course of training, as well as other factors. A majority of the Technical College graduates (64.9 percent) obtained employment after a waiting period ranging up to 12 months from date of release of results, 34.3 percent after a longer waiting period ranging from 13 months to over 25 months. The graduates of Draughtsman, Masonry, Agriculture, Secretarial, Wood Machinist, and Stenography courses obtained employment relatively closer upon graduation, whereas the graduates of Plumbing, Accounting, Machinist, Gas & Arc Welding, and Secretarial courses experienced a much longer period of waiting prior to gaining employment.

The income from employment of the majority of graduates (52.9 percent) is in the highest income category of < Rs.5000; 32.7 percent in the middle-income category of Rs. 3000-5000; and only a small percentage, 8.8 in the lower income category of > Rs. 3000. Although there is no income differential by year of graduation, there is a significant difference in income by category of course completion.

2.3 The relevance and adequacy of training for competencies required in work contexts (objective 2):

In the perception of a vast majority of graduates (70.2 percent), the training they received was relevant ('very' or 'somewhat') to their present job; conversely, 29.8 percent graduates perceived their training as 'not at all' relevant to the competencies demanded by the job in hand. The query on the adequacy of

training elicited responses that were less disparate, 59.2 percent indicating the training as 'adequate' and 40.8 percent, as 'inadequate'. It is interesting to note that the need areas ranked highest by respondents who perceived their training as inadequate - comprehensive practical knowledge, modern technical knowledge,

and theoretical knowledge more suited to the country's work contexts, were x IKB identified by others as factors for 'adequacy' of training provided by courses they & followed. The majority of graduates (59.5 percent) have indicated the need for further training, with 50 percent respondents requesting computer training.

A limited sample of 22 employers, in whose employment 22 graduates of Technical courses had served, for periods ranging from less than one year to over five y Table), responded to various queries on their perception of their employee's The response of the majority of employers (64 percent) was positive, to the queries of whether the employee's training (knowledge, skills), at point of entry was "adequate" for the work entrusted, and whether s/he perceived such training as having been obtained from the Technical College course the employee had followed; however, a similar percentage of employers indicated that they had to provide on-the-job training to their employees, and that such training was facilitated by the Technical Courses the employees had followed. A subsequent query on whether the training the employee possesses is adequate for the tasks s/he is entrusted with, elicited a slightly higher (68 percent) rate of response from the employers.

Eighty two percent of the employers agreed that the employee has made a contribution to the institution's productivity. The perceptions of graduates on the n and adequacy dimension of courses offered by the Technical Colleges, is corroborate, *m* and large, by the sample of employers. Some of the comments of the employers that they had to provide on-the-job-training to the employee were, 'inadequacy of training', 'sufficient theoretical knowledge but inadequate practical training', 'had to provide in other areas'; these specific comments corroborate the responses of the graduates themselves. A couple of employees indicated that the graduate is working in a field, and therefore, had to be trained for it.

The affective domain queries of 'does the employee work to the best of his "her 'report to work satisfactorily', received a 100 percent positive agreement from tae of employers; the negatively worded queries of 'whether the employee shirks 'conflicts with management or resorts to union action', were answered in the all employees. Employee's job satisfaction was rated positively by 91 percent of the employers; 77 percent employers reported that their respective employees were with the remuneration they got. These responses of the employers supplement: obtained on the 'knowledge and skills' domains of the training provided by the 7 College courses, and indicate a very positive work ethic and orientation demonstrated by graduates.

The quality of Technical College graduates relative to industry's demand (Objective 4) can be ascertained in a limited sense, drawing on the findings in general specifically, by course category. However, it must be noted that the data of study is inadequate for an objective qualitative assessment of the products of I College courses. The quality of inputs, process and output (such as what trainers bring to the learning situation, other resources, the course contents, learning and assessment processes, standards attained, etc) must be assessed relative to the industry's demand, if such a systematic assessment is to be made. Therefore, objective four is ascertained only in general, as feasible by the nature of data available. The fore-going analysis, on the relevance and adequacy of training for competencies required in work contexts, is directly applicable, in attempting to ascertain the quality of technical College graduates, relative to industry's demand.

A farther indicator of the quality of graduates relative to industry's demand is a measure of the effects of training, on securing employment (Table 3.9); as perceived by 71.0 percent graduates, the course of training followed satisfied basic/additional training needs for employment or was at least 'useful' in obtaining employment, whereas 24 percent maintain that the training had no effect in obtaining employment. An equally high percentage of graduates (70.2) agree that the skills they had acquired in the courses are 'relevant' to their employment, whereas a lesser percentage (50.2) of graduates indicate that the training they received is 'adequate' to meet industry's demand, more specifically, the demands of the jobs they hold. The fact that 29.8 percent graduates have categorically stated that the training received is 'not at all relevant' to the job they hold, and that the training is considered as 'not adequate' by 40.8 percent, points to a mismatch between the training and industry's demand. This is a cause for concern particularly as only 16.1 percent of those who are employed (in the combined course category), are employed outside of their area of training; and therefore, it can be surmised that a majority of those who have commented negatively on both the 'relevance' and 'adequacy' dimensions of courses they followed, are employed in the fields in which they have obtained training. A market survey of industry's needs and an assessment of courses relative to industry's needs will be very useful, enabling revision/redesign of courses in line with industry's demands.

A systematic assessment by the Technical Colleges of the standard attained by graduates at completion of courses, by indicators of 'fitness for the respective industry', using appropriate scientific measures of assessment, and subsequently, comparable assessments by a representative sample of employers, would provide valid measures of the quality of Technical College graduates, by each industry's demand. Only a superficial and somewhat subjective assessment of the quality of graduates relative to the industry's demand was possible, given the limitations in the data collected, for a more systematic assessment.

2.4 Tracer Study on the students who have followed National Certificate of Engineering Craft Practice course which was introduced in year 2000:

In 1990 the amateur craftsmanship course which was introduced in early 1960 has been modernized with the commitment of National Institute of Technical Education of Sri Lanka. It was increased up to 13 subjects with the reforms and the course name also changed as Engineering Crafts Practice. This new course is being taught 28 Technical Colleges out of 36 which are governed by the Department of Technical Education and Training.

Creating new job opportunities in Industrial and Business sector was the intention behind the reform of this course and the study focused on whether the expectations have been fulfilled or not. The method of the research has been developed based to the previous studies and researches taken places.

How many of passed outs have been employed and what are the institutions they have been working relevancy of jobs and education that they have obtained nature of their jobs, duration spent between the completion of education and being employed check the attitudes of their employers on their workability were expected to realized through the study.

Even though, there were 3600 passed outs for consecutive 4 years since the beginning of this new courses, it was selected the batch passed out in the year 2000 and the total population was 691. The data were collected by a postal questionnaire. In addition to that interviews were conducted for Principals and academic staff of Technical Colleges to obtain some information. These data were analyzed by using valid percents and chi squared methods.

Findings of the study unveiled that the tendency of employment has not been changed though the course was modernized and the level of income has slightly increased among the employees. As well as majority of graduates have stated that the course they followed is relevant for their employment. But it has been revealed that most of them have got extra training opportunities from their workplaces. Majority of the students are satisfied of their course and the content of the course is more suitable for the business sector.

2.5 Recommendations of the study;

1. Should take actions to reduce the percentage of failed students from the final examinations.
2. The course to be reformed as follows.
 - rules and regulations for architectural designs should include into the syllabus
 - Increasing of teaching hours for AutoCAD
 - Continuous tracer studies on passed outs

3. Following instructions given by the curriculum development committee of National Institute of Technical Education, Sri Lanka should be implemented as it is important timely.
 - Conduction of higher National Diploma on Engineering Crafts Practice
 - Students keen on Science and Mathematics should be recruited for this course
4. Course should be conducted in English medium
5. Should only recruit students who have intention to be employed on the same field or attitudes to be changed of competent students

CHAPTER 03 – STUDY METHODOLOGY

3.1 Rationale for methodology:

Research findings have come from longitudinal studies carried out in industrialized countries. Such studies are expensive and, by their very nature, long term. Another form of research that would be achievable by smaller programmes that did not have access to vast resources, and which could be adapted and molded to fit local needs and capacities.

For those who carried out the studies, the process has been an opportunity to gain a deeper understanding of effects and impact and, where a programme still exists, to adjust and develop it. There have also been effects that spread beyond the original programme and, in some instances; both policies and practices of services outside the programme have been adapted.

- The methods used are understandable for virtually all those involved in the study.
- The studies are manageable in a wide variety of circumstances.

This kind of study represents a practical tool that allows programmes in the field to look more deeply into their own work. This is especially so because they are locally determined and controlled.

There are a number of characteristics that distinguish these studies from conventional academic research. A Tracer Study starts from the objectives, goals and context of a programme and sets out to learn from what is there – especially from the kinds of personal outcomes that participants reveal; this is the first characteristic of the Tracer Study.

A second characteristic is that the mass of information that results is often of immediate use: knowing about its actual impact on people can be directly related to the conceptualization and operation of a programme, changing or refining how effectiveness is perceived, modifying or adding to the programme's objectives, and perhaps fine-tuning programme content or changing the ways in which it is structured and run.

A third distinctive characteristic is that a Tracer Study is programme-led and focused on those who were meant to benefit – and this is despite the fact that most of the Studies were implemented by external researchers. The tracer studies present both an opportunity and a challenge for the broader field of educational research. These studies offer important information.

3.2 An opportunity:

Tracer studies represent an opportunity for many of the right reasons. First, the projects represent diverse geographical locations and cultural settings serving a wide range of individuals in very different territories. Too often the ideas about what services should be provided are driven by information generated in the industrialized world. This fact is a natural result of vast resources and large numbers of well-trained staff available for educational projects. However, even for the industrialized world, verification of educational approaches or service processes is required. The tracer studies step into the complexity of settings that stretch and test a broad range of service ideas in new ways.

Second, the projects are fundamentally democratic, a trait increasingly seen as an essential ingredient of any modern society. The projects these studies examine are usually focused on community members discovering ways to help others in their community. This approach is one of empowerment and entitlement. All people respond better when they can see that the product of their effort is accepted and respected. This dimension of the tracer studies establishes their leadership for the broader field of research and educational evaluation.

Third, the studies look at project participant outcomes over time. Too often, the development of information stops at the end of the service component of the project for participants. Looking at outcomes over time is a very important step in the process of separating those approaches that actually change circumstance from those that simply enable some event to occur earlier in time. The tracer studies ask difficult questions regarding effectiveness of services that the broader field of research and evaluation often overlooks.

3.3 A challenge:

Tracer studies are challenged by the mainstream field of research and evaluation. The fields accepted research standards tear at the fabric of the work to date. First, most of the tracer studies have not developed an adequate sample size, nor have they undertaken random selection and assignment. Without meeting these basic criteria, the information generated is interesting for developing ideas and suggesting lines of thought, but offer little guidance to shape public social or educational policy.

Second, many of the tracer studies focus on programme ideas undergoing development, making it unclear just what the specific service or approach actually was. Policy can only be built around information from stable programs. New programmes that are in constant change, as they rightly respond to the experience of delivering services, are not good candidates for policy information because it is unclear what aspect of the project is actually being evaluated.

Third, when project ideas are new, it usually means that instrumentation to assess the project outcomes has yet to be developed. While interviews with participants and judgments by project staff are especially vital for the development of a new service, such data are highly suspect as outcome information. Much of the information presented in the tracer studies, from the initial phase of the project as well as the follow-up phase, comes from such interviews and judgments. Of course, that does not mean that it is always safer to use traditional outcome assessment approaches: are they standardized for this specific population? Is translation of instruments or training procedures involved, and who checked the new forms for accuracy? How was the trial field tests of the instruments conducted? In short, the tracer studies have tackled a very difficult problem indeed, but for the findings to be meaningful there must be answers to these questions.

3.4 The contribution of tracer studies to educational research and evaluation:

All that said, however, there are many lessons generated by the tracer studies, and the broader field of educational research and evaluation can learn extensively from them. From my point of view one of the most important lessons is from the new community or educational service patterns. Working on limited budgets and often short staffed, these projects have explored new patterns of enabling individuals to meet and overcome problems.

Another lesson of value from the studies stems from their diversity: diversity in methods of service; diversity in culture and language of participating groups; diversity in economic development of the community; and diversity in ethnic composition.

The tracer studies encompass a wide range of diverse efforts which can provide intellectual building blocks for newer undertakings, if we can only learn to build on the old while attempting the new. The availability of such studies to the broader field of research and educational evaluation moves forward the potential of knowledge about high quality service. A Tracer Study is another name for a follow-up study. We have used the word 'tracer' because we are discussing studies that have traced students, the workers, the communities or the organizations some years after they participated in a particular programme to find out how they are faring. The studies attempt to find out whether anything has remained from a programme that, several years earlier, tried to influence people's lives.

3.5 Tracer Studies and research in general:

Tracer Studies are not a new methodology; they are an approach that can be used to find out more about a programme and its participants. A Tracer Study, as described here, is a relatively short exercise that can be inexpensive compared to many other kinds of research. It is also easy to understand and easy to explain to all the participants. Like all research, such a study cannot prove that any outcomes found were a direct result of the programme, it can only support an assumption. A Tracer Study can, however, indicate trends and directions that can affect programming and policy.

3.6 What is to be traced?

To carry out a Tracer Study, a number of questions need to be answered. The following is just a first set of questions.

- What are the objectives of the study?
- Is the whole programme to be studied or just one aspect of it?
- What will be the gap (that is: how many years?) between participation in the programme and the follow-up study?
- Will it be possible to trace a majority of participants? That is: is/was the record-keeping system good enough to find them and or is this a location with a fairly stable population?
- How many former participants will the study include?
- Does there need to be a comparison group included in the study in order to compare findings between programme and non-programme informants?
- What resources are available for the study in terms of timing, money,
- Human resources and so on?
- Who is going to design the study?

At the Foundation we decided that there should be a minimum of four years after participation for any studies that we supported. This was partly because we felt that it was a reasonable period to measure medium-term effects or impact, and also because the important rule might be to ensure that the programme keeps good enough records from the very start so that tracing will be possible as and when it is decided to do so.

Sometimes there is a need for a broad research approach that uses a variety of methods. In this instance, a Tracer Study is complementary to other research approaches. There could be a need for a deeper understanding and knowledge about a specific aspect of the programme; a Tracer Study could be the ideal tool to explore this aspect with former participants and other respondents.

When a programme is trying to make a case for further funding or dissemination, a study that demonstrates a continuing impact on participants some years after they were in the programme can be a useful contribution to the argument: A quantitative approach, using figures about costs or about people for example, can help to convince potential supporters, other organizations and services and founders. A qualitative approach can give very real insights and put a human face and voice to the needs, problems and solutions. Both of these approaches (particularly when they are used together) can show gaps, indicate trends and demonstrate change over time.

On its own, a Tracer Study cannot provide a complete and comprehensive picture. A Tracer Study of a programme or situation that no longer exists or has changed radically could be debatable where resources are scarce. While there is always something to learn from these studies, it would be appropriate to question the potential for applying that learning to practice, to policy and to theory.

3.7 Principles and guidelines for doing Tracer Studies:

Early planning;

- Develop the strategy for undertaking a Tracer Study at the same time that the programme is being developed; this includes the budget
- Ensure that record-keeping is accurate and complete and that the records are not thrown away
- Document the situation from the time the programme begins (take ‘snapshots’ in words and pictures)
- Identify clear impact indicators – they should be observable and measurable
- Put the Tracer Study within a wider evaluation/research strategy of the project
- Take into account that each phase of a programme is different – tracing students who were involved in a pilot/developmental phase may not yield the same results as tracing the later programme
- Not all designs have equal value – you may need to have hard data to impact policy
- Different purposes/audiences/methods/budgets

When designing a Tracer Study there are many questions to be discussed, thought about, and answered. The panel below gives the main general questions, although there are going to be others that apply to the specific programme, setting and overall context.

3.8 Designing a Tracer Study:

Practicalities:

- What audience are you aiming at?
- Where/by whom are the research questions generated?
- What is the focal unit (students, employers, process of change)?
- What is the timeline for tracing?
- What is the timeline for carrying out the research?
- Who are the informants, the sample?
- Will you have a comparison sample?
- Are you going to measure/count?
- Who is on the research team?
- What are the research instruments, the tools?
- Have you taken the context into account?
- How are you going to report?

This question has to do with having a clear understanding of who is interested in the results of a Tracer Study. While some may have very clear ideas of what results they want to see. It is important to decide which stakeholders should be included and then to agree a common set of objectives and approaches.

3.9 Objectives and hypotheses:

As noted earlier, the overall objective for a Tracer Study would be to find out what has happened over a specific period but it is obviously useful to set more concrete objectives. Often, people think that this means testing a specific hypothesis. The problem with this is that the research is being led in one restricted direction, the hypothesis requires only a yes or no answer, and the overall picture is lost.

Experience in such studies, shows that it is better to use research questions as opposed to a specific hypothesis. This is partly because a Tracer Study cannot possibly reveal sufficient data to prove anything with certainty; and partly because a hypothesis can blind the researcher to ‘facts that don’t fit’. The use of research questions should lead to an exploration that attempts to find out how life is for the former participants and their families.

One of the real values of Tracer Studies is that they can provide the programme with information that can be used to improve the delivery of services. The second objective was, unfortunately, beyond the scope of any such study: It is not possible to prove anything through a Tracer Study.

3.10 Where do the research questions come from?

Knowing the agenda and the audience and the objectives for the Tracer Study helps in determining the research questions. These are not the questions that will be asked of informants during interviews or discussions and so on, they are the questions that you are hoping to find answers to by doing the study.

Choosing the right research questions is key to the whole study as the questions determine the way forward in the methodology (what methods, who will be the respondents and so on) and, even more crucial, the data that are collected, the data analysis, and what it is possible to say afterwards. It is important to involve people who are close to the respondents when deciding the research questions; it is also possible to involve potential respondents themselves. This could be done through group discussions or by open-ended interviews that explore what has been happening to them over the past years. In any case, research questions that have been dreamed up in an office far from the field are less likely to be useful than those that are agreed following discussions at several levels. It is not unusual that the initial research questions prove insufficient to reach the heart of the situation. Many times an initial analysis of the data raises additional questions that can be explored through further analysis.

3.11 Outcomes and indicators

Objectives for the Tracer Study are closely related to what people anticipate will happen to and for participants over time. In many cases, it becomes necessary to have concrete indicators of what you are seeking to find.

3.12 Informants/respondents

Who will you seek information from? Once all the questions above have been answered and decisions taken, you can then look at which kinds or groups of people will be asked to give information. This will also depend on your specific focus – are you looking at what happened to the children?

There are many ways of gathering data for a study. As a general rule, the objectives and research questions will determine the methods to be used, as will the level of data and analysis that you are looking for. For example: very detailed or more general data, individual perceptions or group perceptions, statistical or qualitative analysis. The main methods that were used in the studies mentioned here were: interviews, questionnaires, rating scales, discussion groups, observations, examination of records, background research and surveys.

3.13 Interviews and questionnaires:

To make sure that the same areas are covered with all members of a group individual information on personality development and attitudes was collected mainly through direct interviews, which involved, first and foremost, creating a good atmosphere and rapport with the student.

3.14 Surveys:

Surveys are used to gather fairly basic data which can then be collated to draw a broad picture. The same questions will be asked of all informants, and the survey may be conducted through interviews or in writing, but these are not generally personalized. It would be possible to use a survey to trace some generalized data among a large group, and then use the results to decide on topics for more in-depth investigations with a smaller group of respondents. A survey could also be used the other way around. For example, after a small-scale Tracer Study to find out whether specific findings can be generalized among the larger population.

3.15 Qualitative or quantitative?

Whether to use qualitative or quantitative methods depends on the objectives of the study, the research questions, the audience being aimed at as well as the resources and skills available. Both of these methodologies struggle to interpret the evidence and account for differences between respondents. And in any case, they are not alternatives. Qualitative methods can reveal phenomena but cannot tell us to what extent they occur within a given population. Quantitative methods can give us this kind of information, but only about phenomena that we know exist.

Combining the different methodologies should lead to more meaningful findings and interpretations. It might be logical to begin with a qualitative study in order to discover the phenomena and then undertake a quantitative study to discover the strength, rate and distribution of them within the given population. It is also possible, for example, to have a fairly large scale quantitative study and then to draw a smaller sample from it for an in-depth qualitative study.

3.16 What variables should explore?

The variables are the characteristics of the people and or the programme that the researcher thinks might be related to outcomes of the programme. The kinds of variables to include depend very much on the programme being studied, the objectives of the research, the overall research questions, and the population being studied. In the panel opposite is a selection of the variables that were used in the Tracer Studies discussed here.

3.17 To compare or not to compare:

Whether to use a comparison group or not in a Tracer Study depends on the research questions. There are two very different questions that can be asked:

The first of these questions is essentially looking for description, it is a way of looking at outcomes, but you cannot relate these to the programme as cause and effect. If this is your research question, you do not require a comparison group.

3.18 Socio-demographic/socio-economic aspects:

- Age
- Socio-demographic makeup
- Economics/ employment opportunities/ poverty/unemployment

If the groups have been randomly assigned, then the sample sizes can be smaller; if the sample is to be non-random, then a larger sample is needed. However, as noted above, in the kinds of Tracer Studies that are being discussed here, it has not been possible to do random assignments, so sample size needs to be determined by other dimensions. One of the things that influences sample size is the study methodology. For example, it would be difficult and unwieldy to do a qualitative study with a sample of 2,000 people. If the study is quantitative then samples of around 25 in each group can be sufficient.

3.19 Population and Sample Frame:

With respect to the area of the study, it has been identified that the duration of programmes of electronics, industrial electrician and fitter machinist is two years and the duration of gas and arc

welder programme is one year. Hence, the population which is taken in to the account had been enrolled with the particular stream in 2003 or 2004 accordingly. The year intended of the completion of these courses by the students in each stream was 2005 as the final exams were taken place at the end of the year 2005.

Table 3.1 Enrolment of Students - Course Wise

Course		Year of intake	Intake capacity	No. Applied	No. Registered
01	NCECP Gas Arc Welder	2004	370	776	332
02	NCECP Electronics	2003	310	1833	282
03	NCECP Fitter-machinist	2003	324	572	296
04	NCECP Industrial electrical	2003	555	1805	460

Source: Statistical hand book on Technical Education 2004

The table 6.1 explains the situation existed on the time period of enrolment of the students on the said areas of the study. Accordingly, 332 were selected and registered for the one year full time course of Gas and Arc Welder among 776 applicants, in 2004. 282 were registered to follow the NCECP fitter-machinist and NCECP electronics which was conducted for two years. 296 and 460 were registered for NCECP fitter-machinist and NCECP Industrial electrical respectively in 2003.

Table 3.2 Sample frame

Course		No of sat for the exam	No of passed the exam
01	NCECP Gas & Arc Welder	296	285
02	NCECP Electronics	167	126
03	NCECP Fitter-machinist	182	164
04	NCECP Industrial electrical	276	129
Total		921	704

Source: Technical College final examination 2005 analysis of results.

NCECP Gas and arc welder course has been conducted in 26 locations out of 36 Technical colleges and 296 have sat for the final exam in 2005. But 11 haven't got through the exam. Though 167 sat for the final exam in 17 technical colleges under NCECP electronics, only 126 were passed the examination. As 19 Technical colleges were dedicated to conduct NCECP Fitter-machinist course, there were 182 have got the opportunity to sit the exam and 164 passed the exam. NCECP Industrial electrical course paved the way for 276 to sit the exam in 26 Technical colleges and 129 were passed the final exam.

Referring the objectives of the study, apparently it is effective taking the total number of the students sat for the final examination in to the account of the sample frame. Because, unless the student got the qualification, still they have possessed a skill and based on that it is possible to cater the industry requirements. Then, irrespectively passing the examination or not level of employment might be nigh among these students who have followed these courses. Developing skills and imparting knowledge towards competencies as the major aspect of these courses, perspective of employability is high. Since, it is positive to consider the total number of sat for the examination as the sample. On the other hand, population of the study has been taken as the sample for data collection. Comparatively it is lower figure and gives the real profile of the population. Then it is strengthening the accuracy and vitality of the findings of the research. Hence, it has been asserted by the research team to collect data with the dispersion of the questioner among all the students who have sat for the final examination under these courses in 2005. As a figure it is 921.

Table : 3.3 Technical Colleges and Courses

College of Technology / Technical College		NCECP - 2005			
		Gas & Arc Welder	Fitter- machinist	Electronics	Industrial electrical
01	Ampara	✓	✓		✓
02	Anuradhapura		✓		✓
03	Akkaraipattu				
04	Anamaduwa				
05	Badulla	✓		✓	✓
06	Balapitiya	✓			
07	Bandarawela	✓	✓		✓
08	Batticaloa	✓			✓
09	Beliatta	✓	✓	✓	✓
10	Dambulla	✓	✓		✓
11	Dehiattakandiya	✓			
12	Embilipitiya	✓		✓	✓
13	Galle	✓	✓	✓	✓
14	Gampaha	✓			✓
15	Hasalaka	✓		✓	✓
16	Homagama	✓	✓		✓
17	Jaffna		✓	✓	✓
18	Kalutara	✓	✓	✓	

19	Kandy	✓	✓	✓	✓
20	Kegalle	✓	✓		✓
21	Kuliyapitiya	✓	✓		✓
22	Kurunegala	✓	✓	✓	✓
23	Maradana	✓	✓	✓	✓
24	Matale				
25	Matara	✓	✓	✓	✓
26	Medagama				

College of Technology / Technical College		NCECP - 2005			
		Gas & Arc Welder	Fitter - machinist	Electronics	Industrial electrical
27	Moneragala	✓			✓
28	Nuwara – Eliya	✓	✓		✓
29	Pathadumbara			✓	
30	Polonnaruwa				
31	Ratmalana	✓	✓	✓	✓
32	Ratnapura	✓	✓	✓	✓
33	Samanthurai				✓
34	Trincomalee				
35	Vavuniya			✓	
36	Warakapola	✓	✓	✓	✓
37	Wariyapola				
38	Weerawila	✓		✓	✓
Total		26	19	17	26

Source : Survey

3.20 Research Methodology:

The research was formulated to identify the matters related to the employability of Technical College graduates who have followed the national certificate of engineering craft practice (NCECP) courses of electronics, industrial electrician, fitter machinist and gas & arc welder in technical colleges 2005. The study has been designed to identify three areas which are in direct relations to the employability of passed outs from Technical Colleges. Educational qualifications, vocational training and relevancy of the course for the employability have been recognized and tested as major areas of

revealing the status of employability of passed outs. Apart from that the study prevails to examine the unemployment and the tendency of students for higher education in Technical and Vocational Education and Training sector. A section has been allocated to accumulate demographic data of students as the basis of the study. The methodology was formulated with to use quantitative techniques.

3.21 Conceptual Frame work:

Accordingly, the research study on this topic can be considered as a further step along the same research line to further investigation of employability of Technical College graduates who have followed the national certificate of engineering craft practice (NCECP) courses of electronics, industrial electrician, fitter machinist and gas & arc welder in technical colleges 2005

The Questionnaire was distributed among 927 passed out students who have read for said steams. The questionnaire was divided into 6 parts. Part one is allocated for the personnel information. It refers seven questions. Part two was designed to test the level of school education of individuals and it consisted of four which leads to unveil the highest qualification that they obtained from the school. Part three is the foundation of the rest of the survey. Because it is focusing the technical education and vocational training that they were confronted and it paws the way of constructing next phases of the study. Almost 40% of the survey derives from the part four which leads to study the factors related to employability and the relevance of the technical course has been followed, to the employment. The attempt to find out matters of unemployment refers to the part five and the test of tendency for higher education is comprised in part six.

Though hypotheses haven't been developed the impact of the study come up with the correlation analysis in between educational background, vocational training, relevancy of the course for employment and unemployment. The study leads to identify the behavioral patterns of these components of the study and realize the affect for each component to the other.

3.22 Study limitations:

The scope of the study is limited to four subject areas of National Certificate of Engineering Craft Practice course. Through, altogether there are nine streams taught under NCECP course.

- ✍ National Certificate of Engineering Craft Practice in Gas & Arc
- ✍ National Certificate of Engineering Craft Practice in Plumbing
- ✍ National Certificate of Engineering Craft Practice in Wood Machinist
- ✍ National Certificate of Engineering Craft Practice in Fitter Machinist
- ✍ National Certificate of Engineering Craft Practice in Refrigeration and Air Conditioning

- ✍ National Certificate of Engineering Craft Practice in Masonry
- ✍ National Certificate of Engineering Craft Practice in Industrial Electrician
- ✍ National Certificate of Engineering Craft Practice in Motor Vehicle Mechanic

Through, the survey was confined to cover up the employability of students who have followed Electronic, Industrial Electrician, Gas & Arc Welder and Fitter Machinist. Circumstances of students of other streams were not revealed with this study. As well as the time period for analysis was year 2005. But this course was introduced in year 2000. Therefore it is effective that it could have collected data since 2001. Then the validity of the analysis would be stronger.

When surveying of employability of passed outs of TCs, it is more productive to accumulate data of total student population including students of other courses. But the attentiveness of the study was drew only for the passed outs of those particular 4 streams.

Reluctance of responding has affected the analysis as the respondent rate is 11.43% of the total population. As well as some questions have been left without answering by the respondents and it has been a blockade for the profile of the analysis.

It was determined to obtain comments from a convenient sample of employers; then findings cover the two different perspectives which are related to the scope of the study. Though, time and financial constrains confined to get feed back from employers. But one variable reveals employers' stand on the passed outs from this particular course.

3.23 Data Collection

The method of data collection was based on a questionnaire and it is consisted of 52 overall questions. This has been provided to each and every member of the sample of 927 passed outs. The questionnaire has been sent and collected by post. The questionnaire is comprised of structured questions as well as open ended questions. All six areas expected to be covered by the study have been fulfilled these 52 questions. 106 ex-students were responded and it is 11.43% of the sample/ total population.

It was determined to make the analysis according to the information received for 46 questions out of 52. Because it has been identified these are the components which are having clear relationship with the intended areas to be studied. To clarify the demographic profile of respondents, 4 questions were allocated. For the educational background it was 3 and for vocational training it was 6. 18, 5 and 10 questions were allocated for relevancy of the course to the job, unemployment and tendency for higher education respectively.

3.24 Data Analysis:

Data analysis has been done basically by quantitative methods using of SPSS as the data collection was done by the survey method. For the best practice of the survey and effective information, cross-tabulation has used for the operation. Objectives of the study are clarified properly under this method since the status score of the employability of graduates of the NCECP courses.

Figure 3.1 : Conceptualization and Operation

Concept	Variable	Measure
Demographic Profile of Respondents	Gender	Count/ Percent of responds
	Age	Count/ Percent of responds
	Divisional secretariat	Count/ Percent of responds
	District	Count/ Percent of responds
Educational Background	Ordinary level pass/fail	Count/ Percent of responds
	Stream of advanced level	Count/ Percent of responds
	Advanced level pass/fail	Count/ Percent of responds
Technical and Vocational Training	Course followed	Count/ Percent of responds
	Technical college	Count/ Percent of responds
	Status of results	Count/ Percent of responds
	Medium of knowing the course	Count/ Percent of responds
	Have you followed any other course	Count/ Percent of responds
	Other courses followed	Count/ Percent of responds
	Kind of training	Count/ Percent of responds
	Sufficiency of theoretical and practical knowledge for the job	Count/ Percent of responds
	Relevancy of the NCEP course followed for the job	Count/ Percent of responds
	Relevancy of the training received from the course for the job	Count/ Percent of responds
	If not, reasons	Count/ Percent of responds
	Effectiveness of the course to find a job/start self employment	Count/ Percent of responds
	If not, reasons	Count/ Percent of responds
	Satisfaction of the employer on the course followed	Count/ Percent of responds
Technical and Vocational Training	Future prospects of your job	Count/ Percent of responds
	Areas to be developed of the course	Count/ Percent of responds
Unemployment	Refusal of any type of job	Count/ Percent of responds
	If yes, reasons	Count/ Percent of responds
	Duration of unemployment	Count/ Percent of responds
	Type of job expected	Count/ Percent of responds
	Main reason of unemployment	Count/ Percent of responds
Tendency for Higher Education	Effectiveness of the course for further education	Count/ Percent of responds
	Course of further education	Count/ Percent of responds
	Institution conducting the course	Count/ Percent of responds
	Awareness of NVQ system	Count/ Percent of responds
	Source of awareness	Count/ Percent of responds
	Level 5 student	Count/ Percent of responds
	Level 5 course	Count/ Percent of responds
	College of technology	Count/ Percent of responds
	Any NVQ certificate received	Count/ Percent of responds
Level of NVQ	Count/ Percent of responds	

Source: Developed by the Researcher

CHAPTER 4 - DATA ANALYSIS

4.1 Method of data collection and analysis:

The data collected by the questionnaire was analyzed using graphical and statistical methods in this chapter. The questionnaire has been divided into six parts. In the first part demographic features of the passed outs from Technical Colleges who have followed National Certificate of Engineering Craft practice in Gas and Arc Welder, Electronics, Fitter Machinist and Industrial Electrical Course in 2005. In the second part data related to secondary education of them and the third part is concerned of the Technical Education and the Vocational qualifications they have obtained. Factors related to the employability are focused by the fourth chapter. Unemployment and the tendency for the higher education are discussed by fifth and sixth chapters respectively. The effectiveness of major factors for the employment and unemployment is analyzed by using of cross tabulation of SPSS/PASW package.

4.2 Analyzing the demographic data:

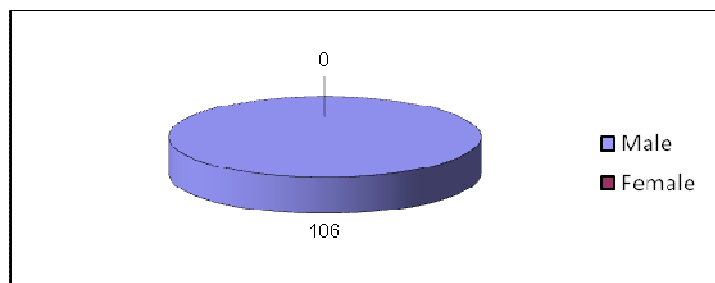
The first six questions of the demographic part were categorized as follows according to their responses.

Table 4.1 : Respondents by Gender

Gender	No of respondents	Percent
Male	106	100
Female	0	0
Total	106	106

Source: Survey

Figure 4.1 : Respondents by Gender



Source: Developed by the researcher

The first step of the demographic sector is considering the gender situation of the respondents. According to the responds it is obvious that the total consisted with male and no female students have responded. It is revalued only male students were interested of following these courses as the respondent rate is 100% of male passed outs.

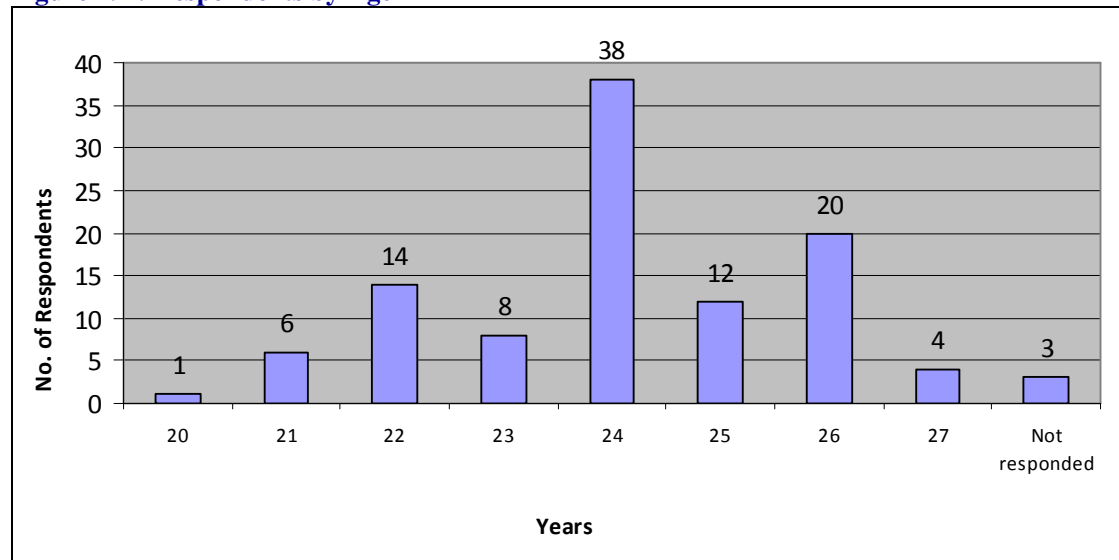
The next step is examining the level of age of the respondents as follows;

Table 4.2 : Respondents by Age

Age – Years	No of respondents	Percent
20	1	0.9
21	6	5.7
22	14	13.2
23	8	7.5
24	38	35.8
25	12	11.3
26	20	18.9
27	4	3.8
Not responded	3	2.8
Total	106	100

Source: Survey

Figure 4.2 : Respondents by Age



Source: Developed by the researcher

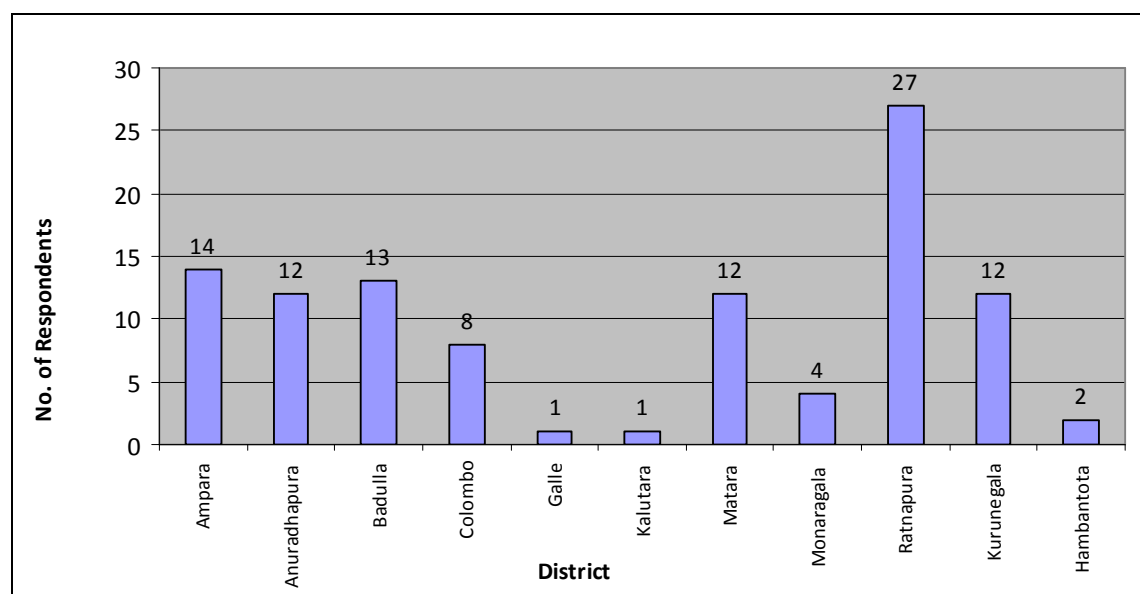
Majority of the sample are 24th years old and the age cohort prevails between 20 years and 27th years. Three respondent haven't mentioned their age and if is negligible as it is a small amount of the sample.

Two questions of the demographic part were about the area that they reside. One, unveils the district and the other focused the divisional secretariat.

Table 4.3 : Respondents by Districts

District	No of respondents	Percent
Ampara	14	13.2
Anuradhapura	12	11.3
Badulla	13	12.3
Colombo	8	7.5
Galle	1	0.5
Kalutara	1	0.9
Matara	12	11.3
Monaragala	4	3.8
Ratnapura	27	25.5
Kurunegala	12	11.3
Hambantota	2	1.9
Total	106	100

Source: Survey

Figure 4.3 : Respondents by Districts

Source: Developed by the researcher

Table 4.4 : Respondents by Divisional Secretariat

Divisional Secretariat	No. of Respondents	Percent %
Pasgoda	1	0.9
Kamburupitiya	1	0.9
Uhana	7	6.6
Pitabeddara	1	0.9
Welimada	3	2.8
Padaviya	2	1.9
Matara	5	4.7
Padukka	1	0.9
Uvaparanagama	2	1.9
Buttala	1	0.9
Damana	7	6.6
Nnp	4	3.8

Haldummulla	3	2.8
Weligama	2	1.9
Wellawaya	2	1.9
Galenbindunuwewa	1	0.9
Ipalogama	3	2.8
Piliyandala	1	0.9
Walallawita	1	0.9
Homagama	3	2.8
Kekirawa	2	1.9
Ambalangoda	1	0.9
Hanwella	3	2.8
Welipitiya	2	1.9
Akuressa	1	0.9
Ehaliyagoda	9	8.5
Awissawella	7	6.6
Haliela	2	1.9
Badulla	1	0.9
Tissamaharama	2	1.9
Embilipitiya	4	3.8
Godakawela	5	4.7
Kahawatta	4	3.8
Kuliyapitiya	2	1.9
Udubaddawa	2	1.9
Katugampola	2	1.9
Pannala	3	2.8
Hettipola	3	2.8
Total	100	100

Source: Survey

The majority represents the Ratnapura District and it is 27. The minority represent Galle and Kalutara Districts. According to the data, respondents were dispersed in 38 divisions all over the country.

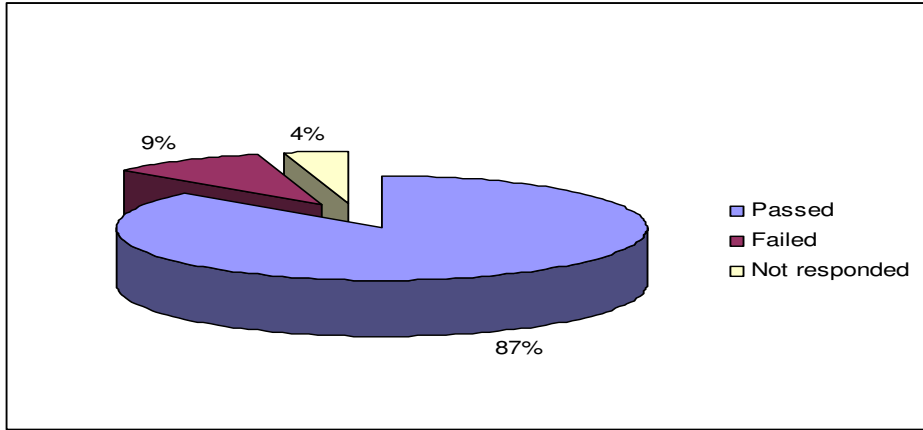
The second part of the questionnaire has been allocated to describe the school education of passed outs and it covers three areas of school education.

Table 4.5 : Respondents by education - Ordinary Level

Status	No. of Respondents	Percent
Passed	92	86.8
Failed	10	9.4
Not responded	4	3.8
Total	106	100

Source: Survey

Figure 4.4 : Respondents by education - Ordinary Level



Source: Developed by the Researcher

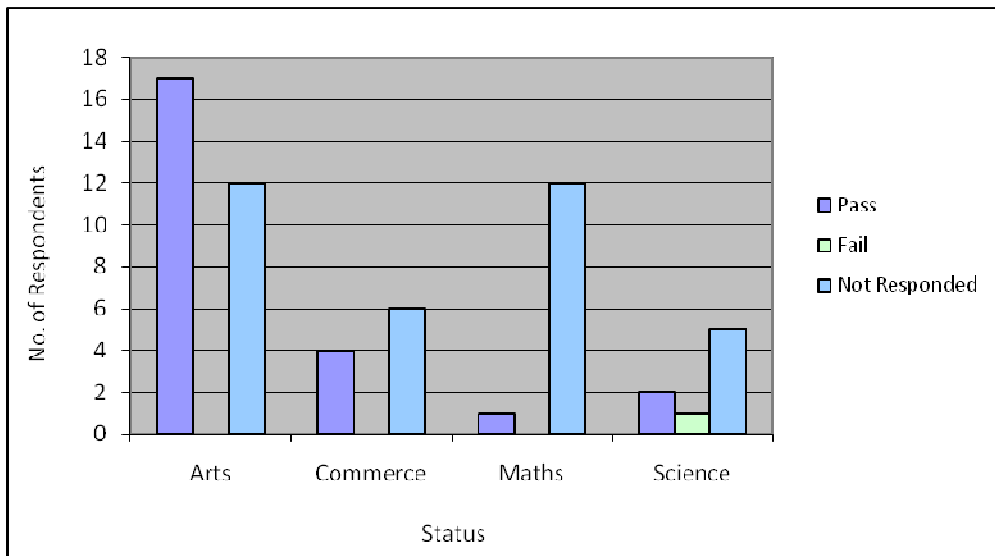
With respect to the above figure 86.8% of the respondents were passed the ordinary level examination and just 9.4% have mentioned that they were unable to obtain the particular qualification. 3.8% have not mentioned their either they have passed ordinary level or not.

Table 4.6 : Respondents by education - Advanced Level

Status	Stream of Advanced Level Examination					Total
	Arts	Commerce	Maths	Science	Not available	
Pass	17	4	1	2	4	28
Fail	0	0	0	1	0	1
Not Responded	12	6	12	5	42	77
Total	29	10	13	8	46	106

Source: Survey

Figure 4.5 : Respondents by education - Advanced Level



Source: Developed by the Researcher

Apparently majority have not responded about the stream that they have followed for their advanced level and it is 46. Though 28 persons have passed advanced level and 1 has failed. But the significant factor is majority of them are reluctant to express the status of their advanced level. As a percentage it is 72.26% of the sample.

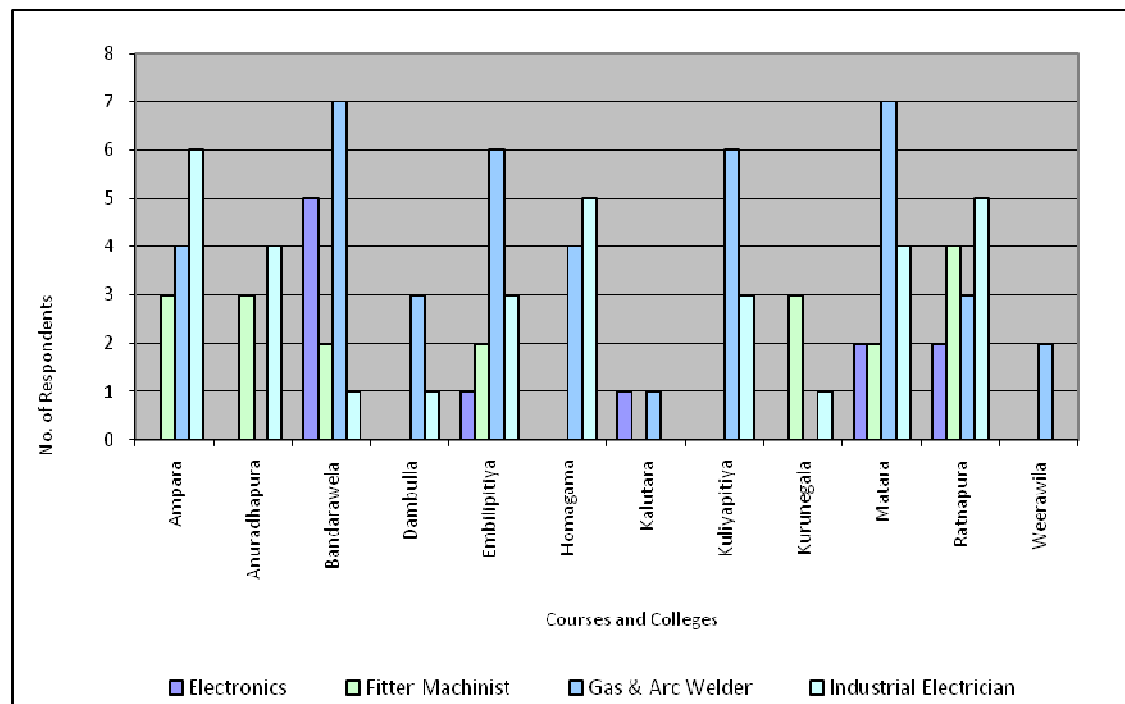
The third part of the questionnaire is reserved to accumulate the data related to the technical education that they have obtained.

Table 4.7 : Technical Education

Technical College	Course Followed				Total
	Electronics	Fitter Machinist	Gas & Arc Welder	Industrial Electrician	
Ampara	0	3	4	6	13
Anuradhapura	0	3	0	4	7
Bandarawela	5	2	7	1	15
Dambulla	0	0	3	1	4
Embilipitiya	1	2	6	3	12
Homagama	0	0	4	5	9
Kalutara	1	0	1	0	2
Kuliyapitiya	0	0	6	3	9
Kurunegala	0	3	0	1	4
Matara	2	2	7	4	15
Ratnapura	2	4	3	5	14
Weerawila	0	0	2	0	2
Total	11	19	43	33	106

Source: Survey

Figure 4.6 : Technical Education



Source: Developed by the Researcher

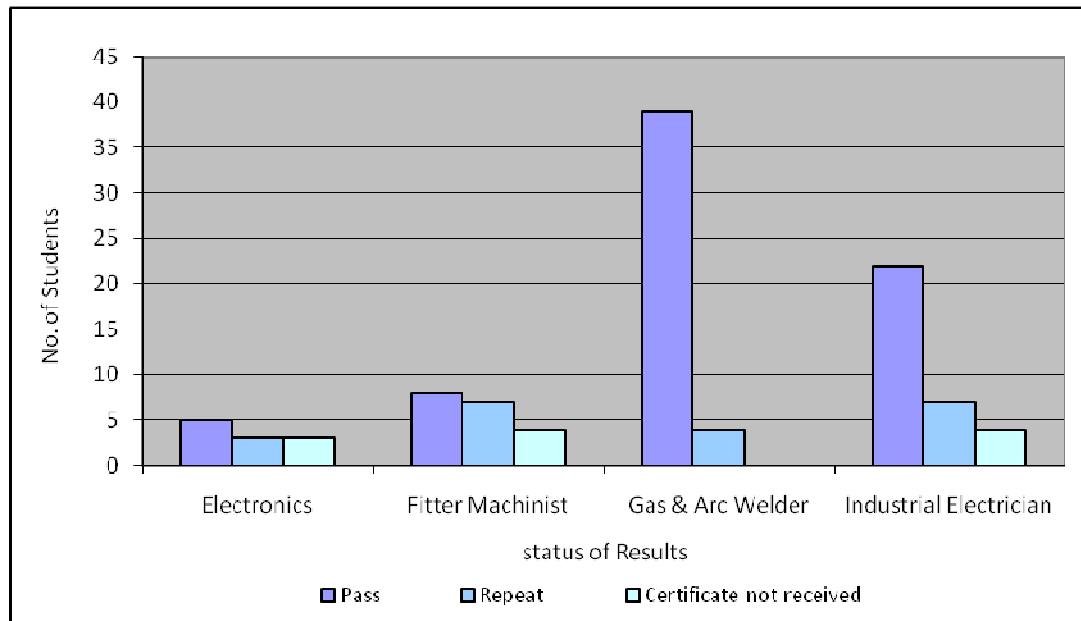
In accordance with the above data 43 students were followed Gas & Arc Welder course in 10 colleges in different areas of the country. 33 students were followed Industrial Electrician in 10 colleges. 11 responds and 19 responds are for Electronics and for Fitter Machinist respectively.

Table 4.8 : Analysis of the Result

Status of Results	Course Followed				Total
	Electronics	Fitter Machinist	Gas & Arc Welder	Industrial Electrician	
Pass	5 (45%)	8 (42%)	39 (90%)	22 (66%)	74 (69%)
Repeat	3 (27%)	7 (36%)	4 (9%)	7 (21%)	21 (19%)
Certificate not received	3 (27%)	4 (21%)	0 (0%)	4 (12%)	11 (10%)
Total	11 (100%)	19 (100%)	43 (100%)	33 (100%)	106 (100%)

Source: Survey

Figure 4.7 : Analysis of Results



Source: Developed by the Researcher

39 out of 43 students of Gas & Arc Welder stream have passed the final test. 5 out of 11 passed the final test of Electronics and 8 passed from Fitter Machinist stream. In Industrial Electrician it is 22. The total of the students who have passed the final test in all 4 streams is 74. 21 students had to repeat the exam. The important matter is 11 students have not received their certificate yet. Altogether with them the total of students who have passed the exam rises up to 85 and it is over 80% of the sample.

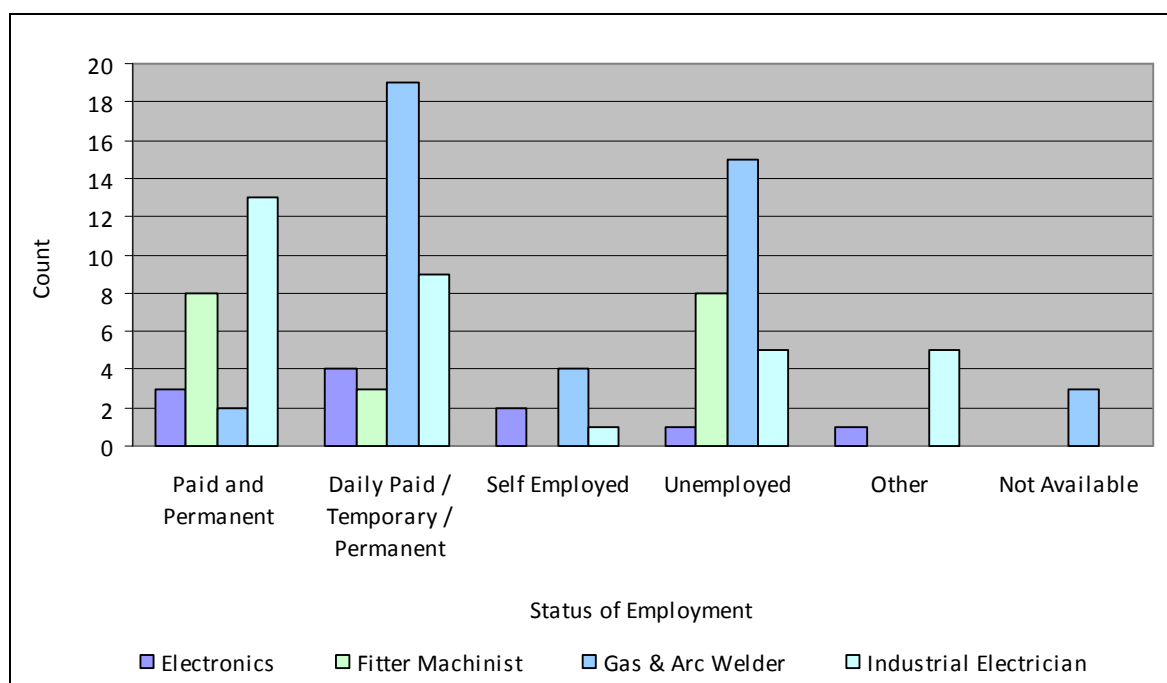
The fourth part is dealt with the main area of this study; it is employment status of the passed outs who have followed these courses.

Table 4.9 : Status of Employment

Status of Employment	Course Followed				Total
	Electronics	Fitter Machinist	Gas & Arc Welder	Industrial Electrician	
Paid and Permanent	3 (27 %)	8 (42%)	2 (4%)	13 (39%)	26 (24%)
Daily Paid / Temporary / Permanent	4 (36%)	3 (15 %)	19 (44%)	9 (27%)	35 (33%)
Self Employed	2 (18%)	0 (0%)	4 (9%)	1 (3%)	7 (6%)
Unemployed	1 (9%)	8 (42%)	15 (34%)	5 (15%)	29 (27%)
Other	1 (9%)	0 (0%)	0 (0%)	5 (15%)	6 (5%)
Not Available	0 (0%)	0 (0%)	3 (6%)	0 (0%)	3 (2%)
Total	11 (100%)	19 (100%)	43 (100%)	33 (100%)	106 (100%)

Source: Survey

Figure 4.8 : Status of Employment



Source: Developed by Researcher

26 persons have been working as paid and permanent basis. Majority is unveiled that they engage with daily paid/temporary/part time work. Interest of self employment is comparatively low as it stated just 7 persons that they self employed. Unemployment status is 27.4% of the sample and it is considerably higher level.

The highest number of employment is recorded Gas & Arc Welder stream and it is 19. But these are engaging with daily paid, temporary or part time jobs. 13 have employed permanent and paid basis and all of them have followed Industrial Electrician course. Higher rate of unemployment is recorded as 15 among the passed outs who have followed Gas & Arc Welder course.

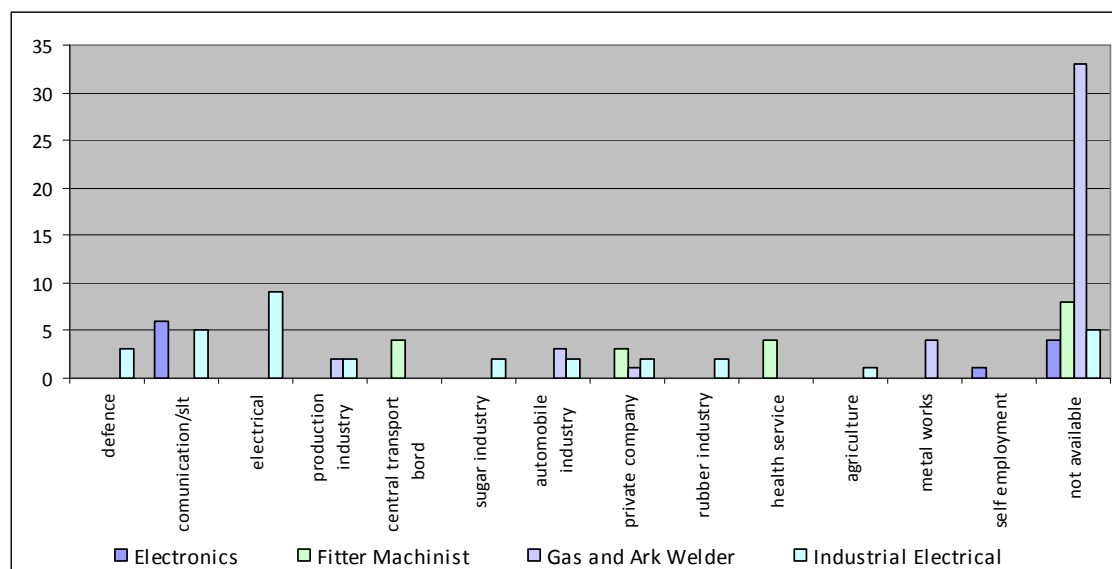
The analysis of the main industries that the passed outs have been working as follows Communication, Electrical and Metal Work industries are significant as most of the passed outs were involved with these industries.

Table 4.10 : Main industry

Main Industry	Course followed				Total
	Electronics	Fitter Machinist	Gas and Ark Welder	Industrial Electrical	
Defense	0	0	0	3	3
Communication/Slit	6	0	0	5	11
Electrical	0	0	0	9	9
Production Industry	0	0	2	2	4
Central Transport Board	0	4	0	0	4
Sugar Industry	0	0	0	2	2
Automobile Industry	0	0	3	2	5
Private Company	0	3	1	2	6
Rubber Industry	0	0	0	2	2
Health Service	0	4	0	0	4
Agriculture	0	0	0	1	1
Metal Works	0	0	4	0	4
Self Employment	1	0	0	0	1
Not Available	4	8	33	5	50
Total	11	19	43	33	106

Source: Survey

Figure 4.9 : Main industry



Source: Developed by the Researcher

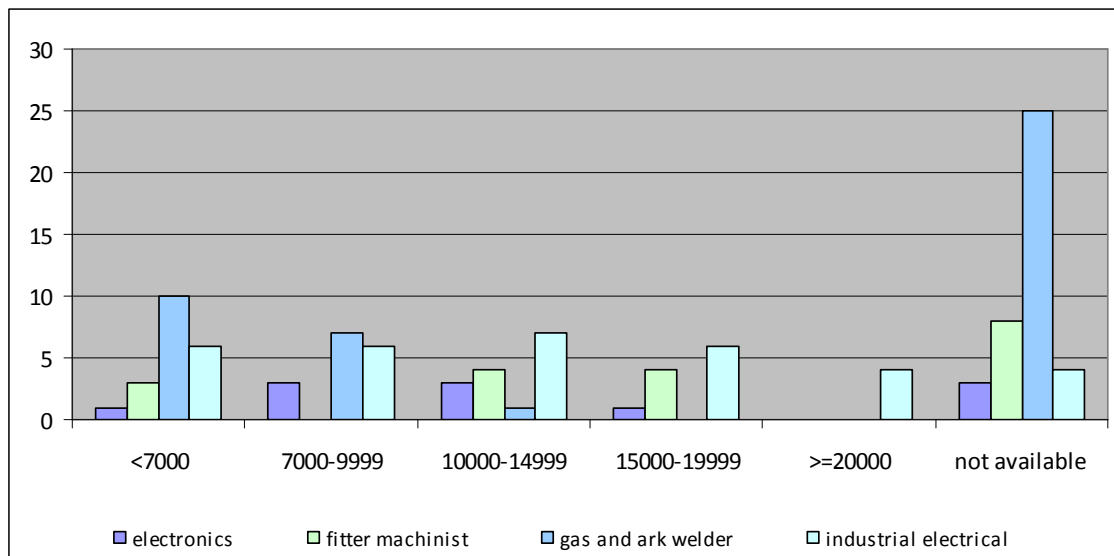
Monthly income of passed outs is existed below Rs. 15,000.00 as 48.11% remains below the aforementioned income level. 9.4% of employed passed outs earn above Rs. 15,000.00 income per month.

Table 4.11 : Total income

Income	Course Followed				Total
	Electronics	Fitter Machinist	Gas And Ark Welder	Industrial Electrical	
<7000	1	3	10	6	20
7000 -9999	3	0	7	6	16
10000 -14999	3	4	1	7	15
15000 -19999	1	4	0	6	11
>=20000	0	0	0	4	4
not available	3	8	25	4	40
Total	11	19	43	33	106

Source: Survey

Figure 4.10 : Total income



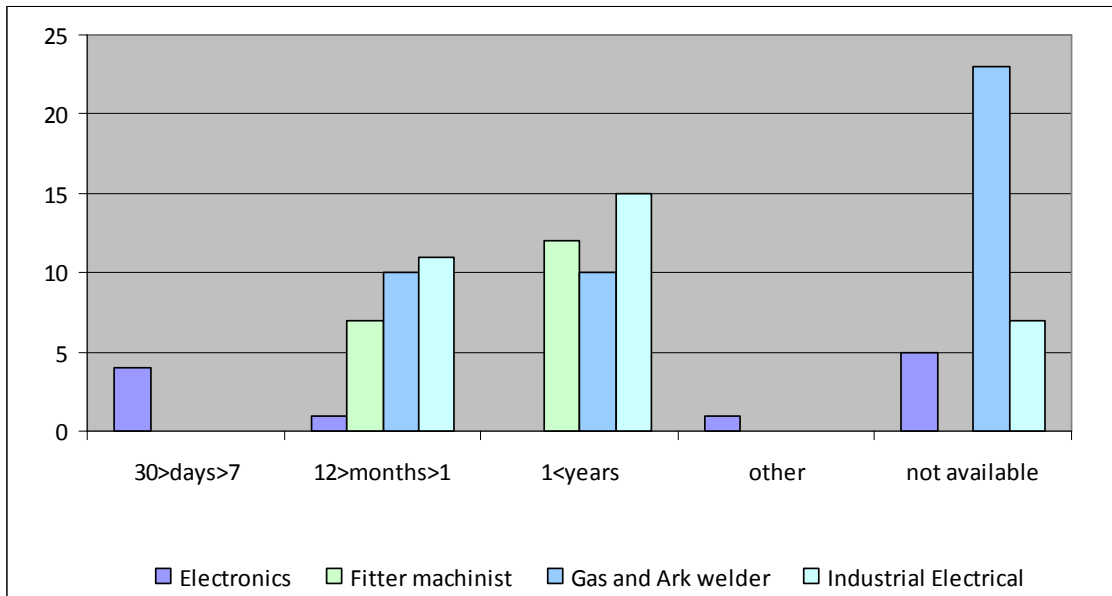
Source: Developed by the Researcher

Table 4.12 : Time Spent until the Job

	Course followed				Total
	Electronics	Fitter machinist	Gas and Ark welder	Industrial Electrical	
30>days>7	4	0	0	0	4
12>months>1	1	7	10	11	29
1<years	0	12	10	15	37
other	1	0	0	0	1
not available	5	0	23	7	35
Total	11	19	43	33	106

Source: Survey

Figure 4.11 : Time spent until the job



Source: Developed by the Researcher

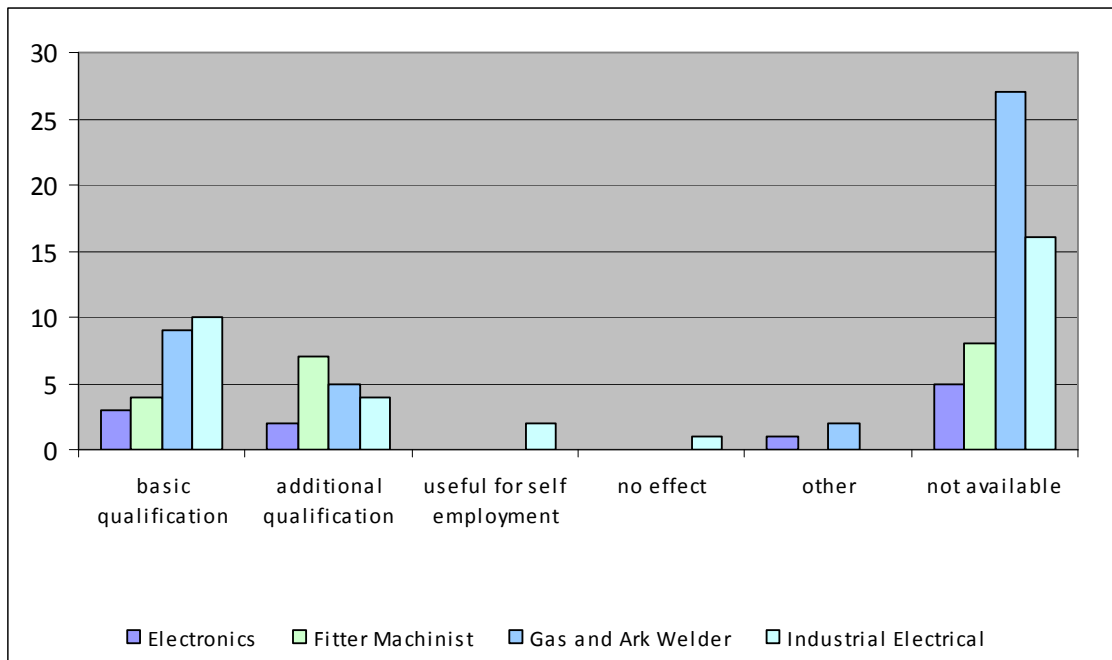
Majority had to spend more than a year to be employed and it is around 35%. Around 31% had to spend less than a year to be employed after the completion of the course. Over 38% were employed in the private sector and around 9% have been employed in the Government and Semi Government sectors.

Table 4.13 : Effectiveness of the Course for Find a Job/Start Self Employment

	Course followed				Total
	Electronics	Fitter Machinist	Gas and Ark Welder	Industrial Electrical	
Basic Qualification	3	4	9	10	26
Additional Qualification	2	7	5	4	18
Useful For Self Employment	0	0	0	2	2
No Effect	0	0	0	1	1
Other	1	0	2	0	3
Not Available	5	8	27	16	56
Total	11	19	43	33	106

Source: Survey

Figure 4.12: Effectiveness of the course for find a job/start self employment



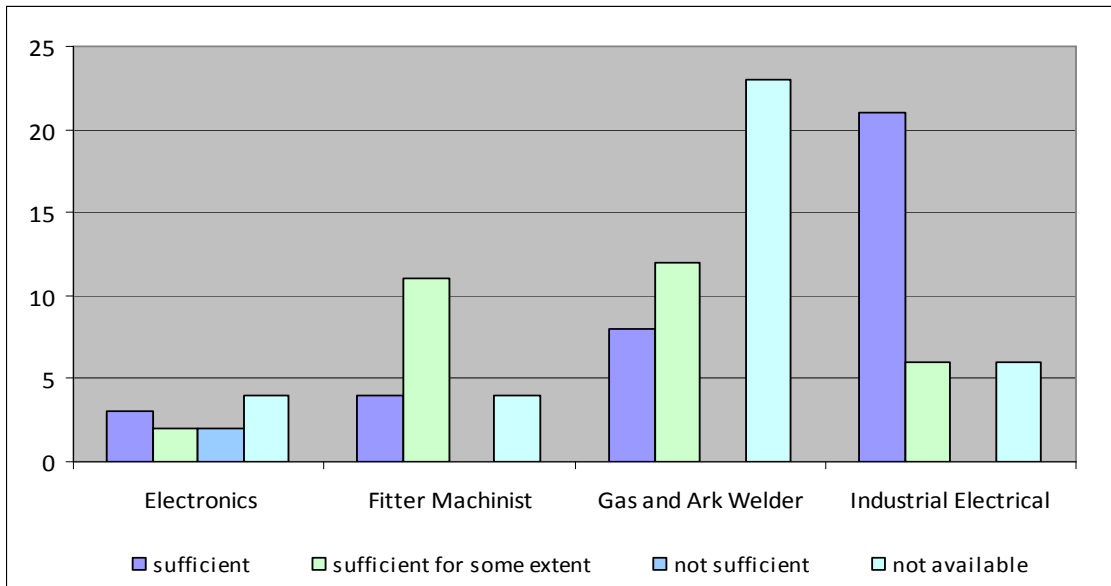
Source: Developed by the Researcher

Table 4.14 : Sufficiency of theoretical and practical knowledge for the job

	Course followed				Total
	Electronics	Fitter Machinist	Gas and Ark Welder	Industrial Electrical	
sufficient	3	4	8	21	36
sufficient for some extent	2	11	12	6	31
not sufficient	2	0	0	0	2
not available	4	4	23	6	37
Total	11	19	43	33	106

Source: Survey

Figure 4.13 : Sufficiency of theoretical and practical knowledge for the job



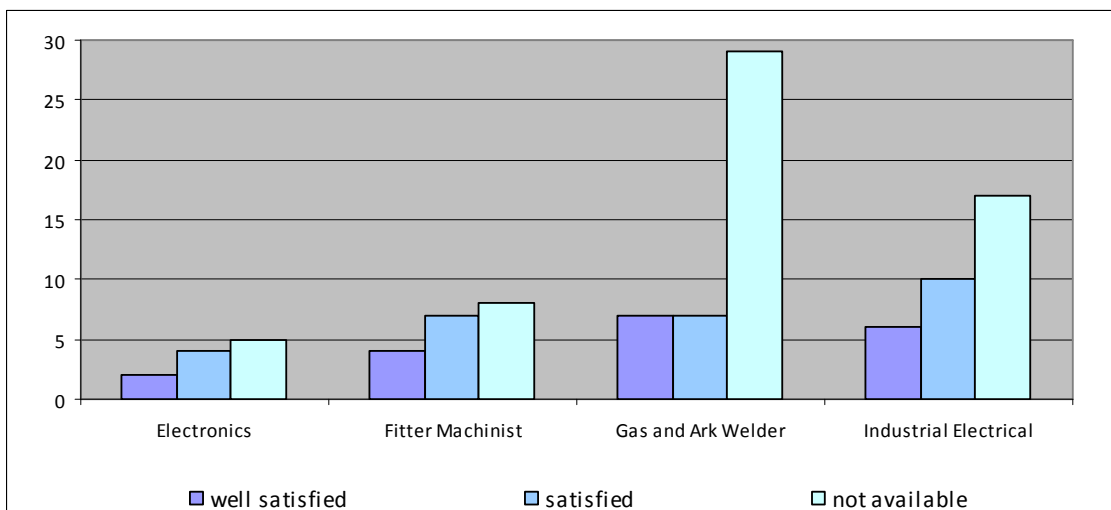
Source: Developed by the Researcher

Table 4.15 : Satisfaction of the Employer on the Course Followed

	Course followed				Total
	Electronics	Fitter Machinist	Gas and Ark Welder	Industrial Electrical	
well satisfied	2	4	7	6	19
satisfied	4	7	7	10	28
not available	5	8	29	17	59
Total	11	19	43	33	106

Source: Survey

Figure 4.14 : Satisfaction of the Employer on the Course Followed



Source: Developed by the Researcher

26% of the passed outs say that the course they followed was a basic qualification to find a job or start a self employment. Around 17% of them say that the course they followed had been an additional qualification for their employment. Around 34% says that the knowledge of theories and practicality obtained from the course is sufficient for their job and 29% says that it is sufficient for some extent. 44% says that their employer are satisfied with the knowledge of employed passed outs.

The discussion of areas to be developed of these courses is confined for 7 areas as follows;

- Broad practical knowledge
- Changes of theoretical knowledge
- New technical knowledge
- Broader computer knowledge
- English
- In-plant training
- Teaching staff and teaching methods

Majority says that three or more among these areas should be developed and most of them say that the courses should be consisted with new technical knowledge. It is 35%.

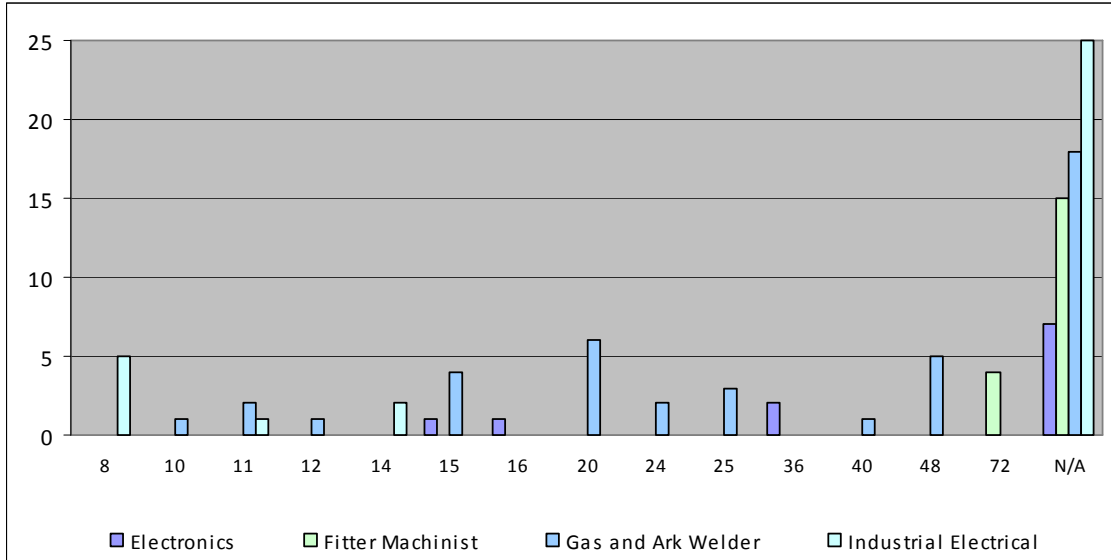
Duration of employment of passed outs from streams as follows;

Table 4.16 : Duration of Unemployment

Duration of unemployment (months)	course followed				Total
	Electronics	Fitter Machinist	Gas and Ark Welder	Industrial Electrical	
8	0	0	0	5	5
10	0	0	1	0	1
11	0	0	2	1	3
12	0	0	1	0	1
14	0	0	0	2	2
15	1	0	4	0	5
16	1	0	0	0	1
20	0	0	6	0	6
24	0	0	2	0	2
25	0	0	3	0	3
36	2	0	0	0	2
40	0	0	1	0	1
48	0	0	5	0	5
72	0	4	0	0	4
not available	7	15	18	25	65
Total	11	19	43	33	106

Source: Survey

Figure 4.15 : Duration of Unemployment



Source: Developed by the Researcher

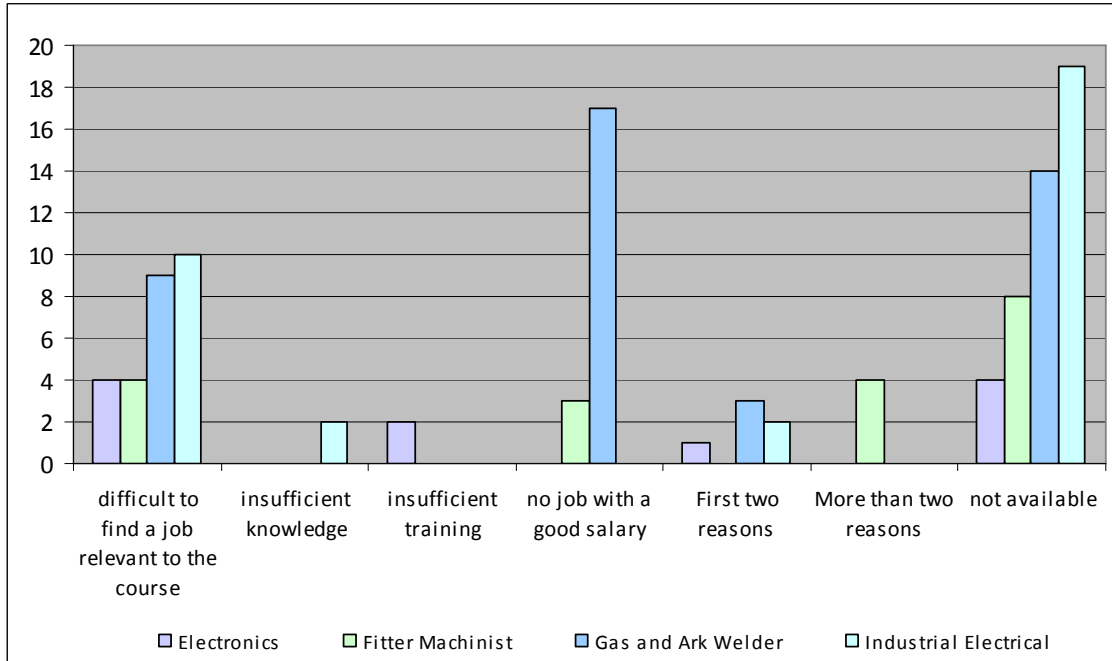
Main reasons for unemployment and status score course wise as follows;

Table 4.17 : Main Reasons for Unemployment

	course followed				Total
	Electronics	Fitter Machinist	Gas and Ark Welder	Industrial Electrical	
Difficult to find a job relevant to the course	4	4	9	10	27
Insufficient knowledge	0	0	0	2	2
Insufficient training	2	0	0	0	2
No job with a good salary	0	3	17	0	20
First two reasons	1	0	3	2	6
More than two reasons	0	4	0	0	4
Not available	4	8	14	19	45
Total	11	19	43	33	106

Source: Survey

Figure 4.16 : Main Reasons for Unemployment



Source: Developed by the Researcher

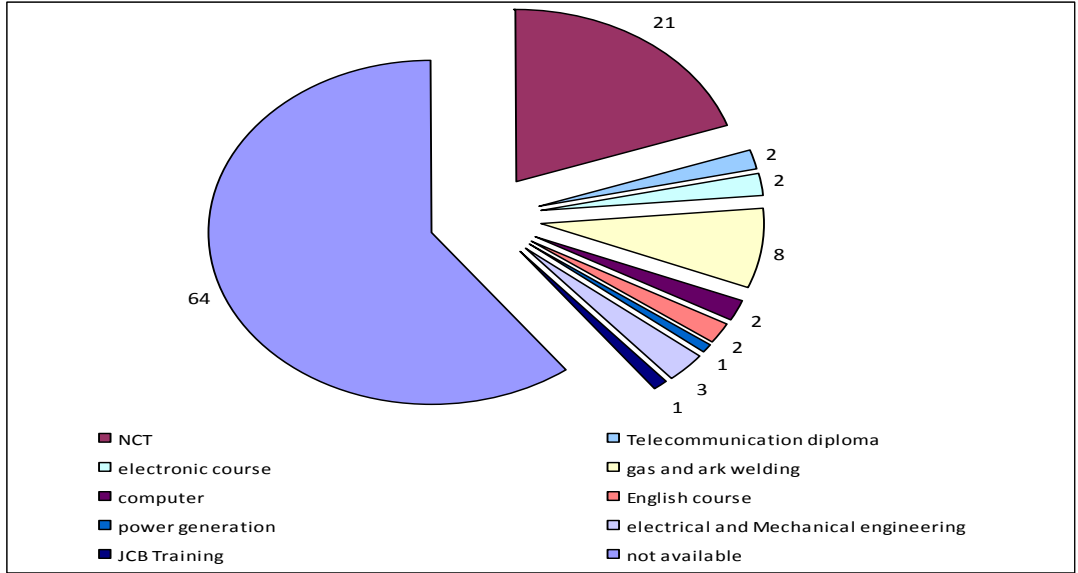
Majority says that it is difficult to find a job relevant to the course that they have followed. It is 34.9% and 22% says that difficult to find a job with a good salary.

Table 4.18 : Course of Further Education

Course	Frequency	Percent
NCT	21	19.8
Telecommunication Diploma	2	1.9
Electronic Course	2	1.9
Gas And Ark Welding	8	7.5
Computer	2	1.9
English Course	2	1.9
Power Generation	1	0.9
Electrical And Mechanical Engineering	3	2.8
JCB Training	1	0.9
Not Available	64	60.4
Total	106	100.0

Source: Survey

Figure 4.17: Course of Further Education



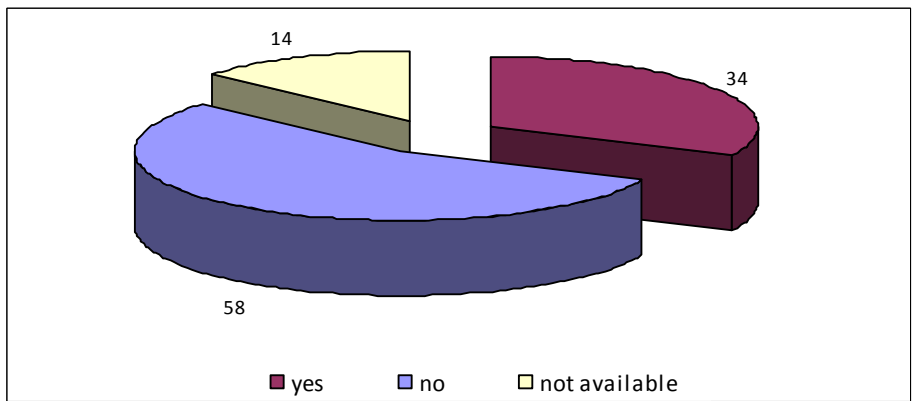
Source: Developed by the Researcher

Table 4.19 : Awareness of NVQ system

Awareness of NVQ System	Frequency	Percent
Yes	34	32.1
No	58	54.7
Not available	14	13.2
Total	106	100.0

Source: Survey

Figure 4.18 : Awareness of NVQ system



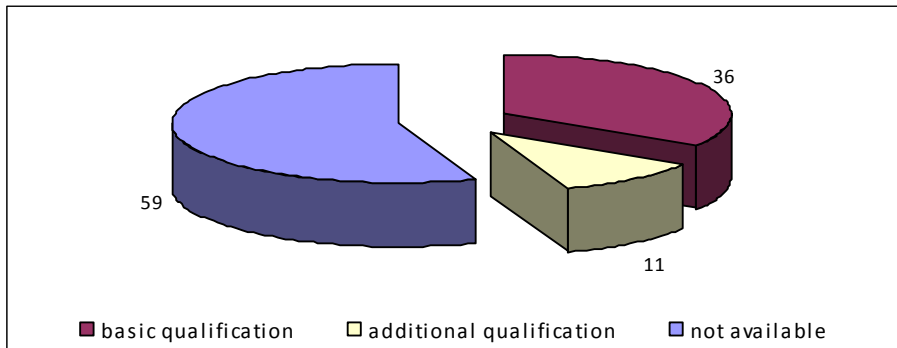
Source: Developed by the Researcher

Table 4.20 : Effectiveness of the Course for Further Education

effectiveness of the course	Frequency	Percent
basic qualification	36	34.0
additional qualification	11	10.4
not available	59	55.7
Total	106	100.0

Source: Survey

Figure 4.19 : Effectiveness of the Course for Further Education



Source: Developed by the Researcher

Above 38% of passed outs have been exposed to the higher education and majority interested of following National Certificate of Technology course which is conducted by technical colleges. As well as 33.9% of respondents say that the NCECP course has been effective which they have followed as a basic qualification for their further studies. 32% of them have got the awareness of National Vocational Qualification system.

CHAPTER 5 - CONCLUSION AND RECOMMENDATIONS

The study was done towards revealing the status of employment of passed outs who have followed NCEP course with respect to the particular four streams. The attention was drawn to achieve four main objectives. Though the total population has been considered as the sample of the study, respondent rate existed as 11.43% of the sample. Numeric value is 106. Hence, the analysis has been done based to the respondent rate. The focus analysis expresses the status score of the employment of passed outs.

1. Study to what extent the graduates are employed after their graduation under these courses.

Apparently around 63% of the sample is employed and 24% among them are employed paid and permanent basis. 33% is employed as daily paid, temporary or part-time basis. The majority of the employed, represent this category. Intention for self employment among passed outs is significantly low as it remains 6% of the sample.

Around 35% of passed outs had to spend over one year time to be employed. Hence it is clear that the passed outs from these courses have to remain unemployed just around one year. Around 38% of the sample says that they are unemployed so far and majority are being unemployed for 20 months after the completion of their course. Difficulty of finding a job relevant to the course that they have followed and the alienation between the available jobs and adequate salary were unveiled as major reasons behind the unemployment. Sector wise analysis of employment of passed outs is clarifies the following s

Figure 5.1 : Employment – Sector Wise

Sector	Count	Percent
Government	7	6
Semi Government	2	1
Private	41	38
Others	10	9

Source: Developed by the Researcher

38% of passed outs are employed in the private sector. Tendency of getting employed in both government and semi government sectors is comparatively low as it is denoted 7%.

Figure 5.2 : Status of Employment

Course followed			Main industry														Total		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14			
Electronics	Status of employment	Paid and permanent		3												0	0	3	
		Daily paid / temporarily /part time		3												1	0	4	
		Self employment		0												0	2	2	
		Unemployed		0												0	1	1	
		Other		0												0	1	1	
Total				6											1	4	11		
Fitter machinist	Status of employment	Paid and permanent					4			0							0	8	
		Daily paid / temporarily/part time					0			3							0	3	
		Unemployed					0			0							8	8	
Total							4			3							8	19	
Gas and ark welder	Status of employment	Paid and permanent				2				0	0					0		2	
		Daily paid/ temporarily/part time				0				3	1					4		19	
		Self employment				0				0	0					0		4	
		Unemployed				0				0	0					0		15	
		Not available				0				0	0					0		3	
Total						2				3	1				4		33	43	
Industrial electrical	Status of employment	Paid and permanent	3	0	2	2			0	2	2	2			0			0	13
		Daily paid/ Temporarily/part time	0	0	7	0			2	0	0	0			0			0	9
		Self employment	0	0	0	0			0	0	0	0			0			1	1
		Unemployed	0	0	0	0			0	0	0	0			1			4	5
		Other	0	5	0	0			0	0	0	0			0			0	5
Total			3	5	9	2			2	2	2	2			1			5	33

Source : Developed by the Researcher

- | | | |
|-------------------------|-----------------------------|---------------------|
| 1 - Defense | 2 - Communication/Slr | 3 - Electrical |
| 4 - Production Industry | 5 - Central Transport Board | 6 - Sugar Industry |
| 7 - Automobile Industry | 8 - Private Company | 9 - Rubber Industry |
| 10 - Health Service | 11 - Agriculture | 12 - Metal Works |
| 13 - Self Employment | 14 - Not Available | |

Over 10% has engaged with communication industry and this is the main industry that the majority is involved. Secondly, passed outs have occupied with electrical industry. It is over 8% of the total sample.

2. Find out the relevancy of the course with their employment

The course that they have followed had been a basic qualification to find a job or start a self employment, reviled with 24% of the respondents. 16% said that it had been an additional qualification for their employment. Only 0.9% said that the course they followed was not effective for their employment. As a whole 41% said the effectiveness of the course they followed is positive of finding a job or start a self employment.

Figure 5.3 : Adequacy of the Knowledge Gained from the Course

Perception	Percent
Sufficient	33
Sufficient for some extent	29
Not sufficient	1

Source: Developed by the Researcher

Course content or the theoretical and practical knowledge disseminated by all four streams is highly sufficient for the job that they are engaged; said by 33%. 29% said that the theoretical and practical knowledge of the course is sufficient for some extent on their jobs. Amid 1% said the knowledge derived form the course is not sufficient for their jobs. Hence, it is obvious that the theoretical and practical knowledge of the course is sufficient for their employment as the percentage is over 62. As well as 43% of employers are well satisfied or satisfied with the capabilities of employees who have followed these

3. Examine the extent of satisfaction with their wages

Only 13% of respondents are receiving over Rs. 15000.00 as their monthly income and 3% among them are receiving over Rs. 20000.00 per month 47% receives less than Rs. 15000.00 as their monthly income. 18% of them are in below of Rs. 7000.00 per month. Hence, it is clear majority is not satisfied with their wages.

4. Analyze the intention for further education under the NVQ system.

Around 40% of passed outs have followed other courses or training programmes after the completion of their NCECP course.

Figure 5.4 : Awareness of NVQ System

NVQ Level	Count	Percent
2	5	4.7
3	6	5.7
4	3	2.8
5	4	3.8
1	18	17

Source: Developed by the Researcher

17% of passed outs from NCECP course have followed course aligned with NVQ system. But 32% has got the awareness of National Vocational Qualification system. The tendency for NVQ courses as per further education is significantly low.

34% of respondents considered the NCECP course that they followed had been a basic qualification for their further education and 10% said that the NCEP course was an additional qualification for their further education.

Recommendations

- Apparently the tendency for National Certificate of Engineering Craft Practice Course among male is higher than their female counterparts. Hence, the awareness programs and guidance should focus more for female.
- Students get aware about courses conducted by Technical Colleges and Colleges of Technology mainly from the gazette. It is 36%. Publicity done by the colleges affected for 24%. Therefore TCs and CoTs should endeavor more on absorbing students for their programmes.
- Career Guidance should operate properly towards reducing unemployment and under employment levels among passed outs from TCs and CoTs.
- Industry linkage should be optimized and the commitment from the industry on job placement of passed outs should be increased by creating a good interface between TCs/ CoTs and the industry.
- Practical knowledge of the courses should be broadened and theoretical knowledge also should be revised. Course content should comprise with new dimensions of technical knowledge. Apart from technical education, English and computer education should be conducted simultaneously. On a border phase. The level of in-plant training should be enhanced with the patronage of industrial sector. Teaching methods should be developed

towards encouraging students to explore new knowledge and expose for practical circumstances. Then the level of self employment will be increased since students' potentials will be developed.

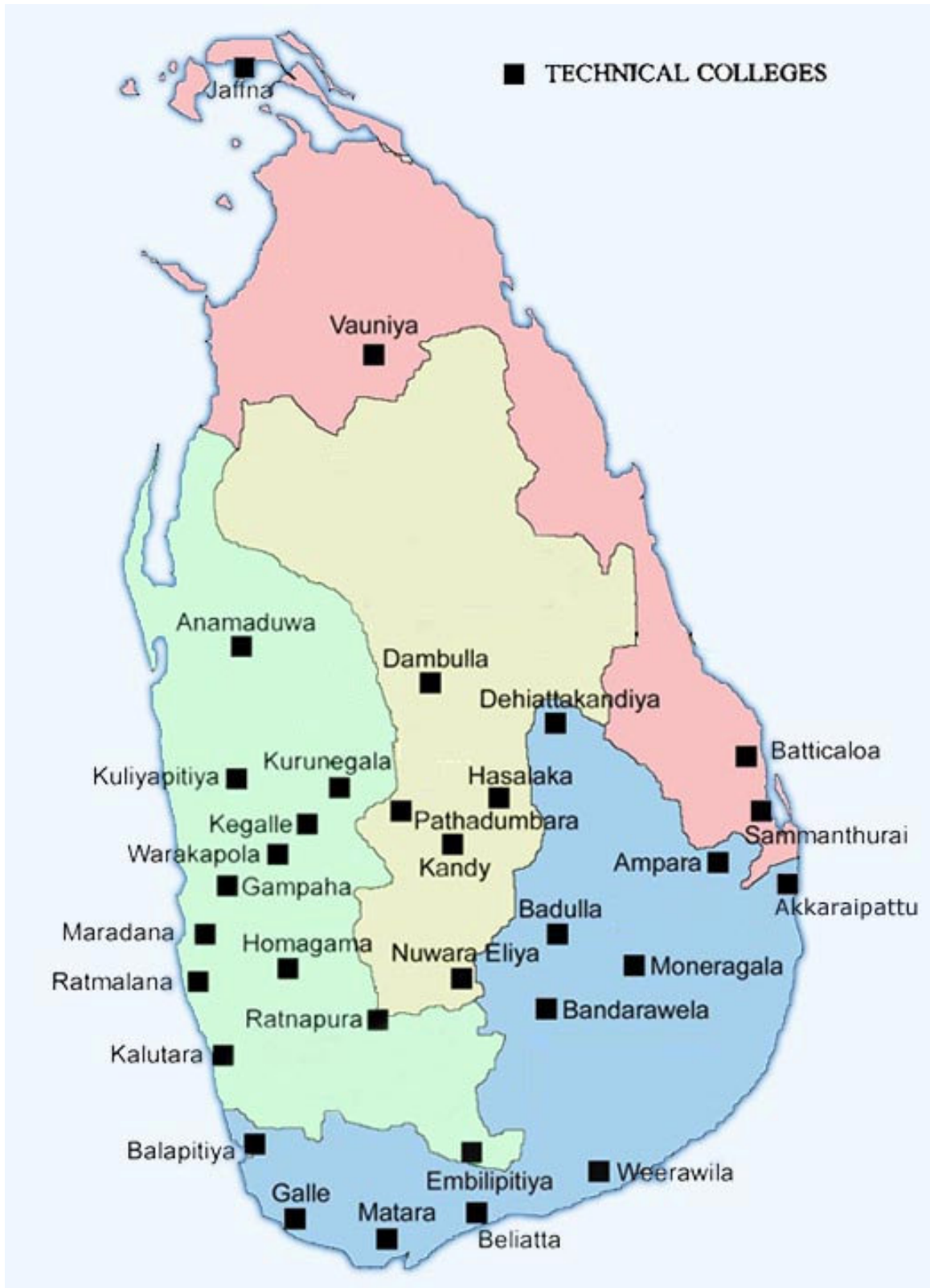
- Publicity and awareness on NVQ system should be strengthen. Basically the awareness among existing student population of TCs and CoTs has to be increased.

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- ✎ Tracer Study on the students who have followed NCECP course which was introduced in year 2000, Department of Technical Education and Training, 2004
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- ✎ Statistical Hand Book, Department of Technical Education and Training, 2004
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APPENDICES

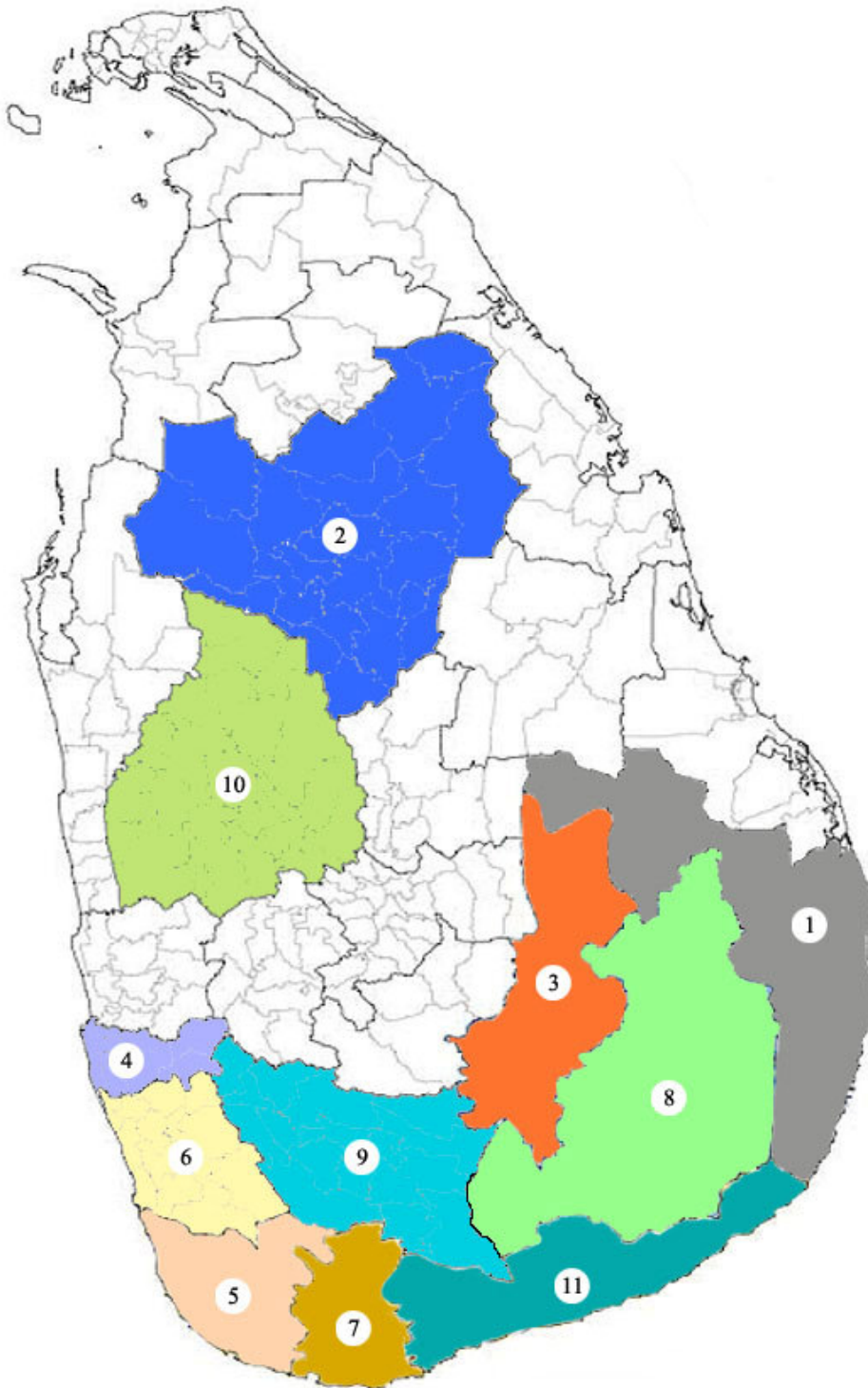
Appendix 1: Technical Colleges focused by the study



A List of Technical Colleges

- | | |
|---------------------|--------------------|
| 01. Ampara | 17. Kandy |
| 02. Anuradhapura | 18. Kegalle |
| 03. Badulla | 19. Kuliyaipitiya |
| 04. Balapitiya | 20. Kurunegala |
| 05. Bandarawela | 21. Maradana |
| 06. Batticaloa | 22. Matara |
| 07. Beliatta | 23. Moneragala |
| 08. Dambulla | 24. Nuwara – Eliya |
| 09. Dehiattakandiya | 25. Pathadumbara |
| 10. Embilipitiya | 26. Ratmalana |
| 11. Galle | 27. Ratnapura |
| 12. Gampaha | 28. Samanthurai |
| 13. Hasalaka | 29. Vavuniya |
| 14. Homagama | 30. Warakapola |
| 15. Jaffna | 31. Weerawila |
| 16. Kalutara | |

Appendix 2 : Districts focused by the study



A List of Districts

1. Ampara
2. Anuradhapura
3. Badulla
4. Colombo
5. Galle
6. Kalutara
7. Matara
8. Monaragala
9. Ratnapura
10. Kurunegala
11. Hambantota

Appendix : The Questionnaire used for the Study

කාර්මික අධ්‍යයන හා පුහුණු කිරීමේ දෙපාර්තමේන්තුව

ඉන්ජිනේරු ශිල්පය පිළිබඳ ජාතික සහතිකය, කර්මාන්ත විදුලි, ඉලෙක්ට්‍රොනික්, වායු හා වාප පෘස්තම, වෘද්ධී යන්ත්‍රකරු පාඨමාලාවල 2005 වසරේදී පාඨමාලා අවසන් කළ සිසුන්ගේ සේවා නියුක්තිය පිළිබඳ පසු විපරම් අධ්‍යයනය

වඩාත් ගැලපෙන අංකය වටා රවුමක් ඇදීමෙන් ඔබේ පිළිතුර සලකුණු කරන්න.

1 වන කොටස යොමු අංකය

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හඳුනාගැනීමේ තොරතුරු

1. පාඨමාලාව හැදෑරූ පුද්ගලයාගේ නම :
2. ස්ත්‍රී පුරුෂ භාවය :

පුරුෂ	1
ස්ත්‍රී	2
3. වයස (පසුගිය උපන් දිනයට)

අවුරුදු		
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4. ස්ථීර ලිපිනය :
5. ප්‍රාදේශීය ලේකම් කොට්ඨාශය :
6. දිස්ත්‍රික්කය :
7. දුරකථන අංකය :

2 වන කොටස

අධ්‍යයන පසුබිම

8. අ.පො.ස. (සාමාන්‍ය පෙළ) ප්‍රතිඵල

ප්‍රතිඵලය	සංඛ්‍යාව
විශිෂ්ඨ සම්මාන	
සම්මාන	
සාමාන්‍ය සමාර්ථ	
9. සමත්වූ වර්ෂය (සඳහන් කරන්න)

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10. අ.පො.ස. (උසස් පෙළ) හැදෑරූවා නම් එම විෂය ධාරාව

කලා	1
චාණිජ	2
ගණිතය	3
වද්‍යාව	4
11. අ.පො.ස. (උසස් පෙළ) සමත්වූවා නම් සමත්වූ වර්ෂය (සඳහන් කරන්න)

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3 වන කොටස

වෘත්තීය පුහුණුව

12. හැදෑරූ පාඨමාලාව :
13. පාඨමාලාව හැදෑරූ කාර්මික විද්‍යාලයේ නම :
14. පාඨමාලාවේ කාලය :
15. ඔබ පාඨමාලාවෙන් ලබාගත් අවසන් ප්‍රතිඵලය

සමත්	1
උණ සමත්	2
අසමත්	3

(හැඩත පරීක්ෂණයට පෙනී සිටීමට අවසර ඇත)
(හැඩත පරීක්ෂණයට පෙනී සිටීමට අවසර නැත)

16. උණසමත් නම්/අසමත් වූවානම් පසුව එම පාඨමාලාවෙන් සමාර්ථය ලබා ගත් වර්ෂය
- | | |
|------|---|
| 2006 | 1 |
| 2007 | 2 |
| 2008 | 3 |

17. පාඨමාලාව පිළිබඳ දැනුවත්වූයේ කෙසේද රැ
- | | |
|------------------------------------------------------|---|
| පුවත්පත් දැන්වීමකින් | 1 |
| කාර්මික විද්‍යාලයෙන් කළ විමසීමකින්/දැනුවත් කිරීමකින් | 2 |
| මිතුරකු මගින් | 3 |
| රජයේ ගැසට් පත්‍රය මගින් | 4 |
| විද්‍යුත් මාධ්‍ය මගින් | 5 |
| වෙනත් (සඳහන් කරන්න) | 6 |

18. ඔබ වෙනත් පාඨමාලා හඳුනාගෙන තිබේද
- | | |
|-----|---|
| ඔව් | 1 |
| නැත | 2 |

19. ඔව්, නම් එම පාඨමාලා කුමක්ද? 1

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 2

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4 වන කොටස

සේවා නියුක්තිය සඳහා පාඨමාලාවේ අදාලත්වය

20. ඔබගේ වර්තමාන රැකියා තත්ත්වය
- වැටුප් ලබන ස්ථිර රැකියාවක යෙදී සිටීම
- දෛනික වැටුප් ලබන/තාවකාලික/අර්ධකාලීනව රැකියාවක යෙදී සිටීම
- පූර්ණ කාලීනව ස්වයං රැකියාවක යෙදී සිටීම
- රැකියාවක් නොමැතිව සිටීම
- වෙනත් (සඳහන් කරන්න).....
- | |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 9 |
- } අංක 37 ට යන්න

21. ඔබ ප්‍රධාන වශයෙන් යෙදී සිටින රැකියාව කුමක්ද?

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22. ඔබේ රැකියාව අයත්වන ප්‍රධාන කර්මාන්තය කුමක්ද?

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23. ඔබගේ සේවා තත්වය
- | | |
|--------------------------------|---|
| වැටුප් ලබන සේවක | 1 |
| සේවා යෝජක (ස්වාමියා) | 2 |
| තමාගේම වැඩකරන/ ස්වයං රැකියාවක් | 3 |
| | |

24. ඔබගේ මුළු මාසික ආදායම (දීමනා ඇතුළුව) කීයද?
- | | |
|--------------------|---|
| 7000 අඩු | 1 |
| 7000 - 9999 | 2 |
| 10000 - 14999 | 3 |
| 15000 - 19999 | 4 |
| 20000 හෝ ඊට ට වැඩි | 5 |

25. පාඨමාලාව හඳුනාගත් පසුව රැකියාව ලැබීමට/ස්වයං රැකියාවක් ඇරඹීමට ගත වූ කාලය කොපමණද?
- දින

--	--

 මාස

--	--

 අවුරුදු

--	--

තමාගේම වැඩකරන/ ස්වයං රැකියාවක යෙදෙන අය ප්‍රශ්න අංක 33 ට යන්න

26. ඔබ රැකියාවේ නියුතු ආයතනය කුමන අංශයකට අයත්ද?
 රාජ්‍ය/පළාත් සභා රාජ්‍ය දෙපාර්තමේන්තු

1

 රාජ්‍ය සංස්ථා හෝ මණ්ඩල

2

 NGO

3

 විදේශ රැකියා

4

 පෞද්ගලික ආයතන

5

 වෙනත් (සඳහන් කරන්න).....

6

27. ඔබ රැකියාව කරන ආයතනයේ රැකියාව පිළිබඳව ඔබට පුහුණුවක් ලබා දුන්නේද?
 ඔව්

1

 නැත

2

28. ඔව්, නම් ඒ කුමන ආකාරයේ පුහුණුවක්ද?
 ප්‍රායෝගික පුහුණුවක්

1

 න්‍යායික පුහුණුවක්

2

 ප්‍රායෝගික හා න්‍යායික පුහුණුවක්

3

 වෘත්තීය අනතුරු වළක්වාගැනීම පිළිබඳ පුහුණුවක්

4

 වැඩපල විනය පිළිබඳව පුහුණුවක්

5

 වෙනත් (සඳහන් කරන්න)

6

29. රැකියාවට අවශ්‍ය න්‍යායික හා ප්‍රායෝගික දැනුමේ ප්‍රමාණවත්වය
 ප්‍රමාණවත්

1

 තරමක් ප්‍රමාණවත්

2

 ප්‍රමාණවත් නොවේ

3

30. ඔබ හැඳුරු ඉන්ජිනේරු ශිල්පය පිළිබඳ ජාතික සහතික පාඨමාලාව ඔබ දැනට නියුතු රැකියාවට කොතෙක් දුරට අදාළ වේද?
 ඉතාමත් අදාළයි

1

 තරමක් දුරට අදාළයි

2

 කොහෙත්ම අදාළ නොවේ

3

31. පාඨමාලාවෙන් ලද පුහුණුව රැකියාව සඳහා ප්‍රමාණවත් වේද?
 හොඳටම ප්‍රමාණවත්

1

 තරමක් ප්‍රමාණවත්

2

 ප්‍රමාණවත් නොවේ

3

32. ප්‍රමාණවත් නොවේ නම්, ඒ කුමන කරුණක් නිසාද?
 (පිළිතුරු එකකට වඩා ඇත්නම් ඒ සියල්ලම කව කරන්න)
 රැකියාව සඳහා පාඨමාලාව මුළුමනින්ම අදාළ නෙවීම

1

 අවශ්‍ය ප්‍රායෝගික දැනුම නොතිබීම

2

 අවශ්‍ය න්‍යායික දැනුම නොතිබීම

3

 අවශ්‍ය නව තාක්ෂණික දැනුම නොතිබීම

4

 වෙනත් (සඳහන් කරන්න)

5

(දැනට වැටුප් ලබන රැකියාවක නියුතු අය ප්‍රශ්න අංක 43 ට යන්න)

33. ඔබ හැඳුරු, ඉංජිනේරු ශිල්පීය පාඨමාලාව රැකියාවක් සොය ගැනීමට හෝ ස්වයං රැකියාවක් අරම්භ කිරීම සඳහා හෝ කිනම් ආකාරයක මෙහෙයක්/බලපෑමක් ඇති කළේද?
 එය මූලික සුදුසුකමක් විය

1

 එය අමතර සුදුසුකමක් විය

2

 එය ස්වයං රැකියාවක් සඳහා ප්‍රයෝජනවත් විය

3

 එය රැකියාවක් සොයා ගැනීමට බලපෑමක් ඇති නොවීය

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 වෙනත් (සඳහන් කරන්න)

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34. මෙහෙයක්/බලපෑමක් ඇති නොකළේ නම් ඊට හේතු
.....
35. ඔබගේ සේවා යෝජකයා (ආයතන ප්‍රධානියා/ආයතන හිමිකරුවා) ඔබ පුහුණුව ලද පාඨමාලාවට සමාන වෙනත් පාඨමාලාවක් සමග සන්සන්දනය කිරීමේදී දක්වන කැමැත්ත කවර ආකාරයේදැයි ඔබට හැඟෙන්නේද?
 ඉතාමත් සෑහීමකට පත් වී ඇත

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 තරමක් දුරට සෑහීමකට පත් වී ඇත
 සෑහීමකට පත් වී නැත
36. ඔබේ රැකියාවේ අනාගතය පිළිබඳව ඔබට කිවහක්කේ කුමක්ද?
 හොඳ අනාගතයක් ඇත

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 තරමක් දුරට හොඳ අනාගතයක් ඇත
 කිසිම බලාපොරොත්තුවක් තිබිය නොහැකිය
37. ඉංජිනේරු ශිල්පීය පාඨමාලාවේ කුමන අංශ මීට වඩා දියුණු කළ යුතුද?
 (පිළිතුරු එකකට වඩා ඇත්නම් ඒ සියල්ල කව කරන්න)
 වඩා පුළුල් ප්‍රායෝගික දැනුම ලබාදිය යුතුය

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 න්‍යායික දැනුම රටේ අවශ්‍යතාව අනුව සකස් විය යුතුය
 වෘත්තීයට අදාල නව තාක්ෂණික දැනුම ලබා දිය යුතුය
 පරිගණක යෙදුම් තවත් පුළුල් කල යුතුය
 ඉංග්‍රීසි
 සේවාස්ථ පුහුණුව
 ගුරුතරවතුන් හා ඉගැන්වීමේ ක්‍රම
 වෙනත් (සඳහන් කරන්න)

5 වන කොටස

සේවා විග්‍රහණය

38. ඔබට ලැබුණ මොනගම් ආකාරයක හෝ රැකියාවක් ප්‍රතික්ෂේප කර තිබේ ද ?
 ඔව්

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 නැත
39. ඔව්, නම් පහත සඳහන් කරුණු වලින් වැදගත් වූ හේතුව හෝ හේතූන් ප්‍රමුඛතාවය අනුව දක්වන්න (හේතු වූ ප්‍රධාන කරුණු 1, දෙවන කරුණ 2 සහ තෙවන කරුණ 3 ආදී වශයෙන්)
 සමත් පාඨමාලාවට අදාල නොවීම
 දුෂ්කර පළාතක් වීම
 වැඩ කරන තත්ත්වයන් අසතුටුදායක වීම
 උසස්වීම් නොමැති වීම
 රැකියාවට අදාල වැඩ ගැන ප්‍රිය නොවීම
 වෙනත් (සඳහන් කරන්න)
40. ඔබ රැකියා විරහිතව සිටින්නේ නම් ඒ කොපමණ කලක සිටද ?
 මාස

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41. ඔබ බලාපොරොත්තු වන්නේ කුමන ආකාරයේ රැකියාවක්ද ?
 සමත් පාඨමාලාවට සම්බන්ධ රැකියාවක්

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 ඕනෑම රැකියාවක්
 වෙනත් (සඳහන් කරන්න)
42. රැකියා විරහිත කාලය තුළ ඔබට රැකියාවක් නොලැබීමට ප්‍රධාන හේතුව කවරේද ?
 පාඨමාලාව අදාල රැකියාවක් සොයා ගැනීමට අපහසු වීම

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 ලැබුණු සහතිකය සඳහා පිළිගැනීමක් නොමැති වීම
 පාඨමාලාවෙන් ලැබුණ දැනුම ප්‍රමාණවත් නොවීම
 පාඨමාලාවෙන් ප්‍රමාණවත් පුහුණුවක් නොලැබීම

ප්‍රමාණවත් වැටුපක් සහිත රැකියාවක් නොලැබීම
 වෙනත් (සඳහන් කරන්න)

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6

6 වන කොටස

වැඩිදුර අධ්‍යාපනය සඳහා ඇති හැඹුරුව

43. ඔබ වැඩිදුර අධ්‍යාපනය සඳහා යොමු වූයේනම් ඔබ හැදෑරූ සැලසුම් ශිල්පීය පාඨමාලාව කොතෙක් දුරට උපකාරවිද?

- මූලික සුදුසුකමක් විය
- අමතර සුදුසුකමක් විය
- ප්‍රයෝජනවත් නොවීය

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44. එම පාඨමාලාව කුමක්ද ?

45. එම පාඨමාලාව හදාරන ආයතනය

46. වෘත්තීය හා කාර්මික ක්ෂේත්‍රයට හඳුන්වාදී ඇති ජාතික වෘත්තීය සුදුසුකම් (NVQ) පද්ධතිය ගැන ඔබ දැනුවත්වී තිබේද

ඔව් නැත

පිළිතුර ඔව් නම් පමණක් පහත ප්‍රශ්නවලට පිළිතුරු සපයන්න පිළිතුර නැත නම් මෙම ප්‍රශ්නාවලියට පිළිතුරු සැපයීම පිළිබඳව අපි ඔබට අභියෝගී කෘතඥ වෙමු.

47. ඔබ ජාතික වෘත්තීය සුදුසුකම් (NVQ) පද්ධතිය පිළිබඳ දැනුවත් වූයේ

- කාර්මික විද්‍යාල මගින්

1

- පුවත්පත් දැන්වීම මගින්

2

- කාර්මික විද්‍යාල සිසුන් මගින්

3

- රජයේ ගැසට් පත්‍රය මගින්

4

- විද්‍යුත් මාධ්‍ය මගින්

5

- වෙනත් (සඳහන් කරන්න)

6

48. NVQ පද්ධතිය යටතේ ඔබ 5 මට්ටමේ ඩිප්ලෝමාවක් හදාරන ශිෂ්‍යයෙක්ද ?

ඔව් නැත

පිළිතුර ඔව් නම් :

49. එම පාඨමාලාව වන්නේ

වායු හා වාප

--

 මෙකාට්‍රොනික්ස්

--

50. එම පාඨමාලාව හදාරන තාක්ෂණික විද්‍යාලය වන්නේ

මරදාන

--

 ගාල්ල

--

 මහනුවර

--

 කුරුණෑගල

--

 රත්නපුර

--

51. දෙපාර්තමේන්තුව මගින් පවත්වන ලද අවසාන විභාගයට අමතරව ඔබ කුමන මට්ටමක හෝ ජාතික වෘත්තීය සුදුසුකම් සහතිකයක් ලබා තිබේ ද

ඔව් නැත

ඔබේ නම පහත ප්‍රශ්නවලට පිළිතුරු සපයන්න

52. ඔබ ලබාගෙන තිබෙන මට්ටම වන්නේ

NVQ දෙවන මට්ටම	<input type="checkbox"/>
NVQ තුන්වන මට්ටම	<input type="checkbox"/>
NVQ හතරවන මට්ටම	<input type="checkbox"/>