Abstract: Inclusive curriculum makes a system where every child has an opportunity to enhance the quality of lives through the education. Educators and pupils are the central aspects for developing an adapted curriculum. The trend of inclusion opens a window through which humanistic perspective takes place in education. The curriculum relation model (CRM), resource-based themes of interaction, ecological model, information processing model, enrichment perspectives are used here to formulate an adapted curriculum.

Index Terms: Inclusion, adapted curriculum, pupils, curriculum relation model.

I. INTRODUCTION

Curriculum is an essential vehicle for regular and special needs learners. Considering the children’s rights, better support system, abolishing segregation, and fulfilling the targets of Education for All (EFA), a relatively new trend of education was introduced through Salamanca Declaration-‘Inclusive Education’ [1]. For ensuring schools’ quality and effectiveness, it is important to have adaptive curriculum that bridges the gap between regular and special needs students through the principles of inclusion; these are-

1. Every child has basic right to attend school and attain learning;
2. Every child has uniqueness, own interest, and learning needs;
3. School should design and implement the programs as children’s uniqueness;
4. Special needs children should accommodate in regular school within child-centered education to meet their needs;
5. Through the implementation of inclusive education, the regular schools can remove the negative attitudes towards special needs children and can create a healthy atmosphere for all the children [1] - [3].

From these principles, it is crystal clear that children with special needs themselves are not barrier rather school systems need to be adapted according to their diversity [2]. For that, it is necessary to make curriculum in such way that is individually adapted and flexible for implementation. Here, the discussions with curriculum relation model [4], resource-oriented approach [5], and other relevant literature are artifacts that mediate to construct factors for making an inclusive curriculum by reflecting on the principles of inclusion. Moreover, it also emphasizes on a specific country based practice about inclusive curriculum that will show us the exact scenario of implementation of inclusion.

II. MAKING AN INCLUSIVE CURRICULUM IN LIGHT OF RELEVANT THEORIES

It is obvious to follow the principles of inclusive education for making a meaningful, flexible, and individually adapted class curriculum. Consequently, there is a need to use various tools that will scaffold us to formulate a more suitably adapted curriculum by reflecting important learning and teaching issues.

Cultural-historical perspective can be used as a broader tool under which it is possible to understand the individuals in terms of their socio-cultural contexts, meditational aspect, and practical activity [6]. This approach can study pupils as whole through which we can easily identify the pupils’ elements related to education and plan curriculum according to their needs. It is important to recognize pupils’ potential level of development. It will help educators to make individually adapted curriculum as Vygotsky emphasized on pupils’ zone of proximal development (ZPD) where learning can take place through the process of internalization or appropriation with the systematic assistance from teachers and knowledgeable peers [7], [8]. Bronfenbrenner’s ecological model was one step forward to cultural-historical theory where school is an important micro system to study individuals in connection with other systems [9]. This model can consider as tool to create a suitably adapted curriculum by studying child within entire contexts (Fig. 1).

Figure 1: Ecological Model of Human Development [10]

The curriculum relation model (CRM) is another tool that also emerges from the cultural-historical perspective. It consists of eight or seven + one main elements which help to construct a bridge between inclusive principles and regular school. These eight aspects are- the pupil(s), assessment, intentions, content, class organization and teaching methods, communication, care, and contextual factors. All of these facets are interrelated with each other; change in one part will be altered others (Fig. 2). The first seven constituents of model are about the teaching and learning activities and the...
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The eighth aspect is about the context in which the seven elements are activated [4], [11].

Figure 2: The Curriculum Relation Model [11]

The resource/mastery-oriented approach is another tool that shows us the way of interaction between teachers and pupils. The eight principles of resource-oriented approach are regarded as the means of communication and mediation; these are to demonstrate positive feelings, adapt to the students, talk to the students, give praise and acknowledgement, help the students focus their attention, give meaning to the students’ experience, elaborate and explain, and help the students achieve self-discipline [5]. Within these eight themes, the first four are presenting the emotional-expressive dialogue, then three themes are corresponding the meaning making dialogue, and the final one is considering the self-regulatory dialogue [12]. All of these communicative themes are mediated to develop curriculum by focusing on teaching and learning perspectives. It is impossible to reach the pupils’ needs and make inclusive schools without the appropriate, reciprocal, and meaningful interaction.

The enrichment perspective is strength and ability-based approach that is focused on inclusion as a tool to adapt learning environment. In this approach, individual differences are considered as resource rather than problem, focus on heterogeneity, recognize pupils as dignified and valued, and create a social atmosphere to interact with each other. This approach can practice into various inner activities of schooling, like schools’ content, teaching-learning methods, and qualification of staff which are influenced to make an individually adapted class curriculum. It is important to focus on teachers’ personal learning and meta-cognitive competence to know how one learns that will indicate how significantly a teacher can use strategies for promoting own knowledge to learners [13].

Information processing model is effective to comprehend pupil’s information processing system through the sensory reception, thinking (central processing), and expression; the interaction of executive function occurs with each part and all process within child’s emotional context [10]. This tool can allow educators to focus on pupils’ strengths and needs through the understanding of processing system and help to prepare an appropriate curriculum for them.

How do all of the relevant approaches help educators to plan a meaningful and individually adapted curriculum? For this, we are discussing about several factors of curriculum.

A. Factors for Individually Adapted Class Curriculum

It is necessary to take into account various factors those are manipulated for curriculum; these are briefly discussed in below.

1. The Pupil(s). Pupils or individuals are the central part of making curriculum. This is because of pupils are persons for whom curriculum is planning. Towards inclusion, it is necessary to bring major shifts within whole school approach; one of them is to concentrate on pupil-centered education and other one is to focus on the broaden assessment of all aspects of teaching and learning issues rather the extreme highlighting on pupils’ learning products. While we are planning curriculum, it should be kept in mind that child’s active participation in education makes the situation more collaborative, lively, and meaningful to inclusion. As a result, curriculum can deliberate on learner-oriented where teachers are only for guiding or scaffolding them to achieve their unique zones of proximal level and their relationship is considered as master-apprentice [7], [14]. For making a fruitful curriculum, it is important to understand and know the learners’ background, their information processing system, whether they have disability, their strengths, learning strategies, ways of communication, current and potential level of mastery, and overall principles of learning and development. Without such knowledge about children, educators cannot make productive curriculum. Educators can study pupils through dialogues and observation.

2. Educational Intentions. The educational intentions or in other word ‘aims’ and ‘goals’ are important point while we are planning an individually adapted curriculum related to the class. It is pointless to make a curriculum if there are no intentions. On the basis of such intentions, we can measure outcomes or can understand whether our goals are accomplished or not. Educational intentions can vary from country to country and across cultures. It is mainly focusing on something that we would like to transmit to newer generation and something that help pupils to develop new knowledge as cultural-historical approach focuses on phylogeny and ontogeny respectively. Educational intentions also show the broader goals as well as short-term objectives to achieve pupils’ future targets. Teachers can identify the pupils’ future goals through dialogues and cooperation with parents, co-teachers, and pupils. Educators are depended on three components to choose learning goals and objectives for pupils’ curriculum; these are country’s educational acts and official documents, learners’ actual and potential levels of mastery, and learners’ own intentions. These three components are very essential to acquire certain skills, knowledge, attitudes, and experiences.

3. Educational Content. As educational intentions, content is another aspect that make curriculum enriched. Contents are set up based on the intentions. How does educational content include in curriculum? It varies across countries and cultures. In some places, the educational contents are fixed for curriculum where limited possibilities for flexibility and individually adaptation that also consider as barrier to practice inclusion. Conversely, some national curricula have a great flexibility to choose the contents according to the
individual needs. For meaningful curriculum, contents should prescribe through the micro level (school) rather than the macro level (government). A number of criteria point out for educational contents that are the consistency with whole teaching program, adequacy with goals, variety and multiplicity, adaptive to individual and group, balancing and cumulative, relevance and meaning, open to optimal integration with other learning activities, and open to pupils’ choices [4]. All these criteria of educational contents help educators to formulate a well-balanced and adaptive curriculum. In addition, a set of questions are introduced about how do we select contents for classroom which are also considered as measuring tool for choosing appropriate contents for children. These questions are reflected about the all pupils’ learning extension, diversity of pupils’ experiences, variation of knowledge, and the different way of learning [15]. For making an individually adapted class curriculum, it is one of the challenges for educators to adapt macro level’s content into micro level and include diverse, balanced, consistent, adaptive, and meaningful contents for achieving the targets and nourishing children as sociable, worth-while, and self-confident. For executing educational content, educators also need to concentrate on other phenomena, like learning environment, teaching materials, motivation level of teachers and pupils, methods, and so on. Overall it can be concluded that the whole school approach needs to be considered for attaining educational ‘what’ or content in order to plan an inclusive curriculum.

4. Teaching Methods and Classroom Organization. It is significant to follow and maintain various teaching and classroom organization strategies in accordance with individual pupil’s needs which are another ingredient for developing curriculum. Consequently, pupils’ learning is depended on how much teacher can understand about pupils’ learning styles and provides a learning-oriented environment for each of the child so that children can develop their own strategies. In a class setting, every individual may have different learning strategies to internalize the learning contents. For example, some needs to more focus on reading, some listening, writing, studying in group or alone. If teachers are not recognizing the individuals’ way of learning, then learning processes are met with difficulties due to biological, psychological or environmental factors or from combination of all. The practice of inclusion highlights the teaching methods and organization of classroom as mentioning all learners’ diversity. Teaching methods and organization strategies are mediated tools through which teachers as ‘experts’ guide learners as ‘novices’ to get their optimal level of learning. If we are considering the roots of educational methodology, we can find four methods that are prescribing, achromatic, dialogic, and heuristic methods [4]. Currently, dialogic method in which conversation relating with questions and answers are prioritized in Bruner [16] and Henning Rye’s [5] work. Rye provides eight themes for the quality interaction between teachers and pupils that narrate the dialogic principles of communication. These themes are acted as tools for mediating delivery of instruction. Despite these, there are various methods that help to engage diverse students into learning tasks.

Based on Vygotsky’s ideas, ‘cooperative learning’, ‘discovery learning’, and ‘scaffolding’ or assisted learning, these methods are guided by the teachers to attain learners’ zone of potentiality [17]. Bruner advocated the discovery learning. He said “we teach a subject not to produce little living libraries on that subject, but rather to get a student to think… for himself, to consider matters as an historian does, to take part in the process of knowledge-getting. Knowing is a process, not a product” [18].

Story telling is another teaching method which enables teachers to catch their pupils as responsive learners. Norwegian scholar Ole Vig considered story telling as ‘the living word’ for its fluidity, liveliness, and amusement through which children could learn freely instead of imposed [4]. Bruner also used story telling methodology to teach the children as his ‘narrative folk psychology’ [16].

In addition, there are various teaching methods for special needs education. Treatment and education of autistic and related communication handicapped children (TEACCH), applied behavior analysis (ABA), picture exchange communication systems (PECS), augmentative and alternative communication (AAC) etc are well-known teaching methods that use various classical strategic aspects, like task analysis, systematic repetition of materials, use of variety of materials, using reinforcers, shaping, and chaining [4], [10], [19]. All these methods are useful while we are planning, implementing, and evaluating inclusive practice in terms of the curriculum development. There are some general criteria that helpful for adapting methods to the plurality of various educational needs, i.e. always using new methods, overview of various methods, applying flexibility, and using different methods leading to eclectic approaches for joint class activities [4].

‘The settlement approach’ and ‘the Reggio Emilia’ are creative teaching methods that also encourage the flexible, individuality, and collaborative education. These are child-centered approach where adult-child collaboration and peer collaboration are used as teaching methods. Rogoff also mentioned the extensive value of collaboration in children’s learning through guided participation [20], [7], [14]. When educators are engaged in co-teaching (general and special educators) that makes possible for diverse students to access an adaptive curriculum [21], [22].

As early mentioned, classroom organization is the central point for choosing contents and applying methods in order to execute the inclusive curriculum. It takes into different ways, i.e. bigger class with combining two or more classes, groupings, individual teaching, as well as inner and outer classroom activities. While planning curriculum, educators need to flexible for arranging activities, means of doing, and the setting of classroom [4].

Moreover, all teaching methods are the way of getting pupils into learning activities through which educators can concern about the individuals’ needs and can organize environment as methods required. Cultural historical activity theory outlines educational standards in which joint productive activity is the core that has impact on class organization and task design to achieve the educational ‘How’ [20].
5. Assessment. One of the vital issues of developing individually adapted class curriculum is assessment for its role to find out learners’ mastery level, to scrutinize the way of educational activities whether it’s effectively working to engage pupils, how to set classroom, along with to keep an eye on the fulfillment of educational intentions. Instead of traditional grade and norm-based assessment, it should be wide-ranging, flexible, and dynamic as the notion derived from cultural-historical approach and principles of inclusion [4], [8]. There are various ways to assess individuals and the whole class, such as using questionnaires, interviews, achievement tests, ability tests, checklists, observation, dialogues etc. When educators are concerned to plan individually adapted curriculum related to class, it is obvious to assess firstly individual needs and how does individual process their information, and then adapting class curriculum along with individual one to achieve educational intentions. This is because of every child is unique and those with special needs have different processing systems than others. For example, children with autism spectrum disorder (ASD) have hypersensitivity or hyposensitivity that affects their incoming experiences [10]. If teachers are unable to assess such variation, it is impossible to adapt curriculum for them. We can ensure the quality of education towards inclusion through the systematic and dynamic utilization of assessment. While we are assessing the pupils and educational processes, we also need to more focus on contextual factors in which child rears up and education takes place as the explanation of Bronfenbrenner’s ecological theory.

6. Communication. Within curriculum relation model, communication placed inside the circle to state its iconic significance at educational setting, more specifically for creating adaptive curriculum [4]. Communication is the only means through which educators can reach towards pupils and can bridge between the pupils’ needs and class curriculum. Within cultural-historical perspective, language is a mediating tool that creates higher psychological functions through which we can interact socially and within our own [8]. It is an intersection point to make a new dyadic (teacher-pupil) and triadic (teacher-pupil-peers) relationships that will beneficial for the overall schooling activities along with curriculum consideration. For example, talking is the prime tool to make a shared framework in collaborative learning where teachers guide pupils to reach their zones of proximal development as Mercer mentioned it ‘intermental development zone’ (IDZ). Teachers and pupils work together to achieve their joint goals. Such intermental development zone (IDZ) is dynamic framework where dialogues are enabling them to attain zones. If it is maintained precisely, then it increases motivation to engage in tasks and decreases the misunderstanding that will helpful for doing educational activities smoothly and possible to receive a well-structured and adaptive curriculum for diverse groups [20]. The eight themes of resource-based approach have an immense influence in the interaction process between teachers and pupils that assist educators to understand about the pupils and make planning for individually adapted curriculum related to class [5]. Communication can be divided into two aspects while we are concerning to develop curriculum; one is technological aspect in which educators need to consider about the communicational devices or setting through which each child has an equal opportunity to get the teachers’ instructions and another is human relational aspect in which educators need to look at the making relation and rapport build up through communication that mentions in resource-oriented approach [4], [5].

7. Care. As communication, care is also placed inside the circle of curriculum relation model because of its importance to hold pupils in the tasks and to implement the principles of inclusion. Care represents the child-centered approach to education where teachers are not only concerned about the pupil but also for the child as a whole in respect of his or her socio-cultural context. It provides more support and encourage play and learning to learners to build up their self-confidence and self-esteem which is an indispensable notion for practicing inclusion [4]. Positive learning is influenced by the basic human needs, like touch, belongingness, love, acceptance and recognition that are included in the aspect of care [23]. That’s why, care is a core issue for planning curriculum that is based on individually adaptation. Educators seem to be successful when learners are also recognized that they are really caring for them through their attitudes, facial expressions, touch, and body languages. It is a great challenge for educators to express their care to all of students in school setting; it is a form of relationship that makes bond between educators and pupils through their relatedness, responsiveness, and receptivity [4].

8. Frame/Contextual Factors. Frame factors is essential aspect to understand pupil as a whole that is effective for creating more adaptive curriculum along with pupil’s needs. Within curriculum relation model, frame factors are important because of its interrelationship with other seven aspects. Without context, it is impossible to plan a curriculum; it likes ‘swimming in the ocean’ that never ends. When we are planning a curriculum, national legislation and policies about education, monetary condition, professional quality, physical structure, social and cultural frame factors need to be considered to establish a meaningful curriculum [4]. It is not enough to study only one micro system as school to develop curriculum. For individually adaptation, it is needed to concern from family, school, society, national and to global contexts as Bronfenbrenner mentioned through micro, meso, exo, and macro level [9].

To wrap up, it can be verbalized that these eight aspects are massively connected to create a class curriculum with consideration of individual needs. Along with curriculum relation model, Bronfenbrenner’s ecological model, enrichment perspective, and resource-oriented approach, and information processing model are also used. By using all these relevant literature, educators can plan a curriculum that is meaningful, flexible and suitably adapted.

III. THEORIES INTO PRACTICE FOR MAKING INCLUSIVE CURRICULUM

As we understand that inclusion is a continuous process that concerns with recognizing and removing barriers to learning. It is not only to bring change in the conceptions but also to alter the processes of education with legislation and classroom’s level [24]. For doing these changes, it is essential
to develop such a curriculum that is adapted with everyone’s needs. In Bangladesh perspective, inclusion is a relatively new approach. As a trainee, the author worked at inclusive school where children with autism spectrum disorder (ASD) were included. Here, the principal responsibility was to enhance the school’s effectiveness so that it would really capable to take various needs children. In light of experience and current knowledge about various models and approaches, this article has drawn an individually adapted curriculum related to class with ASD students. How do the above mentioned eight factors use to plan an individually adapted class curriculum? How does a regular school practice inclusion?

Children are the active agents for the practice of inclusive education. It is important to study about their history and context in which they are brought up. Using assessment, we need to find out the current and potential level of learning. Before enrolling students, such assessment will help to know about the child and make easy to find appropriate class for them. Based on assessment, individualized education plan (IEP) will be developed for children with the help of multidisciplinary team, including parents, child, general and special teachers, psychologists, therapists, and so on. IEP should include the long-term and short-term goals, current level of mastery, how to measure child’s progress towards goals, date, location, services, modification, devices.

Teachers are also important agents for inclusive education. When teachers have any students with ASD and ADHD, then their primary task is to adapt their IEP with existing class curriculum according to their needs. For this, teachers need to choose meaningful content that is motivating, available, and fulfill their goals. Teachers need to focus on the classroom setting as well as the organization of natural environment. It is important to make sure that teachers can reach to the every child and vice versa. For encouraging and holding special children’s attention, teachers should use variety of teaching methods and learning materials. Teachers can divide all students into equal groups not in terms of number but also focusing on children’s needs. As a teaching method, teachers can use cooperative learning, project-based instruction, and scaffolding through which special children can maximally reach their targets with the help of teachers and peers. For most effectiveness, teachers need to concentrate on how they are communicating with students. Communication occurs in such a way that can reach the child’s level. Through communication, teachers make a dyad with students that encourage making a bond between them. Not only verbal but also non-verbal behavior of teachers can influence students and make them realize that how much teachers care about them. This condensed planning is brought up in Table 1.

### Table-1: Transformation of curriculum from regular to inclusive

<table>
<thead>
<tr>
<th>Factors</th>
<th>Class Curriculum</th>
<th>Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupil/s</td>
<td>Regular students, discipline-centered approach</td>
<td>Regular and special students (Autistic, visual impaired), child-centered approach</td>
</tr>
</tbody>
</table>

In such way, educators can make curriculum that will guide them to adapt all the aspects of children relating to education. In broader sense, national curriculum influences the school curriculum and school curriculum similarly affects the classroom curriculum [25]. When national and school curricula influence the classroom curriculum, this is the foremost challenge for educators to adapt it with individual needs. To overcome such difficulty, teamwork and continuous professional development can enhance the capacity of educators and help to minimize the challenges.

**IV. DRAW TO AN END**

There is no doubt regarding the importance of curriculum in respect of regular as well as inclusive education. Focusing on a flexible and adapted curriculum, this paper is discussed about eight elements of curriculum relation model as connected to other models and approaches. Along with eight aspects, we also need to contemplate on the emotional level of educators and pupils as it is vastly influential in educational setting. Despite these, we have to be more innovative and flexible while we are working with diverse groups of pupils. However, no single model can appropriately develop curriculum. This is because of individuals’ uniqueness, complexity of context, and complicated human nature. We cannot draw a fixed outline for including all children.

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