

# Competency based primary education curriculum of Bangladesh: SDG

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## Abstract

Education now is first time truly aiming to improve access to quality education on sustainable development to develop knowledge and skills required for sustainable development. Many countries in Asia are transforming institutions as 'Thinking Schools'. The government of Bangladesh, just like other countries, because of the impact of globalization, it has continued to reform education sector to respond to more emerging issues towards sustainable development. It is on this premise that the introduction of new education system. However, there is too little which has been done in establishing the link between competencies based curriculum and sustainable development and their teething challenges. This article is purposed to link competency based learning curriculum to sustainable development, while bringing to the fore the challenges the Competency Based Curriculum (CBC) is contenting with from conception to its implementation phase and their possible panaceas. Specifically and chronologically, this reflective article attempts clarification of key operational terminologies used, link between competencies and sustainable development, Role of CBC in SDG, theoretical underpinnings of CBC, challenges of CBC, conclusions and recommendations. This reflective and theoretical article significantly contributes to the ongoing debates and reflections on the contribution of competency based curriculum on sustainable development, while addressing the teething challenges undermining the CBC implementation with a view of making it acceptable to all and providing apt strategies towards its successful implementation. Bangladesh is on its way to achieving a Middle Income Country (MIC) status in 2021 and will become a developed country by 2041.

**Keywords:** Bangladesh; Competency; Curriculum; Primary Education; SDG.

## 1. Introduction

International and national agencies have recognized the role of education in building societies based on values of equity, social justice and sustainability and have developed strategies and action plans. The declaration of the United Nations Decade on Education for Sustainable Development (UNDES) 2005–2014 represented a lever for the integration of sustainability in all sectors of education across the globe. The principles of Education and Sustainable Development (ESD) have been widely discussed by several authors. These are those of futures thinking, critical and creative thinking, participation in decision-making, partnerships, interdisciplinary and systemic thinking. In an expert review commissioned by UNESCO, key learning processes aligned with ESD are those of collaboration and dialogue, engagement with the "whole system", innovation and active and participatory learning. Integrative and interdisciplinary teaching and learning approaches that can foster sustainability skills, such as problem solving, critical thinking, action competence and systems thinking, seem appropriate because of the complexity that sustainability presents. Furthermore, transformative social learning is required to deconstruct existing ways of knowing and understanding, to critically reflect on the values, beliefs and worldviews that underpin them and to co-construct new shared meanings that can contribute to sustainability. If we think about sustainability as a learning process, life-long learning is essential as the means to learning to know, learning to do, learning to live together and learning to create generative learning communities towards sustainability. Systems thinking have been widely discussed as a fundamental element of ESD. The ability to see the interconnections between different dimensions (environmental, development, social, economic, cultural) and the complexity of systems and situations can contribute to the effective problem-solving of sustainability issues. ESD is about providing real-world learning opportunities, engaging people in the affective, cognitive and practical domains, and it therefore requires a shift of current thinking, values and practices of individuals, organizations and society.

## 2. Statement of the problem

The government of Bangladesh, like other nations, due to the impact of globalization, has continued to reform the education sector to respond to more evolving issues towards sustainable development. It is on this ground that the introduction of Competency Based Curriculum (CBC) is anchored. Nevertheless, there is too little which has been engaged in determining the connection between CBC and

sustainable development and the confounding challenges. This theoretical article is purposed to relate competency based learning curriculum to sustainable development while bringing to the fore the challenges the CBC.

### 3. Objective

To find out the challenges of Competency Based Primary Education Curriculum of Bangladesh to achieved the SDG.

### 4. The concept of sustainable development

Sustainable development is important as it saves national budget, fulfills the need of people, conserves natural resources, helps in the coordination between the natural resources and people and conserves natural resources for future generation. The aim of sustainable development is to balance our economic, environmental and social needs, allowing prosperity for now and future generations. The report on sustainable development in our common future identifies three leading interconnected principles viz. environmental efficiency, inter and intra-generational social justice and participation in decision making. The General Assembly of leaders of 193 countries of the world at September 2015 take decision facing the future and approved the 2030 itinerary for Sustainable Development that comprises of 17 Sustainable Development Goals (SDGs). Structured on the principle of “leaving no one behind”, the new approach stressed on a holistic perspective to attaining sustainable development for all (UNESCO, 2015). Bangladesh experienced a fortuitous combination of two simultaneous processes which significantly facilitated integration of SDGs into the national development agenda. While the Government was participating in the 2030 Agenda process at the global level, it was also preparing the 7th Five Year Plan at the national level. Accordingly, the sustainable development goals proposed by the UN Open Working Group (OWG) received serious consideration for integration into the national plan. The Sustainable Development Goals are a means to realize a healthier and sustainable future for everyone. They interrogate the universal challenges we encounter, such as those associated to poverty, joblessness, inequity, weather, environmental dilapidation, wealth, and harmony and fairness. The specific goals include; 1) No Poverty, 2) Zero Hunger, 3) Sound Health and Well-being, 4) Quality Education, 5) Gender Equality, 6) Unpolluted Water and Sanitation, 7) Inexpensive and uncontaminated Energy 8) Decorous Employment and Economic Growth, 9) Industry, Innovation and Infrastructure, 10) Reducing Inequality, 11) Maintainable Metropolises and Communities, 12) Responsible Consumption and Production, 13) Climate Action, 14) Life Below Water, 15) Life on Land, 16) Harmony, Fairness and Robust Organizations and 17) Partnerships to achieve the Goals (UNESCO, 2015).

### 5. Education and sustainable development

Sustainable development means ‘development that meets the needs of the present without compromising the ability of future generations to meet their needs’ (WCED, 1987:43). It is not just about pollution, weather change, or environmental issues; it is about the relationship between all aspects of ecological and human life. Therefore, ‘human beings are at the centre for concern for sustainable development’ (UNCED, 1992: Principle 1). Taking such a standpoint, the centrality of education in contributing to sustainable development becomes clear. Education has long been understood as contributing to the development of human potential as well as social growth (Dewey, 1899). It also has been seen as a basic human right and as an integral part of access to political power and participation (Torres, 1990), and can therefore be considered as an act of socializing individuals for social competences. In particular, in the context of serious questions about sustainability of development processes, education should be contributing to the competence of individuals to participate in and construct a sustainable way of life. However, the influence between education and development works in the other direction as well. The unsustainability of development has an impact on schooling, and thereby on individual development. In countries such as Bangladesh, many children have no chance to attend even low-quality primary schools. Dropout and failure rates are alarming; many leave semi-literate, soon to relapse into illiteracy. Given that the result of such failure is often an exclusion from social processes, such poor quality education is part of a vicious circle of unsustainability. The situation is often little better for the majority of those who do complete their schooling. Their school experience is of a traditional, formal education paradigm, aimed primarily at selecting and building human capital for economic growth. As we will see, this paradigm is increasingly at odds with the concept of education for sustainability. In Bangladesh, on which this paper will focus, about 44.7% of the population of 140 million people lives below the poverty line. The government is helping ensure that all children and adults have access to quality education. Although the investment in education in terms of gross national product (GNP) is low compared to other South Asian countries (Haq and Haq, 1998), primary education receives about half of the education sector budget. By expanding enrolment and improving quality of primary education, the government expects to make a major contribution to a better-educated workforce in Bangladesh. Yet, problems persist. Of the 20 million primary school aged children, four million of the more disadvantaged are out of school and another four million or more drop out before completing primary education. As a result of reforms, enrolment levels are high and gender equity has been reached but attendance and efficiency levels are average (CAMPE-UPL, 1999). Due to the large population and inadequate funding, therefore, the state cannot provide basic education for all of its citizens through the formal education system. As a developing country, Bangladesh faces particular challenges in educating its citizens for sustainable development. It is facing multiple developmental challenges, among them most crucial problems are as follow:

- Extreme Population Density
- Mass Poverty and Illiteracy
- Unstable Political Situation
- Corruption
- Fragile Ecology
- Limited Natural Resources

Education is the key to develop human capital and breaking the various cycles of ignorance and exploitation. It also the key to empowering people specially women to improve their lives (Haq, 1997). Bangladesh has not yet performed to the best of its potential in developing human capital and remains a country where illiteracy is widespread. The physical infrastructure and financial capital are not sufficient to break the vicious cycle of poverty in the country.

## 6. Education and competencies for SDG

Education, which enhances sustainable development, is an emerging but vibrant idea that includes a new visualization of education that aims to endow all individuals with competencies to undertake obligation for fashioning a sustainable future. Education shapes the world of tomorrow; it is the most effective means that society owns for mitigating the challenges of the future. Progress increasingly depends upon competency refined cognizance: based on research, creativity, novelty and adaptation. Competent educated minds and predispositions are not only basics in research institutes and laboratories, but also in everyday life. While it is agreeable that education is not in its totality an answer to every challenge, in its widest logic, education is a requisite part of all determinations to envisage and fashion new associations among persons and to enhance reverence for the essentials of the environment (IBE-UNESCO, 2017). Education is the prime instrument of change en route for sustainable development, growing people's capabilities to change their visions for humanity into realism. Education offers technical and scientific abilities, the inspiration, justification, and social backing for trailing and utilizing them. It is on this premise that the society needs to be genuinely worried that much of existing education falls short of this mission. Improving the value and scope of education and redesigning its objectives to take cognizance of the significance of sustainable development should be the country's utmost priorities. In Bangladesh competency based curriculum is anchored on this premise.

Since 1992, an international consensus has been struck that achieving sustainable development is essentially a process of learning. During the UN conferences in the 1990s, women in Beijing (1995), social development in Copenhagen (1995), human rights in Vienna (1993), Small Island developing states in Barbados (1994) population and development in Cairo (1994, and food security in Rome (1996), the vital function of education for development was stressed. In the same way we have learnt to live untenably, we need to learn how to live sustainably (UNESCO, 2015).

The foundation of education for sustainable development is firmly ingrained in the environmental education efforts of such groups as International conservation organizations such as International Union for Conservation of Nature (IUCN) and World Wildlife Fund for Nature (WWF) which are aggressively supporting the incorporation of education into sustainable development at local, national and international levels. Alongside with peace education, citizenship education, universal education, human rights education, development education and multiethnic and anti-racist education that have all been important (IBE-UNESCO, 2017).

Sustainable development needs dynamic and informed citizens and thoughtful and knowledgeable decision makers able of making the right choices about the intricate and interconnected social, economic, and environmental matters the society is experiencing. To achieve this requires the wider undertaking of social transformation branded as social learning. This encompasses not only explicit education and training programmes but also utilization of legislation and policy as openings for teaching and boosting new methods of individual, communal and corporate behavior. These underscored precursors for sustainable development requires re-fashioning of education to grip the correct key competencies to achieve it.

## 7. Sustainable development is rooted in four symbiotic systems

Economic structures which provide an ongoing means of maintenance (jobs and money) for persons; Social structures which provide means for persons to live in harmony, equitably and with reverence for human rights and dignity ;Biophysical structures which offer the life maintenance structures for all life, human and non-human; and political structures by which power is applied justly and constitutionally to make decisions on how economic and social systems use the biophysical environment (UNESCO,2015).

This all-inclusive view embraces four inter-related ideologies for sustainable living, which include: Conservation to warrant that natural structures can endure to offer life support structures for all living things, in addition to the resources that sustain the economic structures. Secondly, peace and equity to inspire societies to live supportively and in congruence with each other and have their rudimentary wants gratified in a fair and impartial way. Thirdly, appropriate development to guarantee that individuals can support themselves in a long-term way. Incongruous development disregards the connection between the economy and the other structures in the environment and finally egalitarianism to ensure that people have a just and equal say over how social, natural, and economic structures should be managed (UNESCO, 2015).

Linking economic, political, social and environmental matters is a critical facet of sustainable development. Creating such links demands a deeper, more ambitious way of re-orienting education to one that retains a commitment to critical analysis while fostering creativity and innovation. In short, it demands that education be re-oriented to promote a system of ethics and values sensitive to cultural identity, multicultural dialogue, democratic decision-making and the appropriate use and management of natural resources. Such links are what competency based curriculum seeks to realize in Bangladesh.

The potential of education is enormous. Perceived as social learning for sustainability, education can upsurge concern over unsustainable undertakings and upsurge our ability to challenge and inculcate change. Education, not only creates awareness to people, it can also change them. As a way to personal insights and for cultural rejuvenation, education is not only crucial to sustainable development; it is society's finest hope and most operative means in the pursuit to sustainable development.

## 8. The concept of competence and competency-based curriculum

The word competence or 'competency' has conventionally been used to describe a professional or occupational trait meant to be a mix between behaviors and skills. Generally, competencies are measures of how well one can do certain things, taking into consideration her/his knowledge, skills and attributes. Competencies are generally behaviors that are easily identified and measured. For example, a driver should be competent in driving, a physician must be competent in diagnosing disease and prescribing medicines (for the patients), a nurse should be competent in serving the patients, a teacher must be competent in teaching and so on.

To make professionals competent, 'competency-based' curriculum is developed for specific profession or occupation such as driving, medicine, nursing, teaching, etc. Mastery learning (i.e., attaining the skill in totality) is a basic feature of competency. This mode of curriculum development has so far not been found suitable for general education, especially in primary and secondary levels because young learners need to develop most of the objectives of education in all the three domains (viz., cognitive, affective and psychomotor) developed by Benjamin Samuel Bloom (an American educational psychologist) and his co-workers in 1956 brainstorming together for about four years (since 1953). Since the curricula in higher education generally aim at developing expertise in some particular disciplines, these can be said to be competency-based.

A curriculum that emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally-defined subject content. In principle such a curriculum is learner-centered and adaptive to the changing needs of students, teachers and society. It implies that learning activities and environments are chosen so that learners can acquire and apply the knowledge, skills and attitudes to situations they encounter in everyday life. Competency-based curricula are usually designed around a set of key competences/competencies that can be cross-curricular and/or subject-bound. A curriculum that emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally-defined subject content.

Competence is knowledge, skills and behaviors one ought to have attained for him or her to execute tasks at school and world of work (Mosha, 2012). Kouwenhoven, (2003) describes competence as ability to choose and apply an integrated consolidation of skills, knowledge and attitudes with the purpose of realizing a task in a given setting. In this context, competence is described as the capability of learners to engage a specific task to set norms emphasizing what they can do as opposed to what they know. In this respect, Competence-based curriculum is type of education that is purposed to cultivate in students the capabilities to learn and do activities to set standards. A curriculum that is described as competence-based thus, encompasses explicit outcome statements that demonstrate the competencies to be achieved. Mosha (2012), posits that a competency-based curriculum is one that aims at developing in learners the capacity to perform, to learn and learn how to learn and to know.

The competency-based curriculum is considered appropriate for addressing the changing societal needs, technological socio-economic demands of the country for sustainable development. It is aimed at addressing issues of unemployment among the youths and graduates by emphasizing on acquisition of skills, knowledge, behaviors and attitudes significant in carrying out various errands (Maodzwa-Taruvunga & Cross, 2012).

The competency-based curriculum, as outlined by Wangeja (2010), is one where knowledge is constructed and not transmitted and prior knowledge impacts on the learning process. It is a shift from the traditional input driven education whose main focus was development of knowledge to competence-based education which is competence-based education (Young, 2009). Its emphases on the development of skills as combined abilities of values, skills, knowledge and attitudes essential for carrying out different tasks (Mulder, 2014).

The competency-based curriculum discourages mere acquisition of knowledge and lays more emphasizes on skill development. There is a change from content-based to competency-based curriculum. Therefore, this calls for change of the teaching-learning approaches from rote memorization to approaches that support development of competencies and skills that can be applied in solving life problems for sustainable development (Woods, 2008; World Bank, 2011).

The Competence-Based Curriculum (CBC) was initiated from teacher education courses in the US in the 1970s (Schilling & Koetting, 2010). This CBC undertaking came about out of the necessity to have a curriculum that emanates directly from the challenges, issues and features of a transformed society. During the 1960s, CBC was branded as performance-based teacher education, which was recognized by its exhaustive scrutiny of behavioral aspects of professional activities (Mulder & Biemans, 2003). The need for enhanced efficacy and better production in the industries also resulted to crafting of best strategies to accomplish a task (Goodman, Henderson & Stenzel, 2006; Kouwenhoven, 2003). Mulder (2004) asserts that competence-based education became primarily associated with behaviorism, mastery learning and modular teaching. Largely, the competence-based curriculum school of thought emanated from discontentment with programs in the post-secondary education. The challenge was that many colleges and universities offered programmes that had no clear aims in regards to what the learners were being trained to do or be (Mulder, 2004).

Likewise, Bangladesh, in response to the challenge of providing valuable education for sustainable development, is switching from objectives-based curriculum to competency-based curriculum (CBC). Just like many Asian countries, Bangladesh is characterized by high number of unemployed youths casting aspersions on the quality of education offered.

In January 2011, the public of Bangladesh set off a review of the national curriculum in order to develop a curriculum that will sufficiently address and meet the needs and aspirations of the Bangladeshis and equip the children with knowledge, appropriate attitudes and skills that will spire them for sustainable economic development. A research report on the need's assessment for curriculum reform by Bangladesh National Curriculum and Text Book Board (NCTB) in its findings, revealed the necessity of competencies that develop self-reliance, self-care and personal development. Values of honesty, humility and love were proposed for inculcation. Among critical learning areas brought out by the findings were those with the ability to raise levels of economic empowerment at the individual level and also contribute to the overall economic development. Content that is suitable for education in the 21st Century, like Critical thinking, Communication, Collaboration and Creativity were also cited as important, with a high ranking above 90%. Others were Mathematics, Languages, Sciences, Information Communication Technology (ICT) and Entrepreneurship. Findings of the study particularized on pedagogies that are more connected to active participation, which promotes what can be done with knowledge, instead of passive participation, which emphasizes transmission and accumulation of knowledge. The NCTB report affirmed the necessity for a primary school curriculum that integrates and equips individuals with competences and skills applicable in real life situations locally and globally. The new curriculum was aimed at creating pathways to domicile talents (Pathways to Education, 2016).

Robiul Kabir Chowdhury wrote (The daily star, March 08, 2015) Primary curriculum of Bangladesh was actually not made competency-based, the term was used erroneously." competency-based curriculum is applicable to those curricula designed to develop "skills or competencies" necessary in technical, vocational or professional education. But the curriculum designed for primary level does have 13 broader objectives and 29 narrower objectives dealing with cognitive, psychomotor and affective domains, and as such, according to his opinion, the objectives of primary curriculum "can, in no way, be taken as competencies." The writer's perception about the competence-based curriculum is partially acceptable as part of that curriculum is the capability of transferring one's knowledge to a newer situation, i.e. skill. But this is not the only periphery (skills) which the competence-based curriculum deals with. Competence extends beyond the possession of skills. It includes the following elements: (i) cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially; (ii) functional competence (skills or know-how) -- things that a person should be able to do when working in a given area; (iii) personal competence involving knowing how to conduct oneself in a specific situation; and (iv) ethical competence involving the possession of certain personal and professional values So, competence-based curriculum can be expected to relate to knowledge (K) -- development of cognition/conceptual acquisition; skill (S) -- thinking, doing, etc.; attitudes (A) -- developing aptitudes such as perseverance, initiative etc.; and values (V) -- personal and social, making decisions, interacting with others etc. Thus it goes beyond content and aims to open the three Hs (heads-on, hearts-on and hands-on) of learners. So, the focus of the competency-based curriculum is on developing the learners' moral and ethical values along with knowledge and skills. The above general competences may relate to (a) preparedness for further education, (b) supporting developments towards choosing, seeking, obtaining a career and (c) also supporting a student to play a role as a responsible citizen in the future. In this sense, competence-based curriculum goes beyond direct learning and seeks to promote transfer of learning to new or unknown situations. The primary curriculum has 13 ob-

jectives divided into 29 terminal objectives. If we go through these objectives we will see that they are apparently general objectives (called general competencies) addressing cognitive, affective or psychomotor domain (believing in Allah or Creator, and developing moral and humanitarian attitude of the learners of the primary education to be respectful to all religions and believers of other religions). But the finest level of the terminal objectives, e.g. learning outcomes, are an integral part of a curriculum and they can, of course, be put forward for K, S, A and V, and hence they are part of a competence-based curriculum. For example, learning outcomes (called specific competences) for different subjects in the primary curriculum are: (i) to know about the society and environment, (ii) to carry out a set of commands and instructions, (iii) to love and serve the country, (iv) to love the juniors, behave well with juniors and seniors and express patriotic feeling through his/her behaviour, and (v) to understand the needs of the children with special needs and to help them, etc. These are some specific competences (aiming to achieve the general competences termed as terminal objectives) which will pave the way for a learner to enter the later stage of his/her life with full potentiality. When we assess how far a student has achieved those objectives, we will need to assess the capability of transferring information, knowledge, skills, attitude and values of a student to his/her day-to-day life. When the national achievement assessment is conducted in the primary level (dominated by cognitive domain), all strive to move away from learning depending on memorization to creative thinking in new contexts and develop a range of abilities -- subject specific and also cross-curricula. Skills-based does not by definition include attitude and values and hence is not really an aspect for describing general education. If we take the curricula of different subjects introduced in Technical Education Board as our example we will see that skills (mostly work-related) can be referred to as the ability to apply the knowledge gained from textbooks, and there is no room for developing attitude and values of a learner. Our primary curriculum has the compilation of lots of learning outcomes (specific competences) aiming to develop ability (e.g. rendering text book information) and capability (going beyond text book information), and has given emphasis on 4 general competencies: (i) cognitive competence involving the use of theory and concepts (knowledge-ability to develop conceptual acquisition of text book information, (ii) functional competence (skills- capability of solving problems following the scientific procedures, participating in the practice of science, applying the use of ICT in daily life etc., (iii) personal competence involving knowing how to conduct oneself in a specific situation (attitude -- collaboratively working with others, or recognizing the contribution of co-workers); and (iv) ethical competence involving the possession of certain personal and professional values (values -- demonstrating an increased awareness of environmental pollution). So, it is rational to call this curriculum competence-based curriculum.

## 9. Role of CBC of Education in SDG

Education is a life-long process for the betterment of human well-being. Education for sustainable development is fundamentally about the links between the awareness of the human as a whole in the nature and its supporting social systems and the health of the planet which we inhabit with responsibilities of present and future world. As such then, education is the key to any sustainable development programme. At the Rio Earth Summit in 1992, the role of education in promoting sustainable development was made explicit by Agenda 21, the global action plan for the 21st century: "Education ... should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address the environment and development issues" (Agenda 21, 1992).

How though can education play a role in promoting sustainable development? Different theories have been used, implicitly or explicitly, in answering this question, and we can group them into three main types:

- 1) CBC in Education about sustainable development;
- 2) CBC in Education for sustainable development;
- 3) CBC in Education towards sustainable development

There is a marked difference between education about sustainable development and education for sustainable development. The first is an awareness lesson or theoretical discussion; it is this approach which dominates many approaches to sustainability in most schools: Thus, albeit many education institutions have incorporated "green" preambles, this was not sufficient to allow principles of sustainable development to leave deep imprints on education as such, or on how education institutions are being run. Education on environment and sustainable development mostly takes place in few and discrete lessons, and detached from the rest of the curriculum. (de Visser, 2002: 12)

## 10. Progress of SDG in education

Gender Parity Index (GPI) exceeded 1 at primary and secondary levels of education and has remained above 1 for more than a decade. GPI at tertiary education reached its peak at 0.737 in 2014 and then declined to 0.701 in 2016 and 0.71 in 2017 respectively. Concerted efforts are needed to reverse the direction of change in tertiary GPI. The proportion of primary school teachers with DPAD/C-in-Ed degree has been rising reaching more than 80 per cent of total teachers in 2015. The Gross Enrolment Ratio in Pre Primary education has been increasing at a slow pace of 1.45 percentage points per annum since 2013. The Government has continued to implement policies and programmes to increase access to education and training, improve quality and relevance of education, reduce inequality in education and leverage on knowledge and skills in science, technology and innovation. Despite various government efforts and progress achieved in the education sector in different dimensions significant challenges remain. They concern inclusive and equitable education, quality of education at all levels, quality of teaching, adult literacy and lifelong learning. Future policies and programmes in education sector will focus on sustaining past achievements and dealing with the emerging issues.

## 11. Challenges and recommendation

Right from the conceptualization to the start of the execution of the CBC, the contentious issue among the stakeholders has been the preparedness of the teachers to implement the new curriculum. Against the background of vast expansion and creation of novel knowledge and an economy-based society, the teachers must be prepared adequately to adopt a complex evolutionary and responsive approach considering curriculum changes (Gatlin, 2009).

There remain the following challenges for the competency-based education regarding the issues of the teachers' preparation. Such as:

- I). CBC is a new process in education, so it has taking time for the teachers to adopting the concept. The teachers have to specify the objective and the learning outcome of the lesson. Unlike, the previous practice, the tendency to deliver lecture based on the textbooks have to change.

- II). Their needs necessary reform in the teachers training program also. The training programs have to incorporate the competency based primary education in their program and trained the news teachers accordingly. Hence, there remains a concern of the training for a large number of the old teachers who are not trained for this.
- III). For the competency based primary education the assessment system is different from the traditional practice. Usually, in many countries there was a practice to emphasis on the memorization in the test process. However, this competency-based education does not emphasize on the memorization and cognitive knowledge only, rather focus on the achievement of competency and skill. So, the teachers have to be prepared for a new type of practice.
- IV). To ensure the achievement of the competency for all the learners' regular record keeping is very important because the achievement of the terminal competency is a step by step process through the grade-wise terminal competency. Since the teacher student ratio is very high in the primary schools in many developing and underdeveloped countries, it is a concern for the record keeping process.
- V). The possibility of increase of inequality in education for this competency-based education cannot be discarded. It can be anticipated that would be difference in the performance between the boys and girls or rural and urban students.
- VI). Teachers' digital literacy skills and execution of the competency-based curriculum .Digital literacy is one of the core competencies of the competency-based curriculum. Teachers need to be prepared in terms of technological skills for them to transit smoothly from the traditional teaching materials to more innovative and digital resources in the new curriculum. There is an increasing demand in the use of ICT in schools in delivery and teaching of knowledge and skills required for the 21st Century.
- VII). Teachers' involvement and execution of the competency-based curriculum. Teachers are vital and influential stakeholders in determining the degree to which schools implement curriculum policies (Porter, 2015). Thus, curriculum reforms may not be effectively carried out if the teachers who are very important in executing the changes do not feel the need for curriculum reforms.
- VIII). Competency Based Curriculum and insufficient implementation resources. The learning and teaching resources are vital as they assist learners to actively partake in the learning and teaching process. Because the implementation of CBC requires small class sizes as per UNESCO recommended standards for personalized learning, which means more classrooms, libraries, workshops, computer rooms and more schools have to be constructed. Most public schools lack infrastructures, at least two teachers per class are required, which Bangladesh cannot afford presently because of acute shortage of teachers.
- IX). Bangladesh faces perpetual shortage of teachers, hence CBC very difficult to continued. It is regular scenario that the dilapidated status of public institutions is only beneficial to private institutions, which are now engaging profitable business at the expense of public institutions. Which is critical in as far as sustainable development is concerned.
- X). Provision of in-service training for teachers. In-service training is a fundamental aspect for the enhancement of teachers professionalism related to the teachers' vision to improve the quality of their work. Besides that, in-service training also provides teachers with ample opportunities to learn new concepts, methods and approaches through professional development. According to the teachers, they lacked in-service training on CBC, which was a big limitation towards successful implementation of CBC. Definitely, before any implementation of the new curriculum, the government should make sure that they train all teachers to furnish them with knowledge and skills. On the same breath, those responsible in decision making in the sector of education should ensure that ICT is integrated at all levels of learning.
- XI). Teacher Training about CBC. There are various factors regarding the effective participation of the teachers, such as: quality of the teacher's instruction whether it addresses the students' abilities, prior knowledge, different learning rates, the existence of incentives both academic and behavioral in order to motivate the students and arouse curiosity, effective use of the time dealing with materials and keeping students task. (World Bank)For having an effective teaching service, the pre and in service trainings are essential. The purpose of the pre-service teacher education is to provide an exposure to the curriculum, its objectives, methods and evaluation strategies. In addition to this, the teachers also learn about the classroom management techniques and opportunities for teaching the students from the pre-service training. In service-professional training the teachers get opportunities to develop their skill and solve the problem that they usually face during their teaching. There remain some problems in the present practice, such as: text-based, passive and lecture oriented teacher education, poorly designed, inflexible, very theoretical teacher preparation, failure to bridge the gap between the curricular content and real teaching practice. Moreover, it is also commented that the pre-service teacher education is more focused on the storage of information rather than the development of the capacity and there remains a gap between the training and actual demand for the effective and innovative teaching manner. The pre and in service training of the teachers would be designed in such a way that the teachers can understand the objectives and methods of the competency based primary education. They have to understand the relationship between the grade wise attainable competencies and the terminal competencies. During their presentation they have to set the clear goal about the achievement of the competencies of the learners from that lesson. They also need to understand the prior achievement of the competencies of the learners. So, the training program has to be designed considering these factors.
- XII). Teachers Involvement in Decision-making in Curriculum Change. Given the significant role teachers play as curriculum implementers in the schools they should be involved in decisions regarding curriculum change. In this way they will own the process.
- XIII). Provision of sufficient Learning and Teaching Resources The head teachers, assistant teachers and learners said that the state should guarantee provision of sufficient learning and teaching resources are allocated and supplied.

## 12. Conclusion

Classroom and lesson observations are increasingly used in LMICs to support improved quality of education by providing information about current practices and measuring change in practices over time as a result of interventions such as teacher training, policy developments or other direct inputs. This study provides evidence for the ESD competencies that student teachers would prioritize Curriculum related to SDG. The student teachers participating in this study tend to prioritize the acquisition of knowledge and practical skills related to nature and natural sciences, to the detriment of other types of learning, such as the promotion of ethical values, positive attitudes towards sustainability and the management of emotions among their future primary school students. It is evident from the scholarly discourses and reflections discoursed in this theoretical paper that there is necessity to re-orient our education systems to another paradigm that will help students to better comprehend the world in which they inhabit, underscoring the interconnectedness and complexity of challenges such as food security, health, unemployment, environmental dilapidation, population growth, gender inequalities, conflicts, urbanization and the abuse of human rights that threaten our sustainable future. This type of education stresses on a holistic, interdisciplinary approach to developing the skills and knowledge desired for a sustainable development as well as changes in values, behavior, and

lifestyles in order to endow everybody to make decisions to mitigate the challenges that threaten our future which we want to sustain. To this end, the CBC has been proposed as stepping stone to achieving this vision though characterized with a number of challenges which can be addressed concertedly and progressively by all stakeholders.

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