Spatial Distribution Pattern of Applicants of the ICTT Training: An Analysis Based on Vocational Training Centres in Colombo

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Declaration of the Candidate

I do hereby declare that work described in this thesis was carried out by me under the supervision of Dr. D.P.S.Chandrakumara, Senior Lecturer, Department of Economics, University of Sri Jayewardenepura and Mr. Prabath J.Malavide, Chief Manager (Logistics), Sri Lanka Ports Authority and report on this thesis has not been submitted in whole or in part to any University or any other Institution for another Degree/Diploma.

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Abbreviation

DSD – Divisional Secretarial Division

GND – Grama Niladari Division

HNDE – Higher National Diploma

ICT – Information and Communication Technology

ICTT – Information and Communication Technology Technician

NAITA – National Apprentice and Industrial Training Authority

NDICT – National Diploma in Information and Communication Technology

NGO – Non Government Organization

NVQ – National Vocational Qualification

NYSC – National Youth Service Council

TVEC – Tertiary and Vocational Education Commission

TVET - Tertiary and Vocational Education Training

UNIVOTEC – University of Vocational Technology

VET –Vocational Education and Training Plan

VTA – Vocational Training Authority

LMI – Labour Market Information

GCE (A/L) – General Certificate of Education (Advanced Level)

GCE (O/L) – General Certificate of Education (Ordinary Level).

BPO – Business Process Outsourcing

IDC – Internet Data Center

SME – Small and Medium Scale

SLICTA - Sri Lanka Information and Communication Technology Association

ICBP - ICT Capacity Building Program

WITSA - World Information Technology and Services Alliance

KE - Knowledge Economy

ITES - Information Technology Enabling Services

USD – United States Dollar

NBN - National Backbone Network

LGN- Lanka Government Network

QLF –Quarterly Labour Force

ICBP - ICT Capacity Building Program

CBT - Computer Based Training

WWW - World Wide Web

e-SDI - e-Society Development Initiative

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ABSTRACT

Currently, Sri Lankan government is making a heavy investment on the tertiary and vocational education and training sector. Mainly, tertiary and vocational education and training courses play an important role in such investment. There are lots of training needs identified so far. According to the labour market information bulletin, training needs for information and communication technology technician training course has the second topmost training need after the computer application assistant. This study was conducted to find the most demanded place in Colombo district. There are not quality training centres available for providing ICTT training Homagama, Avissawella and Hokandara. Therefore government should focus on their training plan regarding this issue. Public, Private and NGO training providers are not focused this area for the provision of trainings on ICTT. They do not aware about the labour market demands. Private sector institutions are depends upon the data published by the government. According to the ground situation, there are no sufficient infrastructure facilities available to train the ICTT courses. Homagama Technical College should be a keen institute for providing quality training for ICTT for the students residing close to the Homagama, Avissawella and Hokandara areas because there are sufficient infrastructure and good transportation facilities available for the students. However, it does not have any concern about the labour market demand and youth neediness in Homagama area.

LMI in 2015 shows that 8000 numbers of students left from G.C.E.O/L without qualified for G.C.E.A/L in 2014 in the study area. During the same period job recruitment from employers, ICTT had the first place in top twenty job vacancy list. Specially government, private and NGO training centers should target this quantity in their planning. From these research findings, institutes use the data for developing their future training plans especially for ICTT course.

Keywords: GIS, Tertiary, Bulletin

CHAPTER ONE

Introduction

1.1 Background of the study

Under the existing education system in Sri Lanka, anyone can continue tertiary and vocational education following to the school education system. Generally, this sector targets 98% of the students' population those who are not qualified for the university entrance and the early school leavers Island wide. Different types of training centres owned by public, private, semi government & NGO sectors provide training to students with their own syllabus and as a result, different certificates are being issued to students for same occupation.

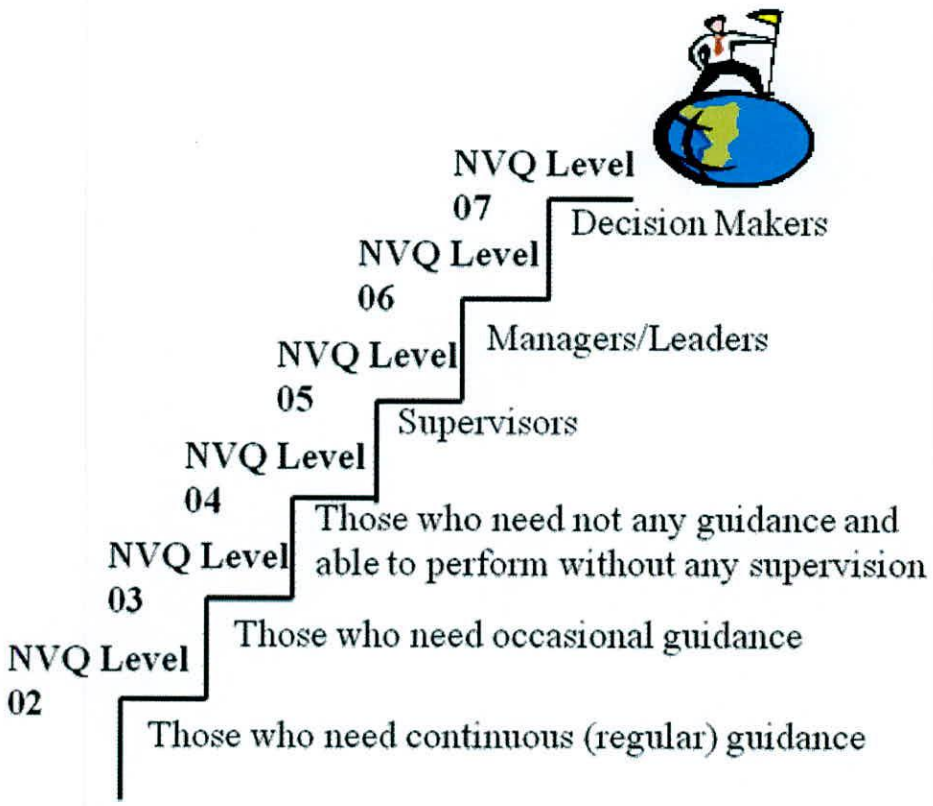
After identifying the above mismatch, previous government has streamlined the qualification system for the tertiary and vocational education sector. That is called as National Vocational Qualification System (NVQ). Under the parliamentary act number 20 of 1990, Tertiary and Vocational Education Commission (TVEC) were established as an apex body of this sector with the intension of implementing and maintaining the NVQ framework among the training providers in Sri Lanka.

Any institute can award NVQ certificate to students however the particular institute should be registered under TVEC as well as the courses have to be accredited by TVEC according to the necessity of tertiary and vocational education act number 20 of 1990. Adequate infrastructure facilities for the provision of relevant training are the prerequisite for carrying out the registration of a training institution. TVEC accredit the courses and award accreditation certificates, based on the quality of training provisions where after evaluating course curriculum, qualification of instructors, students' assessment system and course delivery system. At the beginning, we maintained an attribute data management system for the information regarding to the NVQ training centres. Later on, we have developed spatial data management system to maintain such information. Every year, TVEC publish two Labor Market Information (LMI) bulletin for stipulated occupations from the newspaper advertisements. Therefore, anyone can find any occupational demand from the LMI Bulletin and in addition, a copy of LMI bulletin is being issued to every training center (Registered and accredited with TVEC)

to make their future training plans. Therefore, training centers can be able to register students for the relevant training programe. Especially, LMI Bulletin mainly focuses on the prevailing demand of competent persons among the holders of NVQ.

On the other hand, the demand for the courses varies considerably from one training centre to another for a particular course is concerned. This research study aims to analyze the demand of Information and Communication Technology Technician (ICTT) Training provided by various vocational training centers and to compare the existing demand among public, private and NGO training bodies with the view of further development by using a new system.

Figure1.1: National Vocational Qualification System (NVQ)



Source: NVQ Operation Manual 2005

Qualifications at levels 1 – 4 allows for a trainee to upgrade competencies starting from unskilled stage to reach full or master craftsperson stage through the acquisition of competencies specified at each level. These competencies are incorporated into the units of competencies which are packaged appropriately to form the National Competency Standards of a particular occupation.

Under the NVQ laddering system NVQ level 2 and level 3 are awarded to Computer Application Assistant occupation. Level 5 and 6 are Diploma levels. Level seven is equal to degree offered by UNIVOTEC.

NVQ level 5 and 6 diploma programs allow a student to leave the system at the end of Level 5 with a National Diploma of NVQ level 5 or proceed and leave the system at the end of Level 6 with a National Diploma of NVQ level 6. However some diploma programmes may not have an exit at NVQ level 5. This is possible where the industry

has identified that there is no employment category for a person with competencies achieved up to level 5 only in that technology area.ICTT has vast demand in the world. In Sri Lanka, numbers of training bodies including university colleges conduct ICT training up to NVQ level 06 and ICTT degree has been offered by University of Vocational Technology (UNIVOTEC). There are 06 NVQ levels developed by vocational training sector for ICTT from level 02 to level 07.

This research covers up to NVQ level 4 and those have obtained such NVQ level are able to work without any supervision in office environment as computer technician. After completion of training programme, a trainee should be competent in Word, Excel, Power Point, Access, Internet, VB, HTML, Photoshop and Computer Hardware fields. Recently, it was decided by the government of Sri Lanka to convert all CAA courses to ICT Level 4. As a result of that, all public training centers are started to work on converting the CAA course.

Spatial analysis is the technique applied to structures at the human scale, most notably in the analysis of geographic data. Spatial analysis is the process by which the locational distribution of a set of features is investigated, in order to understand the underlying processes which led to their generation. Spatial analysis has been applied in multiple fields of study and multiple tools are available for use in spatial analysis with an emphasis on techniques which allow the relationship between population density and the spatial distribution of a geographic feature of interest to be investigated.

Labour itself is the basic input but most complex factor in any of the production process. Information and Communication Technology, ICT like many other technologies can have numerous impacts on the working conditions and labour markets in general.

1.2 Research Problem

Colombo is the district which has the highest population in the country. It spreads over a large area in the western province. It consists of 13 Divisional Secretary Division divisions and 556 Grama Niladhari divisions. However, there are large disparities among the Grama Niladhari divisions. As such the demand for vocational training in ICT also can be changed among the GN divisions. The problem of this study is how the

demand for ICT training in vocational training has been spatially varied among the GN divisions in the Colombo district. Information and communications technologies (ICTs) are affecting an ever-increasing array of household activities. Although considerable research has documented patterns of ICT use and training centers profiles of ICT users, surprisingly little research has examined the role of spatial attributes such as accessibility, ICT availability, and levels of congestion in ICT-related activities.

In line with the research findings related to TVET sector, TVET sector training has been further improved year by year. ICT sector development is most important as far as our country is concerned. Without ICT related activities public or private sector institute cannot be run. Even though, training centres enroll the students for ICTT training and provide training and it is necessary to find the distribution pattern of students for ICTT training among training centres. Therefore, this research finds a spatial pattern of applicants for ICTT training in vocational training centers in Colombo district.

1.3 Significance of the Study

Mainly TVEC has five (05) divisions. Apart from the finance division, all other divisions are very customer focused, those are NVQ division, Standard and Accreditation division (S/A), Planning and Research division (P & R) and Information and System division (I/S). NVQ division has two sections namely exam and Quality Management System (QMS). Major function of the Standard and Accreditation division of TVEC is developing National Competency Standard (NCS) and Curricula for future needs in vocational training centres throughout the Island and therefore that division should identify the significance and demand for occupations to develop National Competency Standard (NCS) and curricula. Main responsibility of the I/S division of TVEC is to identify the demand existing and newly developed occupations. Based on the findings of the demanded occupations and S & A division develop the NCS. NCS development process has number of steps to be followed. Normally, Rs.250,000.00 has been spent to develop one NCS. Without taking into consideration of the registration of training centres under TVEC, all the training centers in Sri Lanka aware about labour market demand by using LMI bulletin. In terms of the LMI Bulletin year 2004 Skill Sector Development Project (SSDP) project has combined with public sector training institutions (NAITA, VTA, NYSC, and DTET) and initially there were 45 National