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Do Graduates of General Education in Uganda possess Vocational skills?

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Abstract. Promoting vocational education and training is considered globally as one of the major strategies towards developing the human and social capital needed for sustainable economic growth and development. However, majority of students, particularly in the developing countries, enrol for general education programs that prepare them for white-colour jobs. A questionable aspect is whether these students have any vocation skills that would prepare them for job creation upon graduation. In this study, we provide insights into the level and patterns of vocational skills acquisition among general education students in Uganda. Our investigations are based on primary data obtained from 410 final-year undergraduate students of Makerere University School of Statistics and Planning, in the 2012/13 academic year. A low level of vocational skills attainment was found to characterize the graduates of general education.

Keywords: General education; Vocational education; Curriculum reform.

1 Introduction

General education builds the analytical skills, knowledge and critical thinking of an individual while Vocational Education and Training (VET) develops the craftsmanship, practical experience, and practical problem solving (Education International, 2009, p.5; Silke, 2011). Although general education and VET are inseparable, there is a distinction with regards to the objectives of the two forms of education. In affirming to the close link between the two forms of education, it is argued that ñcritical thinking and analytical skills are needed in the case of a good plumber or electrician who must routinely make judgments in order to solve problems. Equally, a good surgeon needs a large set of practical skills to masterfully operate a patientò (Education International (2009, p.5).

Tarun (2008, pp.59-61) classifies VET by seven broad fields: (i) Agriculture, (ii) Business and commerce; (iii) Engineering and technology; (iv) Health and paramedical; (v) Home science; (vi) Humanities, and (vii) Others, comprising

mainly beauty, pre- school education, and audit visual assistants. A similar classification could be adopted for the vocational skills (VS) attained in each of the seven classifications of VET. A skill, defined by Alexander and Winne (2006) as a particular procedural routine that one uses to accomplish a goal, requires knowledge accumulation, integration, automation and tuning for its acquisition. The fact that acquisition of skills requires knowledge accumulation and integration affirms the strong linkage between general and vocational education. In any case, acquisition of skills is not limited to training through formal institutions; informally, skills can also be attained through part time employment, practical lessons at school, volunteering and family engagement. Similarly, competence in a particular skill is to a large extent not subject to an individualôs source of VET. For example, a plumber who attained the skills from a formal institution could have similar competence in the field when compared to one who acquired the skills through part-time employment.

Notably, promoting VET is considered worldwide as one of the major strategies towards developing human and social capital needed for sustainable economic growth and development. This argument is supported by evidence from the developed economies. The consensus among development economists is that the post-war economic success of Japan and German was attributed to the well-developed social and VET system (Cantor, 1989). In Japan according to Cantor, vocational education which is aimed at preparing students for specific occupational studies is compulsory after secondary education.

Consequently, many developing countries are promoting VET in a bid to tackle the prevailing high unemployment rates. Particularly, implementation of VET is considered as the major solution to Ugandaôs high unemployment rate among the youth estimated at 50% according to the countryôs National Development Plan 2010/11-2014/15 (NPA, 2010). Since 2011, the country through the Ministry of Education and Sports (MoES) started implementing the ñSkilling Uganda, 2011-2020ò program aimed at creating employable skills and competencies relevant in the labour market (MoES, 2011).

A major challenge to this initiative is that the largest proportion of the countryôs total enrolment in tertiary education joins universities (UNCST, 2010; UBOS, 2012) where general education courses are mainly offered. It is not surprising that total enrolment in universities increased by 41% in the period 2007-2011. On the other hand, only a 2% increase in enrolment was noted in the Business, Technical and Vocational Education and Training (BTVET) institutions in the same period (MoES, 2012). Further, the ratio of BTVET to university enrolment in the country is 1:14; implying that BTVET enrolment constitutes about 7% of the total enrolment. Based on the countryôs total number of tertiary education graduates (university and BTVET) in the period 2004-2008 (FUE, 2011), the proportions of BTVET graduates were 8.6%, 18.3%, 12.2%, 9.1% and 8.5% respectively. Thus, the Federation of

Uganda Employers (FUE) is justified to conclude that there is a heavy emphasis in the country on general education compared to VET.

As a matter of fact, Uganda is noted among the countries with the least enrolment in VET estimated at 4% (African Economic Outlook, 2013). It is therefore not surprising that the countryôs unemployment rate of 16% (UBOS, 2010) among the youth (18-30 years) is higher than that of Rwanda whose enrolment in VET is estimated at about 36% (African Economic Outlook, 2013). The fact that about four-fifths of the countryôs workforce does not have any specialized training (UBOS, 2011, p.15), the rate of unemployment is expected to rise in the subsequent years.

The high demand for general education in Uganda does not augur well with the countryôs vision of increasing BTVET graduates to 450,000 annually(MoES, 2011) by the year 2020. Quite often, VET is considered as a last resort for students who have failed to join university education. With the exception of a few secondary schools in the country that provide vocational courses ï which are largely more theoretical than practical - there is hardly any room for VET in the countryôs model of education. Uganda follows a 7-4-2-3+ model of education, with seven years of primary, four years of lower secondary, two years of upper secondary and three years of tertiary education. Thus, majority of students complete their secondary education with the ultimate goal of enrolling for university education which is predominantly based on general education. This evidence suggests that majority of general education enrolees complete their undergraduate studies with no vocational training at all. Given that only 20% of university graduates are absorbed in the labour market annually (UBOS, 2010), the countryôs unemployment rate is expected to rise further if enrolment in BTVET is not enhanced.

The low rate of absorption of graduates into the labour market has been attributed among other factors to shortfalls in relevant skills that promote entrepreneurship and competitiveness of the countyôs labour force both locally and internationally (FUE, 2011). This evidence points to a low level vocational skills attainment at the various levels of education in the country. However, there is no documented evidence to support this claim. Thus, the level and patterns of vocational skills attainment among general education university students in Uganda have not been investigated. All the same, the evidence in the literature cannot explicitly explain the situation in the country despite providing information needs required for evaluating the level and patterns of vocational skills attainment. Perhaps, this has to do with differentials in academic cultures and contexts between developing and developed economies, among other factors. This study therefore sought to provide an understanding of this issue among general education students in Uganda, a developing country.

2 Methods

The study was a cross-sectional survey based on a quantitative approach to data and methods. The study population comprised all 685 final-year students at School of Statistics and Planning (SSP), Makerere University, in the 2012/13 academic year. The students were enrolled on the five programs offered at SSP i.e., Bachelor of Science in Quantitative Economics (N= 156), Bachelor of Statistics (N= 110), Bachelor of Actuarial Science (N=91), Bachelor of Business Statistics (N=178) and Bachelor of Population Studies (N=150). Primary data was obtained from a sample of 410 students using a self-administered questionnaire comprising three major themes namely, status of vocational training and/or skills attained, studentsô characteristics and attitude towards VET.

In the assessment, the type of VET and/or skill(s) attained by the time of the study was based on Tarun (2008) classification which identifies seven broad categories namely, Engineering and Technology, Agriculture, Business and Commerce, Home science, Paramedical as well as Humanities. The status of vocational skills attainment was modelled in the study using a binary outcome ï whether or not a student had attained vocational training and/or skill(s) by the time of the study. An assessment of status of vocational skills attainment was made by studentôs characteristics and attitude towards vocation education. Four modes of vocation skillsô acquisition were investigated namely: (i) training in a vocational institution, (ii) part time employment/ voluntary employment, (iii) passed on by parents and/or guardian, (iv) practical lessons at school.

The characteristics of students investigated in the study were:(i) gender, (ii) family social class based Neo-Weberian Class Model (Saunders, 1990), (iii) academic achievement of students in their bachelors programs and their Advanced Level (A-Level) of secondary education, (iv) status of studentôs exposure to vocational subjects in secondary education, (v) status of studentôs exposure to vocational occupation in their families; (vi) area of permanent residence. The attitude of students towards VET was assessed using a five-point Likert scale comprising of 10 questions on the subject matter. In the analysis, however, an index of attitude was generated based on factor analysis (Pett, Lackey & Sullivan, 2003; Blaike 2003).

The analysis was made at three stages: First, an assessment of the characteristics of students and status of vocational skills attainment was made using frequency distributions. Second, a Univariate logistic regression was fitted on each of the variables in turn to identify potential predictors of vocational skills attainment for further investigations. In other words, all variables with a relatively small probability value in the Univariate logistic regression ($p < 0.5$) were considered for further analysis at the multivariable

stage (Hosmer, Lemeshow, & Stardvant, 2013), unless otherwise indicated. At the third stage, the variables that satisfied the inclusion criterion were modelled using a multiple logistic regression. The final model was investigated for appropriateness using the link specification test (Glidden, Shiboski & McCulloch, 2012). The assessment at the three stages of the analysis was based on a complex survey design. The data was converted to survey data by computing survey weights for each of the programs at SSP. The weight for each program was the proportion of students in the sample in comparison to the total number of students in a particular program during the 2012/13 academic year. The Primary Sampling Units (PSU) was the students identified by their registration numbers.

3 Results

The characteristics of students assessed in the study are summarized as follows: predominantly urban (71.2%) with regards to area of permanent residence and were of the salaried social class (62.20%) families; had Upper Second class of degree with regards to their CGPA at the time of the study. Pertaining to their performance in A-level of secondary education (UACE), about 60% scored between 14-19 points; slightly more than a half (57.3%) were exposed to vocational subjects in their secondary education. There was a slightly higher proportion of males (53.4%) compared to the females (46.6%).

3.1 Attainment of Vocational Skills

Tables 1-3 present a distribution of students with regards to the status and type of vocational skills attained as well as their mode of attainment of the skills; a summary of the results is made subsequently.

Table 1: Status of vocational skills attainment

Status of vocational skills attainment	n	Percentage (%)
Attained VS	120	29.3
Not Attained VS	290	70.7
Total	**410**	**100**

Table 2: Summary of vocational skills attained

Vocational skills by Classification	n	Percentage
Engineering and Technology		
Computer Applications	35	81.4
Computer Engineering and Assembly	2	4.7
Laboratory Technician	1	2.3
Information Technology	2	4.7
Brick Laying And Concrete Practice	2	4.7
Carpentry And Joinery	1	2.3
Total	**43**	**100**
Home Science		
Fashion Designing	8	27.6
Commercial Art and Design	3	10.3
Nutrition and Dietician	2	6.9
Tailoring	7	24.1
Baking	2	6.9
Catering	5	17.2
Total	**29**	**100**
Business and Commerce		
Business Administration	9	34.6
Transportation	3	11.5
Packaging	3	11.5
Travel And Tourism	3	11.5
Marketing	8	30.8
Total	**26**	**100**
Agriculture		
Poultry	7	41.2
Mixed Faming	10	20
Total	**17**	**100**
Arts and Humanities		
Music	3	60
Counselling and Guidance	2	40
Total	**5**	**100**

Table 3: Mode of attainment of vocational skills

Mode of attainment	n	Percentage
Training in a vocational Institution	34	28.6
Voluntary employment/Part time employment	35	29.2
Parents/Guardian	28	23.6
Practical lessons at school	23	18.6
Total	**120**	**100**

About three-in-every ten students (29.3%) affirmed having attained vocational skills by the time of the study. According to results in Table 2, the highest proportion of students attained skills in Engineering and Technology (35.7%, n = 43), followed by those in home science (24.2%, n =29) and business and commerce (21.7%, n = 26). With regards to the mode of acquisition in Table 3, the highest proportion of students obtained vocational skills through voluntary/part time employment (29.2%) and training in vocational institution (28.6%). The rest obtained the skills from either their parents/guardian (23.6%) or through practical lessons in their schooling (18.6%) prior to university education. It is evident that the practical skills are not attained from the from the bachelorôs program on which the students are registered for.

3.2 Attitude towards VET

Table 4 presents responses of students on 10 questions evaluated on a five-point Likert scale.

Table 4: Distribution of responses regarding students' attitude towards VET

Items	Responses (%)					Mean	Rank
	SA	A	UD	DA	SD		
Vocational graduates have low social class	11.4	27.8	9.8	37.6	13.4	3.14	10
Vocational education is mostly for male students	10	20.7	6.6	43.2	19.5	3.42	8
Vocational education is for students who do not qualify for university	7.1	18.8	6.3	39	28.8	3.64	6
Vocational education is for students who can't afford university tuition	6.6	23.9	11.5	35.9	22.2	3.43	7
Vocational graduates don't get well-paying jobs	7.6	25.1	7.8	38	21.5	3.41	9
Vocational graduates have few employment opportunities	3.7	15.4	6.8	48.8	25.4	3.77	4
Vocational education is for students good at sciences	3.2	14.9	6.3	45.9	29.8	3.73	5
Vocational graduates have low demand in the market	2.9	16.6	8	49	23.4	3.84	3
Vocational graduates can't create jobs for them selves	5.4	7.3	5.6	34.6	47.1	4.11	1
Vocational skills not relevant for university graduates	5.6	5.6	5.9	38.3	44.6	4.1	2

Note: assessment is made on all students in the study; where, SA - Strongly Agree; A - Agree; UD - Undecided; DA - Disagree; SD - Strongly Disagree

Overall, results according to Table 4 show that the students had a progressive attitude towards VET. The aspects where the studentsô attitude was largely positive were: (i) vocational skills being relevant for university students/graduates (82.9%), (ii) vocational graduates being in position to create jobs for themselves (81.7%), (iii) vocational education not for students who are good at sciences (75.7%), (iv) vocational graduates having many employment opportunities (74.2%), (v) vocational graduates having high demand in the labour market (72.4%), and (vi) vocational education not being for students who do not qualify for university education (67.8%). On the other hand, varying opinions were noted with regards to vocational graduates having low social class and their chance of getting well-paying jobs.

3.3 Likelihood of Vocational Skills

Table 5 presents results of the Univariate logistic regression on studentsô characteristics and their attitude towards VET. As earlier indicated, the analysis at this stage is geared towards identifying potential predictors of vocational skills attainment i.e., variables for further assessment at the multivariable stage.

From the results in Table 4, the variables with relatively high probability values ($p > 0.5$) in the Univariate logistic regression were performance at A-level, exposure to vocational subjects in secondary school and sex. With the exception of gender, the rest of these variables were excluded from the analysis at the multivariable stage. The variable gender was included in the analysis at the subsequent stage due to its importance noted in the literature.

Table 5: Vocational skills attainment in a Univariate logistic regression

Explanatory Variables	OR[a]	LL[b]	χ^2	p-value
Performance at A-level				
20 points above†	1	0	.	.
14-19	1.04	-247.8	0.038	0.846
<=13	1.04	-247.8	0.011	0.915
University performance				
Second Class Upper and above†	0	1	.	.
Second Class lower	0.63	-245.8	4.053	0.044
Pass	2.52	-246.3	3.154	0.076
Exposure to vocational subjects in secondary school				
No†	1	0	.	.
Yes	1.04	-247.8	0.028	0.868
Family social class				
Salaried†	1	0	.	.
Intermediate	0.46	-238.7	8.787	0.003
Working Class	0.63	-247.1	1.467	0.226
Residence				
Rural†	1	0	.	.
Urban	1.23	-247.4	0.728	0.394
Exposure to vocational skills in the family				
No†	1	0	.	.
Yes	1.84	-243.9	7.816	0.005
Gender				
Female†	1	0	.	.
Male	0.9	-247.7	0.244	0.621
Attitude	1.16	-247.1	1.526	0.216

† represents reference categories adopted in the analysis
[a] Odds Ratio
[b] Likelihood Ratio Estimates
[c] Chi-square estimates

Table 6 presents results of a multiple logistic regression on the variables with the exception of performance at A-level and exposure to vocational subjects in secondary education.

Table 6: Vocational skills attainment in a multiple logistic regression

Explanatory Variables	Coef. [a]	OR [b]	Std. Err [c]	p-value
University performance				
Second Class Upper and above†	0	1	.	.
Second Class lower	-0.31	0.74	0.209	0.135
Pass	0.52	1.69	0.902	0.265
Family social class				
Salaried†	0	1	.	.
Intermediate	-0.81	0.44	0.126	0.005
Working class	-0.63	0.53	0.224	0.135
Residence				
Rural†	0	1	.	.
Urban	0.26	1.29	0.333	0.316
Exposure to vocational occupations in the family				
No†	0	1	.	.
Yes	0.59	1.81	0.412	0.009
Gender				
Female†	0	1	.	.
Male	-0.01	0.99	0.237	0.956
Attitude	0.11	1.11	0.143	0.396
Constant	-0.89	.	0.312	0.005

Note. Analysis is based on a survey data analysis; where, F =1.99, p>0.05, n = 410.
† Reference categories adopted in the analysis
[a] Coefficients
[b] Odds Ratio
[c] Linearised standard Errors of coefficients

The link specifications test was carried-out to assess the appropriateness of the logistic function adopted in the investigations. Specifically, the test was carried out to investigate whether: (i) the logistic transformation was the correct specification for the outcome variable; (ii) a linear combination of the predictors was supported; (iii) a logistic transformation is explained by a linear combination of the predictors. Table 7 presents results of the specification test.

Table 7: Specification test on logistic function

Logistic function	Coefficient	Std. Err [c]	p-value
hat [a]	1.54	0.486	0.004
hatsq[b]	0.32	0.261	0.300

[a] Hat-statistic is estimated linear predictions from the MLR
[b] Hat-square statistic is the square of the estimated linear predictions from the MLR
[c] Linearised standard errors

The results in Table 7 show that the model is well specified as predicted by the hat-statistic ($p < 0.05$). Results of the hat-square statistic show that no additional variables in the MLR were significant ($p < 0.05$). These results implied that a linear combination of the predictors on a logistic transformation was the proper specification of the data adopted in the investigations. These findings show the appropriateness of using the model in Table 6 in explaining the data in the investigations. The result in Table 6 shows significant variations in the odds of having attained vocational skills by family social class and exposure to vocational skills in the family ($p < 0.05$). No significant associations with vocational skills attainment were established by the rest of the variables, namely, performance at university, residence, gender and attitude towards vocational education ($p > 0.05$).

4 Discussion

In the results about three-in-every ten students (29.3%) had attained vocational skills by the time of the study. This figure does not compare favourably with estimates in the developed countries. For example, in Austria (Schneeberger & Nowak, 2010) and China (OECD, 2010), about 80% and 50% of the students respectively attain vocational skills before joining tertiary education institutions. These findings suggest that a considerable number of general education students in Uganda graduate with no practical skills required for job-creation. Thus, the FUE is justified to conclude that ñthe country lacks a culture of entrepreneurship and this is especially apparent among the youth currently joining the labour marketò (FUE, 2011, p.14). With over 70% of the countryôs total enrolment in tertiary education enrolling for university education based primarily on general education (UNCST, 2010), the escalated skills gap between labour supply and demand markets certainly renders the countryôs labour force largely uncompetitive (FUE, 2011).Thus, employers in the country are justified to outsource labour from other countries. The unemployment rate is expected to rise in the subsequent years given that: (i) 20% of graduates are absorbed into the labour market annually (UBOS, 2010); (ii) a fifth of the workforce has specialized training (UBOS, 2010, p.15). The shortfalls point to the need to strengthen vocation education and training at the various levels of general education particularly prior to university enrolment. A recommended approach to enhancing vocational skills attainment among general education enrolees is mandatory VET prior to university enrolment (Schneeberger & Nowak, 2010; Elias, Hernaes & Meredith, 1994).

The results in this study add to literature that identified social class (Ozioma, 2011; Udoh & Sanni, 2012; CDS, 2011; European Commission, 2011) and

exposure to vocational occupations in the family (Udoh & Sanni, 2012; European Commission, 2011) as predictors of vocational skills attainment. Particularly, individuals in the lower social class are consensually regarded to have reduced odds of vocational skills attainment. However, Kai (2002) concluded otherwise on this aspect ï Kaiôs study reveals no significant influence of familyôs social class and career choices of children. This evidence suggests that the influence of social class on vocational skillôs attainment may vary between individuals and/or countries. The reduced odds vocational skills attainment among individuals in the lower social class is attributed mainly to three factors. First and foremost, stereotype of social status that makes individuals consider vocational occupations as being inferior compared to the white-colour office jobs (Kassotakis, 1978). Second, there is a high competition for prestigious and lucrative occupations between the rich and poor families (Udoh & Sanni, 2012). In citing Onyejiaku (1987), Udoh and Sanni (2012) argue that rich parents compel their children to train for the prestigious and lucrative positions in order to maintain the status quo while the poor do so with the goal of liberating their families from poverty. Third, a considerable number of individuals consider vocational education to be a ñdead endò (CSD, 2011, p.25). These reasons apply largely to individuals in the developing countries, including Uganda. However, the argument of competition for the prestigious and lucrative positions forwarded by Onyejiaku (1987) probably explains Ugandaôs situation better. Oftentimes, parents go an extra mile to secure school fees loans to ensure that their children join university education based on general education rather than enrolment in affordable vocational educational programs (DFID, 2007).

On the other hand, the increased odds of vocational skills attainment among individuals exposed to vocational occupation noted in the results was consistent with studies by Udoh and Sanni (2012) as well as European Commission (2011). The consensus is that personal experience between the parents and their children creates a positive attitude towards vocational occupations (Udoh & Sanni, 2012; European Commission, 2011).This evidence points to the need to promote vocational education particularly at family level so as to demystify the existing negative notions associated with VET in the society.

The association between residence and vocational skills attainment is debatable. While the results in this study collaborate with literature that does not regard residence as a predictor of vocational skills attainment (Adinarayana, Uma & Mahadeva, 2011), the findings according to the European Commission (2011) were otherwise. Rural respondents are regarded to have increased odds of vocational skills attainment compared to their urban counterparts according to findings by the European Commission. The choice for VET among the rural residents is attributed mainly to the high prospect of getting a job after school. This however is not the case in most developing countries, including Uganda,

because of the social prestige issue. As earlier stated, a considerable number of individuals in both rural and urban areas associate general education graduates with higher social class when compared to their vocational education counterparts.

With regards to gender, the results in this study add to literature that does not regard the variable as a predictor of vocational skills attainment (Adinarayana et al., 2011; Ozioma, 2011; Ahmed, 2007; Igbinedion, 2011). Contrary to these findings, Egun and Tibi (2010) consider females to have reduced odds of vocational skills attainment. Their argument is that a low level of self-efficacy among females discourages them from being involved in certain occupations that they consider to be predominantly male dominated. This however is not be entirely the case in Uganda because of the increased advocacy for gender mainstreaming in all aspects including but not limited to education, employment and politics. A similar conclusion could be applied to the situation in other developing countries promoting gender equality.

Similar to related studies (Ramlee & Norhazizi, 2010; Ozioma, 2011; Ahmed, 2007), the results in this study show no significant association between attitude towards VET and vocational skills attainment. As a matter of fact, students in this study had a generally positive attitude towards VET. This is contrary to recent evidence that generally considers the attitude of students in Uganda towards BTVET to be negative (FUE, 2011). This implies that the generalization of a negative attitude towards VET across individuals at various levels of education and/or disciplines does not hold. In any case, the non-significant influence of individuals attitude towards vocational skills attainment is attributed among other factors to: (i) influence of parental social economic status whereby, children from highly educated families express less need for vocational subjects despite having interest in them (Ahmed, 2007; Ozioma, 2011);(ii) social interactions effects, feeling of personal respect, acquaintance and human relationships which neutralizing the influence of attitude (Ramlee & Norhazizi, 2010); (iii) gender stereotypes whereby few females engage in certain vocational occupations despite having interest in them mainly for fear of being sexually harassed (Ramlee & Norhazizi, 2010). This is characteristic of the situation in Uganda where some students enrol for general education programs because of either pressure from their parents or high grades attained in their at A-level of secondary education; however, on completion of their studies, these graduates take-up occupations that are not in any way related to the general education programs undertaken in their bachelors studies. Thus, it is not surprising that performance of students on their bachelorôs program was not significantly associated with vocational skills attainment. Ideally, students who have excelled academically in the past are regarded as having a higher chance of successful performance in their subsequent academic endeavours (Alfan & Othman, 2005; Duff, Boyle, Dunleavy & Ferguson, 2004; DeBerard, Glen, &

Deana, 2004; Navarro, Vitamog, Tierra & Gonzalez, 2011; Shultz & Zedeck, 2011; Wamala, 2013). All the same, the findings corroborate with recent studies (CSD, 2011; Agodini et al., 2004) that arrived at the same conclusion. On the contrary, Ahmedôs (2007) study associates vocational skills attainment with low academic achievers. Thus, this evidence implies that the influence of studentôs academic achievement in general education and vocational skills attainment is debatable.

In sum, the low level of vocational skills attainment in the study is characteristic of general education graduates in Uganda. This conclusion could be applied to general education graduates in many developing countries. This study identifies the major hindrance to vocational education as social stereotype that associates vocational education and occupations with low social class. In other words, the notion of focusing on self-esteem rather than self-efficacies in matters of career choices must be addressed at not only the family but also at the national level. Otherwise, it will take the country longer than expected to raise the current level of vocational skills attainment to matchup with the figures in the developed countries. Failure to increase the level of vocational skills attainment in developing countries will not only have a negative impact on the absorption rate of general education graduates into the labour market but also the rate of economic growth and development subsequently.

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