

Entrepreneurship Education in TVET for Small and Medium Enterprise Development: A Case Study in Bangladesh

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Abstract

Bangladesh incorporated entrepreneurship education into the TVET curricula more than two decades ago. This study examines how entrepreneurship education is currently being addressed. The data were collected through studying the TVET curricula and surveying principal stakeholders' opinion. Quantitative and qualitative methods of data analysis were used. The study finds that entrepreneurship education is integrated as a 2-credit mandatory course into all TVET curricula at Diploma and Certificate level programmes, with an exception of HSC (Business Management) where it is a 4-credit mandatory course. It is delivered only in theory classes and mostly the lecture method is used. Ninety percent of the teachers have teaching experience of more than 5 years, but they have no entrepreneurial experience. Enterprises/industries are not involved with institutions in teaching, promoting and developing entrepreneurship education in TVET. According to teachers' opinion they need training for effective delivery of the course. The opinions of the respondents (both teachers and students) were mixed when asked if students acquired the basic competencies required to start-up a business through this course. Almost all respondents agreed that teachers' entrepreneurial experience and self-efficacy have an important effect in teaching-learning in the entrepreneurship course. The study also identifies some other problems for effective implementation of the course and some limitations that hinder TVET graduates from starting up their own businesses. The paper is concluded with some recommendations.

Key words: Entrepreneurship Education, TVET, SME Development.

I. Introduction

Bangladesh is one of the countries in South Asia where the growth in labour force outpaced the growth in employment during the last decade (World Bank 2012, as cited in Khatun, 2014). Unemployment rate remained remarkably low in Bangladesh only 4.5 percent in 2010 by the definition commonly used (BBS Labour Force Survey 2010). The unemployment rate for 2010, however, was as high as 24.0 percent if underemployment was included in calculating the unemployment rate (ibid.). TVET empowers graduates and

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creates opportunities for employment. However, it is recognised that the country cannot solve the rising unemployment problem simply by providing the millions of young people with general education and/or technical and occupation-specific skills. A combination of general, technical/ occupation-specific and entrepreneurship competencies may be a major tool in reducing unemployment through opening opportunities for self-employment (Karim, 2014, p.15, Tahir, 2008, UNESCO, 2001, p. 29, 39, CPSC, 1996).

Existing activities and programmes qualify as education for entrepreneurship if they include at least two of the following elements: a) Developing those personal attributes and generally applicable skills that form the basis of an entrepreneurial mindset and behaviour, described as horizontal skills; b) Raising students' awareness of self-employment and entrepreneurship as possible career options; c) Work on practical enterprise projects and activities; for instance, students running mini-companies; and d) Providing specific business skills and knowledge of how to start and successfully run a company (EU, 2009, p. 10).

Entrepreneurship education is important since it increases the likelihood of self-employment (Herath, 2014, Badawi, 2013, Myamba, 2013, Maigida, 2013, Bakar, 2007, Charney & Libecap, 2000, Gorman et al., 1997, Robinson & Sexton, 1994, Donckels, 1991). Islam et al. (2011, p. 292) stated that there is a significant positive correlation between the successful entrepreneurs and their educational qualification. Entrepreneurs with business and technical education background are in a better position in terms of success rate than entrepreneurs who do not have any technical background and entrepreneurship education (Charney & Libecap, 2000, Sinha, 1996). As TVET is by design intended to develop occupational competencies that can be used in specific occupation or job, TVET with Integrated Entrepreneurship Education (IEE) can significantly increase entrepreneurial intention (EI) to start-up a business (Zhang et al., 2014, p. 638). Thus IEE can reduce unemployment, and contribute to economic development significantly (Farstad, 2002, Shane & Venkataraman, 2000).

Entrepreneurship education is particularly effective in TVET, because, as students prepare to enter the world of work self-employment can be a valuable option for them. Considering the potential significant effect of entrepreneurship education, it is included in the TVET curricula in many countries in the world (EU, 2009, p. 7). For example, Kenya and Sri Lanka have achieved increased self-employment of TVET graduates through providing capacity building training on entrepreneurship. In Kenya over 40% of TVET graduates became self-employed and over 20% of those who entered wage-employment also started their own businesses, hence creating jobs for others (Simiyu, 2010). Some European countries reported that 90% to 100% of TVET graduates participated in entrepreneurship programmes at some point during their technical and vocational education path. "The benefits of entrepreneurship education are not limited to boosting start-ups, innovative ventures and new jobs. Entrepreneurship is a competence for everyone, helping young people to be more creative and self-confident in whatever they undertake." (EU, 2009, p. 11). The recommendation of the European

Parliament and the Council-2006 on “Key Competences for Lifelong Learning” identified the “Sense of Initiative and Entrepreneurship” as one of eight key competencies to be instilled at all stages of education and training (EU, 2009, p. 11, Otten & Ohana, 2009).

It is more than two decades since entrepreneurship education has been introduced in TVET curricula in Bangladesh (Azim, 2011, p. 212, BTEB, 2014). The current Bangladesh National Skills Development Policy (NSDP, 2011) emphasizes TVET graduates’ individual employability in wage and self-employment. Therefore, the integration of the entrepreneurship education course into the diploma level (upper secondary) and secondary education level (vocational stream) curricula of formal TVET in Bangladesh is expected to accelerate SME development, create job-opportunity and, hence, contribute to the country’s economic development. However, as this paper argues, this measure (the integration of the entrepreneurship course into TVET) is not enough. Due attention needs to be given to other factors that contribute to quality entrepreneurship education, such as appropriate teaching methods, inclusion of the practical elements of entrepreneurship, fully competent teachers, linkage of entrepreneurship to specific training subjects or occupation/professions, and sufficient involvement of business people.

A study in Europe finds that “the major challenges for entrepreneurship programmes in technical and vocational education are mostly connected with teaching methods” (EU, 2009, p.18). Although lectures are used as the most basic teaching tool, there should be a wider range of techniques to supplement it (ibid.). Other common teaching methods which can be used to deliver the entrepreneurship course are: demonstration, group discussion, business simulation, mini-project based methods, analysis of life histories of successful entrepreneurs, etc. (Arifin & Gerke, 2014, Azim, 2011). However, no study has been made so far to examine how this course is being implemented and how it helps TVET graduates to become future entrepreneurs. The present study attempts to find the answers to these questions.

The findings of this study are expected to be useful for the concerned authorities; particularly, the quality assurance unit of Bangladesh Technical Education Board (BTEB) which monitors curriculum implementation and training delivery. It also should be of help to educators, teachers, and other stakeholders including students.

Scope and Importance of SMEs in Bangladesh

Micro, small and medium enterprises (SMEs) are the creators of employment and acknowledged generators of significant economic growth (SMEF, 2013, UNECE, 2003). In a recent study, 177 SME clusters have been identified across the country. The study also assessed the prospects and problems of SMEs with the aim to create a vibrant SME sector in Bangladesh (SMEF, 2013). Another study carried out by Asian Development Bank identified about 5 million micro enterprises and 70 thousand SMEs -- firms with fewer than 100 employees in Bangladesh. Micro and SMEs make up 75 percent of the domestic economy. A recent survey concluded that the sector now contributes up to 25 percent to

national gross domestic product (GDP). It noted that the government goal is to raise the share to over 40 per cent anticipating a middle-income country status for Bangladesh by 2021 (The Financial Express, 2012). This sector accounts for about 40 percent of manufacturing output, 80 percent of industrial jobs and nearly 25 percent of the total labour force in Bangladesh (Afzal, 2011, Zaman & Islam, 2011, ADB, 2004).

The SMEs are characteristically highly diverse and heterogeneous. Their traditional dominance is in a few industrial sub-sectors such as food/agri-business, agricultural tissue culture knitwear, textiles and ready-made garments; light-engineering and metal working; designer leather making and leather goods; and wood, cane and bamboo products (SMEF, 2013, Ahmed, 2004). The other new emerging industries which have grown in importance in the SME sector in the recent years are IT/software, plastic and other synthetic products, electrical goods/machines, electronics, artificial jewellery, wooden and steel furniture, computer, television and radio assembling/repairs, personal wear products, soaps and detergents, health care and diagnostics products, and tourism and recreation parks (SMEF, 2013).

Educational services and private training providing institutions/enterprises can now be considered as a growth industry. SMEs occupy an important and strategic place in Bangladesh for the commonly perceived features that include: relatively high labor intensity, dependence on indigenous skills and technology, growth of industrial linkage, etc. In recognition of this, policies and strategies to assist entrepreneurs and to promote SMEs are being developed. Important initiatives include business support and human resources development (HRD) programs for entrepreneurs and for employees in SMEs (Azim, 2011, SEDF, 2015, SMEF, 2013).

Competence Requirements for Entrepreneurship

The mass industrial production has shifted to more flexible and adaptable production regime in response to constantly changing market demands. This structural change, the changing market access brought by globalization and market liberalization, rapid change in technology, and stiff competition have led particularly to continuous human resource development needs. This demands training, further training and lifelong learning. Therefore, considerable attention has been paid to the identification of competence requirements, both for initial and ongoing training of entrepreneurs and employees in SMEs. An entrepreneur needs training and assistance in the following areas related to SME development and operations:

- Exploring business opportunities, evaluating business ideas and protecting ideas and intellectual property;
- Marketing basics, market research, sales forecasting, and business promotions;
- Business finance, equity financing, long term and short term debt financing, and alternative sources of financing;

- Planning fundamentals, preparing a cash flow forecast, and preparing a business plan; and
- Basic knowledge of legal requirements, government regulations for getting started, taxes, becoming an employer, and basic start-up task.

An entrepreneur needs to possess, as noted above, diverse entrepreneurial-managerial competencies: positioning/adapting competencies, represented by a clear business vision; sales planning and promotion; interpersonal skills, leadership in setting the environment, communication, delegation, and mentoring; management and decision-making; cognitive ability and information processing; background knowledge of industry and business connections; financial capabilities, cash management and control; technical capabilities; entrepreneurship; and innovation (Barker, 1998, p. 6, CPSC, 1996, Mazzarol et al., 1999, Shapero & Sokol, 1982). Additionally, the ability to establish and maintain political, family and personal relationships is an asset for a successful entrepreneur.

Other Factors Influencing the Growth of Entrepreneurship

The success of a new business depends not only on entrepreneurial competencies, but also on several other crucial factors. Resources such as financial, technological and human; appropriate business climate including political stability of a country; and government regulations are considered as important influencing factors for the growth of entrepreneurship. While technological expertise is essential to the realization of ideas, human resources are the foundation of a successful and well-functioning enterprise. Entrepreneurs need to ensure adequate start-up funds from their own capital, family support or external financial supporters. Risk taking attitude is one of the pillars of the entrepreneurial spirit. These factors have to complement and supplement technical-vocational training that generates skilled manpower essential for setting up and running enterprises (Azad & Shakhawat, 2015).

Common Learning Outcomes of entrepreneurship education

The overall goal of entrepreneurship education is to provide students with the attitudes, knowledge and skills to act in an entrepreneurial way. EACEA (2012, p. 21, citing Heinonen & Poikkijoki, 2006), describes the broad dimensions of entrepreneurship education by breaking it down into various categories as shown in Table 1. This framework for the wide range of specific learning outcomes is provisionally adopted by European countries (ibid.).

Table 1: Dimensions of entrepreneurship education

I. Attitudes
Category 1. Self-awareness and self-confidence are the entrepreneurial attitudes which constitute the basis for all other aspects of entrepreneurship. They entail discovering and trusting in one's own abilities which then allow individuals to turn their creative ideas into action. In many countries, these attitudes might be pursued as general education goals.

Category 2. Taking the initiative and risk taking, critical thinking, creativity and problem solving are also fundamental, but they are also specific attributes of an ‘enterprising self’.
II. Knowledge
Category 1. Knowledge of career opportunities and the world of work are learning outcomes (LOs) that help students in choosing their future career. Although these LOs are not directly related to entrepreneurship, a good level of knowledge in the nature and different types of work of entrepreneurs usually enhance students’ understanding of what it is to be an entrepreneur. This knowledge also allows students to define and prepare their place in the world of work with a well developed awareness of opportunities and constraints.
Category 2. Economic and financial literacy including knowledge of concepts and processes that can be applied to entrepreneurship.
Category 3. Knowledge of business organisation and processes is specific knowledge of the environment in which entrepreneurship is often applied.
III. Skills
Category 1. Communication, presentation and planning skills as well as team work are transversal skills essential to entrepreneurs.
Category 2. Practical exploration of entrepreneurial opportunities includes the various stages of the business set up process, including designing and implementing a business plan.

Source: EACEA (2012, p. 21), citing Heinonen & Poikkijoki (2006) and incorporating issues from EC (2007). Keycompetences for lifelong learning – European Reference Framework and NESTA (2009). The identification and measurement of innovative characteristics of young people.

TVET Providers and Agencies Supporting SMEs

Under Bangladesh Technical Education Board (BTEB), entrepreneurship education is provided through public, private, and NGO/not-for-profit run TVET institutions. The institutions which provide formal technical and vocational education (general education integrated with skills training) at secondary and higher secondary level i.e. Diploma, SSC (Vocational) and HSC (Vocational) are polytechnic institutes, technical schools and colleges (TSCs), and technical training centers (TTCs). It is also provided by other training institutions under other ministries. A number of NGO-run institutions, i.e. Under-privileged Children’s Education Program (UCEP), Mirpur Agricultural Workshop & Training School (MAWTS), CARITAS Bangladesh, also provide this integrated form of education besides their organised skill training programs. Reportedly, large numbers of people are given some income-generation skills in conjunction with the provision of micro-credit through organizations such as Grameen Bank and BRAC. A large number of private trade schools also exist with the aim of making profit. The growth of private trade schools is primarily

connected to large-scale export of skilled and semi-skilled manpower.

SMEs generally access training through a variety of channels. These include technical schools and colleges, polytechnics and private training institutes; suppliers of equipment or goods provide product-specific training; companies hire trainers for a specific task or to fix an identified problem; business interests sponsor training seminars, e.g., the chamber of commerce; clients may require training as part of a supply contract, e.g. in quality control; and trade associations may organize training for members. SMEs make use of customized (short) training in external training institutes, in-house training program and on-the-job training. In Bangladesh, a good number of organisations in both public and private sector provide varied types of assistance to the entrepreneurs. Some of the important organizations and institutions are: the Board of Investment (BoI), Bangladesh Export Processing Zones Authority (BEPZA), Export Promotion Bureau (EPB), Bangladesh Small and Cottage Industries Corporation (BSCIC), Small and Medium Enterprise Foundation (SMEF), Small and Cottage Industries Training Institute (SCITI), Bangladesh Institute of Management (BIM), Bangladesh Council of Scientific and Industrial Research (BCSIR), National Productivity Organization (NPO), Department of Youth Development (DYD), the Dhaka Chamber of Commerce and Industry (DCCI), and Micro Industries Development Assistance and Services (MIDAS) (Azim, 2011). Some international donor agencies are providing support services to entrepreneurs for SME development, for example, KATALYST and SEDF (South Asia Enterprise Development Facility). SEDF is a multi-donor facility managed by the International Finance Corporation (IFC) of the World Bank Group, based in Dhaka, Bangladesh, which focuses on the need of the SMEs in Bangladesh, Bhutan, Nepal and North East India.

II. Aims and Objectives of the Study

The main aim of this study is to examine the current status of entrepreneurship education (EE) for TVET students in Bangladesh with regard to improving learning/teaching effectiveness of TVET leading to better motivation and preparation of graduates for self-employment. The specific objectives of this study are to:

- Determine the curricular focus on EE as well as business competencies, in terms of credit-hours and course content;
- Assess how EE is implemented (who delivers it and the delivery methods and approaches), and
- Identify the problems (if any) of implementing the entrepreneurship education (EE) course in TVET institutions, and the factors limiting the entrepreneurial intention (EI) of TVET graduates.

III. Scope of the Study

This study focuses on technical and vocational education at secondary level (ISCED 2/3: Grade IX - XII) and at post-secondary non-tertiary level (ISCED 4) provided in the formal education and training systems in Bangladesh. The population of the study consists of teachers and students of polytechnic institutes, technical schools and colleges (TSCs), technical training centres (TTCs) and also entrepreneurs having TVET background. These TVET institutions offer Diploma, HSC (Vocational) and SSC (Vocational) programmes of BTEB. Samples were chosen opportunistically on the basis of availability of potential respondents. Fifty (50) teachers (including 9 female) who teach the entrepreneurship course, two hundred (200) students from more than 20 TVET institutions and twenty (20) entrepreneurs in Bangladesh took part in this study and responded with their opinions.

IV. Methodology of the study

The BTEB curricula of Diploma and Certificate level programs and other relevant literature such as study reports and articles on entrepreneurship education in TVET were studied. Further data were collected through a semi-structured questionnaire consisting of four parts. The first part of the questionnaire captured the respondents' background information; the second part was designed to gather information regarding how the 'Entrepreneurship' course is being taught and delivered; the third part served to collect respondents' opinion about the course on a 5-point Likert type scale; and finally, the last part consisted of a few open-ended questions to the respondents. The opinions of teachers, students and entrepreneurs were gathered mostly through organized meeting by the writer himself; however, some data were collected via email. Quantitative and qualitative methods of data analysis were used for this empirical study. The responses (data) were presented at an international workshop on Entrepreneurship Development through TVET held in Gazipur, Dhaka, in December 2014. The workshop was attended by more than 30 participants from 10 Organisation of Islamic Countries (OIC) members. The views and ideas of the workshop participants complemented the findings from the questionnaire survey and helped in formulating the recommendations.

V. Analysis of TVET Curricula in Bangladesh

Technical and vocational education and training (TVET) in Bangladesh operates at Diploma and Certificate levels. It is offered in a range of technical specialties under several educational programmes.

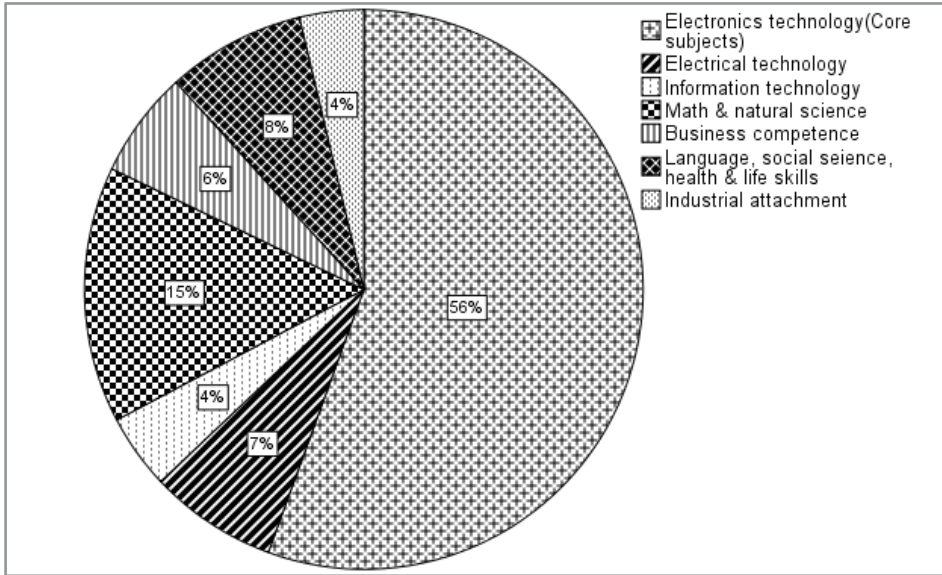
Diploma Level Curricula

The Diploma qualification corresponds to Bangladesh National Technical and Vocational Qualification (NTVQ) Level 6 (NTVQ 2012, BTEB 2014) and can be referenced to the Upper Secondary–Non-Tertiary Technical/ Vocational Level 3 and/or Level 4 qualification with provision of direct access to the world of work and higher studies. Students with grade X qualification (ISCED Level 2) can enroll for this Diploma programme. The duration of

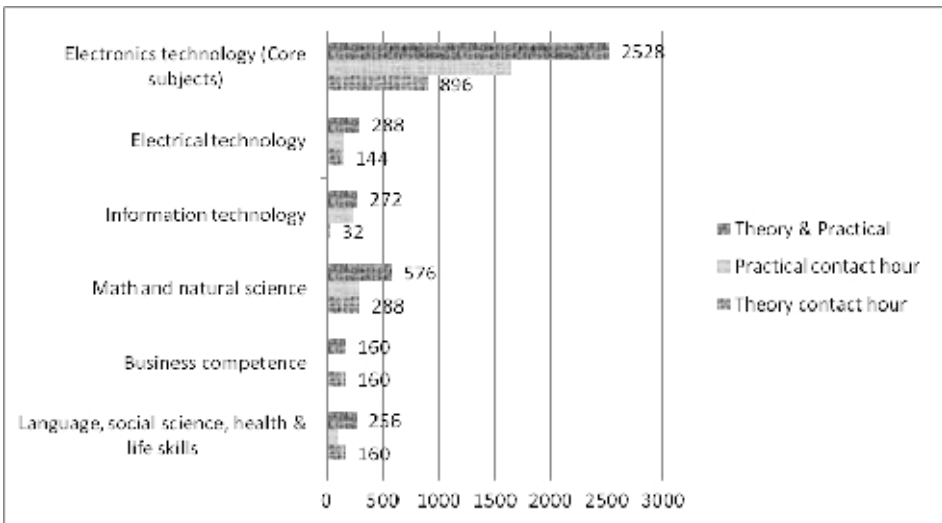
Diploma level programmes in TVET varies from 2 years to 4 years based on the specialisation. The 4-Year Diploma programmes are offered in Engineering in various technical/technology majors including Textile Engineering, Agriculture, and Fisheries. The 3-Year Diploma programme is offered in Forestry, and Medical & Health Technology; and the 2-Year Diploma in Commerce, and Animal Health and Production Technology.

The curriculum structure of all the Diploma programmes is more or less the same. However, the curriculum structure of the 4-Year Diploma in Engineering (Electronics Technology) is described here, since it is one of the popular education/ training programmes at Diploma level in Bangladesh. The 4-Year Diploma in Textile Engineering is also catching the attention of the secondary school graduates due to increased market demand. The 4-Year Diploma programme consists of 8 semesters. In the last semester students undergo internship training in enterprises/industries. The curriculum is organized subject-wise. Each subject/course is allocated credit-hours and (theory/tutorial/practical) contact-hours based on course content. The total number of credit-hours is calculated to be 162. The subjects/courses under each of the Diploma programme can be grouped into categories: (1) Domain specific (i.e. specialization/technology related core subjects), (2) Cross occupation/technology specific (3) Mathematics and natural science, (4) Business competence specific (i.e. business organization and communication, book keeping and accounting, industrial management, environmental management, and entrepreneurship), (5) Humanities (Language, Social Science, Health and Life Skills), and (6) Industrial training. In general, most of the subjects consist of two parts: theoretical and practical part. The theoretical part is taught in classrooms and the practical part involving tasks/assignments are conducted in laboratories or workshops. Figure 1 shows the credit-hours and contact-hours under different categories in the Diploma in Engineering programme for Electronics Technology, as an example. As seen in Figure 1A, the domain specific (core electronics technology subjects) comprised 56% of the total credits, 11% of the total credits are allocated for cross-occupational (within the sector) subjects, 15% for math and natural science, and the business competence and humanities related courses are about 6% and 8%, respectively. The amount of credit-hours for Industrial Training is only 4% of the total credits.

Fig. 1: Content categories in Diploma in Engineering Programme (Electronics Technology)



I.A: Credit-hours



I.B: Contact-hours

Source: Writer’s analysis from BTEB (2014) Syllabus.

On the basis of 16 working weeks per semester, the sum of the contact-hours allocated for the 4-Year Diploma-in-Engineering (Electronics Technology) programme was calculated to be 4,080 (excluding Industrial Attachment period). One (1) contact hour is usually 50 minutes. The Bar Diagrams in Fig.1B shows the contact-hours distribution of different subject categories. Each grouping of bars in a subject category represents theory contact-hours and practical contact-hours in labs/workshops. The contact-hour for Industrial attachment training is not shown in these diagrams. Out of the total 4,080 contact-hours, the theory and practical proportions are 1,680 and 2,400 hours, i.e. 41% and 59%, respectively. The industrial attachment (internship) training is 16 weeks long and has two phases; in the first phase students are placed to industry/enterprise for 12 weeks and in the second phase they return to their own institutes for 4 weeks and perform practical tasks in labs.

Curricula of SSC & HSC Vocational

At certificate level, BTEB offers 2-Year Higher Secondary School Certificate with vocational skills, HSC (Voc.), and 2-Year Secondary School Certificate with vocational skills, SSC (Voc.), in several technical trades. Currently, the SSC (Voc) programme is offered in 31 different technical trades and the HSC (Voc) in 14 technical trades. BTEB also offers 2-Year HSC in Business Management, HSC (BM). In the following sub-section the curricula of some selected programmes will be discussed in brief. The entry requirement of the SSC (Voc) is Junior School Certificate (JSC) or Junior Dakhil Certificate (JDC) – a special track which is part of Islamic education. After completing the SSC (Voc) or equivalent students can go to general stream of education or they can choose HSC (Voc) programme or a Diploma programme of study as noted above. Following HSC (Voc) programme students may enter the world of work or they can pursue higher education. The amount of contact-hours in theory and practical of both of these programmes is almost similar (see Table 1). In this integrated SSC (Voc) and HSC (Voc) programmes, entrepreneurship education is included as a theory course (two classes per week in SSC and one class per week in HSC, see Table 1). In a year there are 36 working weeks including 2 weeks exam period.

Table 1: Weekly Contact-hours in SSC (Voc) & HSC (Voc) curricula

Subjects Group	Contact Hours in SSC (Voc)			Contact Hours in HSC (Voc)		
	Theory	Practical	Total	Theory	Practical	Total
Trade related subjects	4	18	22	3	15	18
Information Technology	0	2	2	0	0.5	0.5
Math & Natural Science	10	3	13	9	6	15
Language & Others	6	1	7	8	0	8
Entrepreneurship	2	0	2	0.5	0	0.5
Engineering Drawing	0	2	2	1	3	4
Total	22	26	48	21.5	24.5	46

Source: SSC (Voc) and HSC (Voc) Programmes of BTEB (2013).

VI. Findings

The curricular focus in business competence and entrepreneurship education

The writer studied the TVET curricula, developed and endorsed by Bangladesh Technical Education Board (BTEB), in order to determine the curricular focus in business competence and entrepreneurship education for TVET students in Bangladesh. As mentioned in Section 1.5, TVET is offered at Diploma and Certificate level in numerous technical, business and service specializations. At Diploma level, out of the total of fifty courses the business skills related courses, specifically for the 4-Year Diploma programme, are: business organization and communication (2 credits), book keeping and accounting (2credits), industrial management (2 credits), environmental management (2 credits), and entrepreneurship education (2 credits). Therefore, the business competence relevant courses amount to about 6% (10 credits) of the total of 162 credits. These courses are delivered only through theory classes. There is no practical or tutorial class for this group of courses.

As per the BTEB (2014) curriculum, the aim of the entrepreneurship course is to encourage students to consider self-employment as a viable career option and to help them acquire an entrepreneurial mindset and the basic entrepreneurial skills required to start a micro/small business.

The main learning objectives of the course are to understand the basic concept of entrepreneurship, economic development and growth and ideas about venture capital. It also includes operational aspects of project selection, evaluation and financial planning as well as understanding the environment for entrepreneurship and the sources and ways of getting assistance. For these learning objectives the following contents are included in the course:

- Concepts of entrepreneurship and the entrepreneur;
- Entrepreneurship and economic development;
- Environment for entrepreneurship;
- Entrepreneurship in the theories of economic growth;
- Sources and evaluation of venture ideas in Bangladesh;
- Financial planning;
- Project selection;
- Self employment and entrepreneurial motivation;
- Business plan;
- Sources of assistance & industrial sanctioning procedure,
- Insurance and risk protection; and
- Case studies (BTEB, 2014).

Who delivers the course and how

As mentioned above a questionnaire was designed to survey the principal stakeholders' opinion. In the first part of the survey teachers' background information was gathered. The

findings are as follows: ninety percent of the teachers who participated in the survey have teaching experience of more than 5 years. However, almost all teachers, but two, have no entrepreneurial experience; i.e. they never started and ran a business. Almost three quarters (70%) of the teachers never even worked in an enterprise. Only about a quarter have such working experience which varied in duration from one year to more than five years. To a question if they had undergone any training on entrepreneurship, none responded positively. About forty percent of these teachers have Diploma qualification in Engineering Technology, and the rest have university level (ISCED 5 or above) bachelor's degree (40%) and master's degree (20%) in business, management and/or social sciences.

In the second part of the survey it was found that the teachers followed lecture method in teaching which focused mainly on theory. Other teaching methods such as demonstration, group discussion, etc., were mentioned in very few instances. No teacher mentioned about using business simulation or a mini-project approach which are considered effective in teaching an entrepreneurship course (Arifin & Gerke, 2014). Teachers mentioned the use of teaching aids such as multimedia and whiteboard. Enterprises or industries were not involved in teaching and promoting entrepreneurship in the TVET programmes. The teachers said that they needed training for effective delivery of the course.

In the third part, teachers' and students' perceptions related to various aspects of entrepreneurship education (EE) were surveyed. They expressed their opinions on a 5-point Likert type scale. The teachers' and students' responses are presented in Table 2.

Table 2: Opinions of teachers and students on entrepreneurship education in TVET

Sl. No.	Statement	5 (S.A) #T #S	4 (A) #T #S	3 (U) #T #S	2 (D) #T #S	1 (S.D) #T #S
1	The course content of EE was delivered efficiently within the given time in a semester/year.	15 20	30 160	05 00	00	00
2	There was enough students' motivation towards learning the EE course.	15 80	35 100	00 10	0 10	00
3	Through this course the basic competencies required to start a business were acquired.	40	33 118	712	668	0 2
4	Teachers' entrepreneurial self-efficacy has important effect in teaching/learning the course.	20 32	27 148	3 20	0 0	00
5	Involvement of entrepreneurs and other agencies in EE positively influences the learning outcomes.	18 40	26 128	6 32	0 0	0 0
6	Government policy measures influence EE.	625	2286	2079	210	00
7	Business project plan(s) should be necessary requirement(s) for graduation.	1633	2798	251	518	00

(Note: Strongly Agree (S.A), Agree (A), Uncertain (U), Disagree (D), Strongly Disagree (S.D); number of Teachers (#T), and number of Students (#S)).

These findings can be summarized as follows: More than 90% of the teachers completed course instruction within the given time and this statement was supported by students too. Almost all the students found the course interesting and they were well motivated. This opinion of students was supported by their teachers. The opinion of the respondents was divided on the statement that students acquired the basic competencies required to start-up a business through this course. The majority (74%) of the teaching staff were of the opinion that students achieved the basic competencies required to start-up a business, 10% disagreed, and 14% were undecided. On the other hand, 59% students supported the teachers' opinion on this point, but a significant number (35%) disagreed and 6% were silent. Almost all respondents strongly agreed (94% teachers, 90% students) that teachers' entrepreneurial experience/self-efficacy has greater effect in the teaching-learning of the entrepreneurship course than mere academic qualification.

The statement that "teachers' entrepreneurial self-efficacy has an important effect in teaching/learning the course" has been fully affirmed by all entrepreneurs who were interviewed. The respondents (88% teachers, 84% students, and all entrepreneurs) also held the view that the involvement of entrepreneurs and other agencies in entrepreneurship education positively influenced the learning outcomes. They also thought that government policy measures influenced the outcome of entrepreneurship education. On a question whether preparing a business-project plan should be a requirement for graduation, the opinions varied among teachers and students. More than three quarters (86%) of the teachers suggested that a business-project plan should be a requirement for graduation. The same was the view of two-thirds of the students (65.5% agreed, 25.5% were undecided and 9% disagreed) regarding this proposition.

Problems of implementing the EE course and factors limiting EI of TVET graduates

In responding to the fourth part of the questionnaire, teachers, entrepreneurs and workshop participants shared their experiences regarding the problems in effectively teaching the entrepreneurship education (EE) course and factors limiting entrepreneurial intentions (EI) of TVET graduates. The major issues mentioned in hindering the effective implementation of the course were: pedagogically untrained teaching staff and lack of specially designed training course for them, lack of real-world entrepreneurial experience of teachers, and insufficient curriculum focus on EE such as developing a business project plan, and not involving successful entrepreneurs in teaching.

Furthermore, according to the opinion of the participants of the Workshop on Entrepreneurship Development mentioned in Section 4, the main factors that limit the Business Start-Up or EI of TVET graduates are: lack of initial capital since TVET students/graduates usually come from below-middle-income family, lack of specially designed formal training programme and guidance for graduating TVET students, absence of support by government and/or other agencies for unemployed graduates, no opportunity

to be familiar with a proper business plan during the delivery of EE course, lack of social security for the graduates, an unfavourable legal framework, and political unrest, et cetera.

VII. Conclusion and Recommendations

The TVET curricula in Bangladesh, in addition to providing job-related technical/vocational competencies, also include content on basic entrepreneurial competencies so that graduating students are encouraged to start-up their own businesses. However, implementation of the course is far from satisfactory. Several factors contribute to this deficiency. Among these are lack of entrepreneurship experience and skills of the instructors, absence of linkage with entrepreneurs and similar agencies, limited knowledge of instructors about external training providers in this field, resource constraints, and lack of time and in-house capabilities of TVET institutions to plan and carryout an effective entrepreneurship training course, recognizing that this is different from teaching other courses. Improvement is greatly needed in these areas.

The EE course has to be reviewed and improved based on the findings of this and further study regarding the current entrepreneurial environment, policy, and opportunities in the country. A quality entrepreneurship education can equip a large number of TVET graduates with entrepreneurial competencies and motivate them to become entrepreneurs, help create new jobs and develop micro-enterprises and SMEs. The writer suggests the following specific measures:

- Tailor-made training for teachers who would teach the entrepreneurship course as well as specialized training beyond the general entrepreneurship course for graduating students who would consider self-employment as career option. The methods of training should include role play, case study, business simulation, and similar techniques, based on the principle of “learning by doing”.
- Bangladesh National Skills Development Policy supports cooperation between schools and enterprises in general, and this type of cooperation already exists, but only in very limited cases. The technical/vocational institutions should take proactive initiatives to identify successful entrepreneurs and business people who will come to the classroom and share their experiences with graduating students.
- Graduating students should be assisted with information on possible training courses on entrepreneurship offered by professional bodies; business advice and loan on easy terms based on viable project proposal should be arranged for them from financial institutions. for TVET graduates intending to take up self-employment.
- In order to create awareness among the trainees in the non-formal and lower-skills TVET and equip them with necessary knowledge and skills regarding entrepreneurship, a training module on entrepreneurship can be included in the curricula of non-formal competency based training (CBT) programme.

Implementing these steps with due diligence is likely to help fulfil the objectives of the entrepreneurship education initiative begun more than two decades ago.

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