Review of Single National Curriculum with Perspective of the Education of Children with Visual Impairment at Primary Level in Punjab Pakistan

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ABSTRACT

Purpose: The Single National Curriculum (SNC) is one of the basic items of manifesto of ruling party in Pakistan. The academic capability of Children with Visual Impairment (CWVI) is usually considered as that of non-disabled students due to their good cognitive skills. Directorate of Special Education Punjab adopted the same curriculum for CWVI. This study is an effort to identify the standards, benchmarks and SLOs which are difficult to accomplish for CWVI.

Methodology: It was a qualitative study by method and curriculum review/document analysis technique was applied to study the SNC. The complete curriculum of seven key learning areas at early childhood level and following six subjects of English, Urdu, Mathematics, General Knowledge, Islamiat and General Science were studied at primary level. The data was retrieved from the website of National Curriculum Council, Ministry of Federal Education and Professional Training, Islamabad, Government of Pakistan. Collected information was coded, major themes were derived and interpreted.

Findings: Results revealed that a large number of standards, benchmarks and Student Learning Outcomes (SLOs) were easy to accomplish for CWVI as non-disabled children but many standards, benchmarks and SLOs were not easy to accomplish for CWVI due to their visual limitations and lack of sufficient need based support.

Implications: The study recommended that proper adaptations, modifications and accommodations should be made for CWVI especially to attain the geometry, science and geography related standards, benchmarks and SLOs including adaptations proposed by Directorate of Special Education Punjab. Pictorial representations and visual tasks should be substituted with some other learning tasks for CWVI.

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**Introduction**
Curriculum is considered as the basic pathway to attain the destination of academic goals in any educational setting. Curriculum could be classified in different ways. The national curriculum represents the basic ideology of life; beliefs, ethics, traditions, educational goals and mindset of a nation. In other words, national curriculum covers the past, present and future of a state. The single curriculum for whole nation directs the attitudes, behaviors and mentality of the people in a specific similar direction, but on the other hand, the use of various curricula, syllabi and educational systems within a single nation curriculum creates various prejudices, confusions, complexes and fractions among different sectors of society. The Single National Curriculum is one of the main items of the manifesto of ruling party in Pakistan (Sehgal, 2021).

Government of Pakistan is going to apply Single National Curriculum in different phases. The first phase of SNC is being applied at primary level from April 2021. Disability is a phenomenon that limits a person’s abilities, capacities and capabilities in various fields of life. Necessary need based support, least restrictive environment and proper arrangements are the ways in which a person can cope with his disability related problems and excel in his or her life. A person with visual impairment is considered as one of the marginalized members of human population. Of the 253 million people in the world who are visually impaired, 55% are women (139 million). A number of factors contribute to this gender imbalance, including the longer life expectancy of women as compared to that of men, 89% of visually impaired people living in low- and middle-income countries. Three Asian regions are home to 62% of the people in the world with visual impairment, even though they are home to only 51% of the world’s population: South Asia (73 million), East Asia (59 million) and South East Asia (24 million). The five high-income regions account for 14% of the world's population but only 11% of people with visual impairment (Ackland, et al, 2017).

Persons with visual impairment have some particular needs for their educational rehabilitation due to their specific disability related limitations. It is because the idea of expanded core curriculum (ECC) is used and applied for them all over the world. Although individuals with visual impairments may be included in the same instructional settings as sighted peers, they may not gain all of the skills related to being successful students through common core curriculum instruction. The ECC refers to the necessary nine areas of instruction that individuals with visual impairments need to be successful in school, in community, and at the workplace (Haeglele, et al, 2014).

But on the other hand, there is no specific concept of expanded core curriculum in Pakistan for children with visual impairment. Directorate of Special Education Punjab believes that there is no need of any different curriculum for CWVI due to their good cognitive and academic skills like children without disabilities. But in fact, in spite of their all cognitive abilities their visual limitation creates many hindrances for them in their academic achievements, particularly, in the absence of proper need based support (Farooq, 2012; Hafeez, 2019). This study is an effort to explore the themes, competencies and SLOs which are difficult to achieve for CWVI in Single National Curriculum.

**Literature Review**
Some studies narrated that there is no deference between the curriculum needs of any regular learner and a visually impaired learner, except, visually challenged learners may be imparted some extra competencies and provisions by their teachers (Abel, 1959). These other
Competencies and domains of knowledge are usually called as plus curriculum or expanded core-curriculum which must be applied along with mainstream curriculum (Hatlen & Curry, 1987; Richard, 2005). Children with low vision and blindness could be integrated in regular classrooms but in fact they can’t grasp all essential competencies to attain their success by mainstream curriculum. The ECC indicates essential nine domains of instructions that are mandatory for a visually challenged child to attain and maintain his or her success. These areas are as follows: (a) compensatory or access skills, (b) career education, (c) independent living skills, (d) orientation and mobility (O&M) skills, (e) recreational and leisure skills, (f) self-determination skills, (g) social interaction skills, (h) use of assistive technology, and (i) sensory efficiency skills (Jones, 2010; James & Halten, 2010; Bjorg, 2016).

In the same way, a study demonstrated some important skills which are supportive to comprehend the curricular needs of CWVI. Visually impaired individuals have similar instructional needs as other children do, however, their visual limitation restricts, most of the time, their accessibility to regular curriculum, particularly, in case of traditional instructional methodology applied by teachers. A teacher of students with visual impairments has obligation to coach the CWVI by direct or indirect instructions in some areas which are straightly associated with teaching learning process and learner’s accessibility towards instructional content such as learning (Braille, Text, verbal, technological), calculative skill, tactual abilities, embossed images composition, literacy skills, equipments, socialization, concept formulation etc. (Sapp & Halten, 2010; Wolfe & Kelly, 2011; Spungin, 2017; Opie, 2018).

In addition, researchers found a statement given in an article of Tutt, Lieberman & Brasher (2012) which is as follows: VI students learn mainstream curricula except some exceptionalities as modified physical education. An instructor formulates adaptations on behalf of personal attributes of a child, even if related with various multiple impairments or different levels of sight (Lieberman, 2011; Tut, et al, 2012; Michael & Ellis, 2013). Furthermore, it was mentioned in another study that in 1989 the three most eminent subjects (English, Mathematics & Science) had been taken as a final consideration by National Primary Core Curriculum and it was revised in 1994 as well. Over the boundaries of England and Wales, an Educational Act in 1988 was formulated that, as a major component of the biggest curriculum, comprises all students that fall in between the age of 5 and 16. Additionally, another study demonstrated that UK, the orders being put forwarded by the National curriculum were highly overburdened and seemed less focused and that surely did not enough to open up a clear platform for meeting the special educational needs of students (Coulby & Ward, 1996; McLaughin & Rouse, (eds). 2000; Mark, 2000). Furthermore, another study narrated that basic expertise required in the field of special education includes linguistic ability, musicology, physical training, sports sciences, religious knowledge, as well as visual arts education in Malaysian institutions (Mohsin, et al., 2007).

In addition to this, a study depicted an interesting initiative taken by Montenegro in this way, Montenegro had applied a law that once a child got admitted in a special education institution, the teacher should have designed an individual curriculum for that particular child meeting up all his social needs by the mutual cooperation of his parents and when the things got decided as per requirement, that must be intimated to the Bureau within starting 30 days for educational services, vocational education centre and examination centre there on (UNESCO, 2015).

On the other hand, there is another study that had been undertaken to mention the importance of giving high value to the individual needs of disabled students while designing a curriculum especially for the course of mathematics and science in which students face a lot of difficulties like interpreting the graphs, tables, bar charts etc. Many students express their need to take benefit from further supportive devices to perform the task of geometry, shapes and manipulation of numerals. Sometimes they demand extra time to accomplish their assignment (Holiday, 2013;
Likewise a study depicted, in which way the visually challenged students were integrated in USA in regular science class. List of 10 different experiments for the course of science and the purpose was found and evaluated the results of how much or to what extent students were being involved and integrated in science activities by often, rarely, never or not applicable at all (Koehler & Wild, 2019).

As the researchers elaborated variety of samples of multiple areas of curriculum and syllabi being put into practice for pupils having visual difficulties within different boundaries of the world, now they also wanted to open up the ways of curriculum being put into practice for the students who are visually impaired studying at primary level in special schools of Pakistan. They want to describe the curriculum development mechanism/steps in curriculum development in Pakistan such as assessment of needs, determining educational targets, picking out the learning material, composition of instructional material and learning experiences, determining the instructional methodology and techniques of judgment, area of research and evaluation, (National Curriculum Framework of Pakistan, 2018).

In the same way Directorate General of Special Education stated its responsibilities and provisions for special students at its website. Some of them are as follows:

1. Coaching of Braille and mobility for independence.
2. Curriculum design etc.
3. Assessment, diagnostic and referral opportunities.
4. Standardized ideological services, speech therapy, physiotherapy and occupational therapy.
5. Academic and vocational training at all levels.
6. To develop pre vocational and vocational skills.
7. Professional development for teaching and non teaching staff of special education institutions
   (Directorate General of Special Education, 2020).

Moreover, a research depicted the opinions of some children having different disabilities along with their parents regarding usual curriculum being put into practice in Pakistan in a pattern that the curriculum being prepared and decided for physically fit students is not normally applicable for students having visual handicaps. Nonetheless, few adaptations and amendments are necessary to apply to the things to learn and teaching methodologies to efficiently fulfilling their learning requirements and motives. Approximately 35% of the parents replied that their visually disabled kids did not get the manners of good behavior at their houses. Most of kids with visual problems suggested that the syllabus of special education should be re-designed (Maluk et. al, 2018).

The Committee suggested adapting the syllabus of Punjab textbook Board till 8th grade excluding practical geometry. The Committee is of the opinion that mathematics could not be instructed without taking help of mathematical symbols and Braille chart, hence the committee asked to design a mathematical symbol Braille chart from grade three to eight and paste the same at the end of every book from class three to eight. Perkin Braille machine, special geometry box must be brought into use and block column and bar graph must be mounted by the Braille printing press texture, stamped impression and Braille symbols should be managed rather than ink-print. Braille printing press will be supposed to supply the required pictures, maps and Braille symbols as elaborated in the upper text. Urdu Braille chart must be provided at the last pages of Urdu textbook from standard 4 to 8. English Braille chart may also be given when the actual text book finishes from grade 6 to 8(Curriculum Wing, Directorate General of Special Education, Punjab, 2018).
Many research studies reveal the deficiency of suggested things and implications marked by Directorate General of Special Education Punjab in the respective manner, bringing tools in use for teaching empowerment are often inadequate. It further depicted the insufficient skills of instructors in special education to boost up the potential in mathematics and science (Mbulahneni Maguhvi, 2015). On the other hand, another study throws light on the importance of mobility and orientation in curriculum for better social integration of SWVI. There is an outstanding bond between Orientation & Mobility coaching and social adjustment of students in case of personality development and interaction with one another. Pakistan is a developing country and there is lack of high quality training and social care like those of other developing countries (Malik et al, 2018).

Single National Curriculum (SNC) that produced a speech all over the country in the starting of this year is being implemented in the current educational session and new text books have been published for this purpose. The Federal Minister of Education shafqat Mehmood elaborated the starting of a unified curriculum in all academic organizations as a radical step. Now students will have equal chance to get success regardless of their parental position in society. There is no any reservation to implement the SNC all over the country except the province of Sindh. Keeping in mind the Sindh exceptions, Shafqat Mehmood shared his view: “The Sindh government has put forward some exceptions, nearby; I have settled a meeting with provincial minister in an attempt to their demands”.

The Single National Curriculum that has been finalized currently is considered to be a perfect curriculum from the government. Although some educational experts still have a few reservations. The latest curriculum depicts new styles to be followed by instructors for teaching practices and exams simultaneously. Nonetheless like all other fully elaborated approaches, the current opinion of education policy is more similar to an abstract all over which is tough to accept in reality if it has been given a deep thought. The model would have opened the way for better quality of public education. But unluckily the complete emphasis of all efforts had been on designing a comprehensive national curriculum. The other three eminent domains that should be given more emphasis were either neglected or were not given the required importance due to shortage of funds. According to a study conducted by UNICEF presently Pakistan is holding the second number. In which students under the age between 5 to16 years are not going to any educational institution with an average of 228 million. Bringing this big ratio of pupils to the schools with limited resources is surely a big challenge to be achieved by the government (NetMag, 2020).

From the survey we come to conclude that NECL fulfills the global standards. But, the text book is not conforming to the national curriculum for ELT. In addition, instructors are unfamiliar with Standards, Benchmarks and Students Learning Outcomes included in the national curriculum of English language. As those instructors are not proficient for that and face a lot of hurdles by not being provided with Audio visual aids and vice versa. In the same way another study expressed subjects’ low morale with the top-down, previously proposed nature of the curriculum that makes it incomplete and poor for the pupils such as in the circumstances of covid-19 pandemic. It was opined that curriculum was extremely tough with less space for different modalities.

**Scope and Significance**
All eminent intellectuals, experts and reformers clearly reflected the belief that education has a significant and ever lasting impact on human beings. Instructional content / curriculum shapes the people’s beliefs, thoughts, customs and whole philosophy of life in some particular direction. History has proved many times that educational ideology influenced the human life not less than any effective weapon. The Revolutionary change in the life of Arabs by the ideology and
Effective teaching of Holy Quran is one of the best examples of miracle impacts of educational system, curriculum and a teacher. According to Oxford Dictionary, “A nation is defined as a group of people with the same language, culture and history, who live in a particular area under one government. But on the other hand, many Islamic think tanks like wisdom of East Allama Muhammad Iqbal, narrated in their various artifacts the fundamental element which formulates a nation is religion. Moreover, it can be said that a large group of people who share common history, common beliefs/religion, some common characteristics and same ideology of life is considered as a nation. The term national curriculum is derived from the concept of nation. Several intellectuals, philosophers and reformers believe that a nation should have same curriculum or education system because the ultimate result of various educational systems or curricula within a nation will be the division of people on behalf of different ideologies. That is why the Single National Curriculum is one of the basic requirements of a nation. For example all Muslims who are not living in same territory or under same government accept the Quran-e-Kareem as the basic code of life. Single Prophet Muhammad (SAW) and single curriculum Holy Quran chained them as a nation in-spite of various differences. Furthermore, it is also a proven fact that no nation can achieve the destination of progress and prosperity until the all segments of society contribute by their optimum abilities to the journey of progress. Persons with disabilities is an important segment of all human societies because according to an estimation, one billion people, or 15% of the world’s population, experience some form of disability, One-fifth of the estimated global total, or between 110 million and 190 million people, experience significant disabilities.

In addition to this, persons with visual impairment make an important proportion of any society because it is a common observation that the persons with visual impairment usually have better academic and professional achievement than whole community of people with different abilities due to their better cognitive skills. History has many examples of successful and influential thinkers, poets and artists having visual impairment who contributed to their existing literature and body of knowledge with their precious input. In the present era according to some estimate, 253 million people in the world who are visually impaired, moreover 89% of visually impaired people live in low- and middle-income countries. Individuals with visual impairment can contribute to the development of their nation and country in an effective way. Although most of them have remarkable cognitive and academic skills they still face a large number of obstacles by their visual limitation. Particularly, in prevailing special education practices in government special education institutions in Punjab, children with visual impairment face a lot of challenges due to the lack of need based supportive material, proper arrangements, lack of assistive technology and shortage of competent teachers. As the Single National Curriculum is going to be implemented for all sectors of society including children with visual impairment it is an intense need to identify the Benchmarks, Competencies and SLOs which are not appropriate for CWVI due to the above mentioned reasons so that the upcoming generation with visual impairment can contribute to the progress of country in a significant and an effective way.

Objectives of the study
The study was conceptualized to achieve the following objectives:
1. To identify the Standards, Benchmarks and Student Learning Outcomes (SLOs) in SNC which could be easy to accomplish for children with visual impairment enrolled at primary level in government special education institutions of Punjab Pakistan like regular students.
2. To recognize the Standards, Benchmarks and SLOs in SNC which could be difficult to accomplish for children with visual impairment enrolled at primary level in government special education institutions of Punjab Pakistan like regular students.
3. To give some practical suggestions about necessary improvements to make the Single National Curriculum more compatible and applicable for CWVI.
Research Questions
The study was carried out to answer the following questions:
1. Which Standards, Benchmarks and SLOs in SNC could be easy to accomplish for children with visual impairment enrolled at primary level in government special education institutions of Punjab Pakistan like regular students?

2. Which Standards, Benchmarks and SLOs in SNC could be difficult to accomplish for children with visual impairment enrolled at primary level in government special education institutions of Punjab Pakistan like regular students?

3. Which practical improvements could be made to make Single National Curriculum more compatible and applicable for CWVI?

Design/Methodology/Approach
This study was carried out to identify the Benchmarks, Competencies, and SLOs which are difficult to achieve in Single National Curriculum for CWVI. It was a qualitative research by method. Researchers preferred to the curriculum review/document analysis technique to conduct this study as Creswell and Creswell (2018) narrated that qualitative methods rely on text and image data, have unique steps in data analysis. In fact, it was the part of principal author’s evaluation study for his PhD dissertation. In this curriculum review, researchers studied and analyzed the implemented curriculum developed by Punjab Curriculum and Text Book Board which is also adopted for children with visual impairment studying at primary level in Government Special Education Institutions of Punjab especially in perspective of the education of children with visual impairment. The researchers identified various standards, benchmarks, competencies, and student learning outcomes from implemented curricula which are easy or difficult to achieve for CWVI in perspective of disability related challenges. Afterwards, researchers identified the same from Single National Curriculum because it has been implemented all over the country from April 2021 including children with visual impairment. Researchers also found those factors in existing special education practices applied in Government Special Education Institutions which restrict the effectiveness of any curriculum in prevailing special education system for CWVI. But, in this research, only those Benchmarks, Competencies and SLOs from SNC have been identified which are difficult to achieve. In this way, all syllabi and key learning areas of Single National Curriculum only at early childhood and primary education level have been reviewed.

Data Collection
For the sake of data collection, researchers studied and reviewed the syllabi of various subjects proposed for early childhood and primary level in Single National Curriculum from the website of National Curriculum Council, Ministry of Federal Education and Professional Training, Islamabad, Government of Pakistan. Researchers studied all given syllabi in detail included in Single National Curriculum consulting electronic sources. After an in depth study, various Competencies, Standards, Benchmarks and SLOs which are difficult to achieve for CWVI due to their visual limitations, lack of proper assistive technology, specialized instructional strategies and desired resources in special education institutions which can facilitate the CWVI in absence of vision were identified.

Data Analysis
For the sake of data analysis, Single National Curriculum was reviewed by document analysis technique. The given Standards, Benchmarks and SLOs of all subjects and key learning areas proposed at early childhood and primary education level were studied. Data were coded and interpreted. Three major themes were derived: most of the standards, benchmarks and SLOs
given in SNC are easy to achieve for CWVI like other students, whereas, some standards, benchmarks and SLOs were found difficult to achieve for CWVI. Necessary modifications in Standards, Benchmarks, SLOs and need based support in learning environment was recommended.

**Findings**
Some of the important findings of this research are as follows:

Total 108 SLOs including 23 from early childhood education syllabus, seven from primary level English syllabus, six from social studies, four from general knowledge, seven from general science, 30 from Urdu and 31 from mathematics at same level were found difficult to achieve for students with visual impairment, particularly for blind children. Moreover, 16 themes were found difficult in the syllabi of various subjects at early childhood and primary level, six benchmarks were found difficult to achieve for CWVI. Similarly, four given competencies were found difficult to develop in children with visual impairment.

Most of Standards, Benchmarks and SLOs given in SNC are easy to achieve for CWVI like other students. Some examples of such SLOs are as follows:

- **Grade pre I early childhood care and education subject:** Personal, social and emotional development SLO choose and talk about an activity/work that they enjoy doing the most in class.
- **Grade II Book English SLO:** Articulate the sounds of letters of the alphabet in random order.
- **Grade III Book English SLO:** Recognize specific parts of words including common inflectional endings.
- **Grade I Book General knowledge SLO:** Recognize living and non-living things around them.
- **Grade III Book General Knowledge SLO:** Recognize what is an ecosystem (e.g., forests, ponds, rivers, grasslands and deserts).
- **Grade IV Book General Science SLO:** Take care of their own belongings and put classroom materials back in the right place after use.
- **Grade V Book Mathematics SLO:** Multiply numbers, up to 5 - digit, by 10, 100, and 1000.

Difficult to achieve SLOs, themes and benchmarks for CWVI in Single National Curriculum due to their visual limitation and lack of need based support are as follows:

- **Grade pre I early childhood care and education SLO:** Describe a picture by using appropriate words or simple sentences.
- Predict the story by looking at the cover page and flipping through pages.
- Arrange objects and letter pictures according to their size/length, going from smallest to biggest, biggest to smallest, shortest to longest and longest to shortest.
- **Grade II Book English SLO:** Pronounce and match the initial sound of common words depicted in pictures with their corresponding letters.
- **Grade IV Book Social Studies SLO:** Recognize the concept of Direction by using the term “Cardinal Points” and Compass Directions with the help of a diagram.
- Define Scale in reading maps and its types with the help of diagrams.
- **Grade I Book General Knowledge SLO:** Draw the flag of Pakistan.
- Identify how schools, communities, and transportation have changed over time (from the given pictures).
- **Grade II Book Mathematics SLO:** Identify straight lines and curves from the given drawings.
- Use ruler to draw a straight line of given length (exclude fractional length).
• Make/ complete geometrical patterns on square grid according to one or two of the following attributes • Shape • Size • Orientation
• Identify right angles in 2-D shapes.
• Read and interpret a bar graph given in horizontal and vertical form.
• Draw horizontal and vertical bar graphs for given data.
• Grade I Book Urdu SLO: Students will be able to answer the comprehension based questions after looking at the picture.
• To give opinion in three to five sentences after observing a picture, model and scene.

Benchmarks
• At least 2500 basic words with their meanings could be understood (such kinds of benchmarks are difficult to measure in actual classroom situation not only for CWVI but for all students.

Competencies
• Children will learn the skills of collage work and printing and use these in a variety of ways to create their own pieces of art and patterns developing their fine motor skills.
• Children will express themselves through the use of drawings and colours.

Themes
• Globe and map skills

Conclusions
The conclusions of this study are as follows:
A large number of benchmarks, given competencies, and SLOs are easy to accomplish for CWVI as non-disabled children but many benchmarks, competencies and SLOs are not easy to attain for CWVI, particularly, for blind or severely low vision students due to their visual limitation and lack of sufficient need based support at special education institutions. Moreover the themes and SLOs from mathematics particularly in the field of geometry will be difficult to achieve for CWVI in the scenario of existing lack of need based supportive material at special education institutions of Punjab. Similarly the benchmarks and SLOs in geography will also be difficult for students with visual impairment. On the other hand many benchmarks and SLOs presented in the syllabus of Urdu for various grades at primary level are difficult to measure in actual classroom situation not only for CWVI but for regular students as well.

Implications/Originality/Value
It is recommended that proper adaptations, modifications and accommodations should be made for CWVI specially to attain the geometry, science and geography related benchmarks, competencies and SLOs including adaptations proposed by Directorate of Special Education Punjab. Competent and trained teachers may be deputed to teach CWVI. Proper need based supportive material should be made available in all government special education institutions. Tactile and embossed material should be recommended in SNC as a substitute of visual material including maps, graphs, art and craft work etc. Pictorial representations and visual tasks should be substituted with some other learning tasks for CWVI and these should be mentioned in SNC. Easy to measure and easy to achieve Benchmarks, Competencies and SLOs should be developed for all students in upcoming syllabi and next versions of Single National Curriculum. More detailed studies are needed to conduct to identify the special educational needs of children with hearing impairment, physical disabilities, intellectual challenges, learning disabilities, those of children with emotional and behavioral disorders and more importantly, children with giftedness which have not been incorporated in Single National Curriculum.
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