EDUCATIONAL TECHNOLOGY FOR INCLUSIVE CLASSROOM

Sumana Paul

Senior Faculty, Department of Education, Women's College, Shillong

The quality of education given to students who are in need of special education is gaining importance day by day. For this reason, new education centers are being founded, new studies are being conducted and adapted in public life. Inclusive education is a part of these studies. Equality of opportunity and normalization is the basic philosophy of inclusion. "Inclusive education - according to UNESCO means that the school provides good education to all pupils irrespective of their varying abilities. All children will be treated with respect and ensured equal opportunities to learn together. Inclusive education is an on-going process. Teachers must work actively and deliberately to reach its goals" (UNESCO, 2007). Inclusive education refers to an academic system that allows special education students to become included in mainstream classes alongside their peers. Inclusion classrooms can benefit many special-needs children.

Vision of Inclusive Education:

- ➢ Equal opportunities
- ➢ Effective educational programmes
- ➢ Assistive devices
- ➢ Parent involvement
- ➢ Making students learn to appreciate each other's unique strengths
- ➢ Encourage students to help each other
- ➢ Students with disabilities are able to foster friendship in a natural manner
- ➢ Non-disabled students get a chance to develop positive attitudes towards people with disabilities.

Teachers' Responsibilities and Preparation:

Teaching students with disabilities in an inclusive classroom may be regarded as a challenge for teachers accustomed to teaching in the regular classroom. Therefore, teachers should know the basic characteristics of effective teaching. To be a successful teacher in inclusive classrooms is not easy because in such cases the teacher is dealing with different abilities.

It is important to support the right of each child to play and learn in an inclusive environment that meets the needs of children with and without disabilities. Each child's culture, language, ethnicity and family structure are to be recognized and valued in the program (Copple, 2006).

The inclusive classroom has been assessed to be of benefit both to the teacher and student. A fully inclusive educational setting requires planning, trained teachers, and other supporting staff. Such an inclusive classroom is challenging but has the possibility of being effective. Social and emotional inclusion is just as important to the inclusive teacher as academic inclusion. Social inclusion is promoted by providing opportunities for students to interact with each other. Co-operative learning, working in pairs or groups, using peer tutors, team activities, structured games, and changing seating arrangements all promote social inclusion. The inclusive teacher has a long term vision for each child and therefore modifies the curriculum to suit every child.Benefits of inclusive education include an opportunity for special-needs students to learn team work skills while heightening their sense of belonging in the school community. Many teachers welcome the change at the same time some may feel challenged or be confused about their new roles.

Therefore, there is a compelling need for departments of education, colleges and universities to provide pre-service and in-service training for educators. According to Malloy, 1994, educators need this kind of training so as to work effectively with children of varied abilities and disabilities.

The Successful Inclusive Classroom:

Keys to success include:

- Students need to be active - not passive learners.
- Children should be encouraged to make choices as often as possible; a good teacher will allow students some time to flounder as some of the most powerful learning stems from taking risks and learning from mistakes.
- Parental involvement is crucial.

- Students with disabilities must be free to learn at their own pace and have alternative assessment strategies in place to meet their unique needs.
- Students need to experience success, learning goals need to be <u>specific, attainable and measurable</u> and have some challenge to them.

Duties of an Inclusion Teacher:

An inclusion teacher is a special education teacher who works with inclusion students. Inclusion students are those students who have disabilities, but are able to function in the general education classroom. Inclusion teachers have the following duties.

1. Accommodate Inclusion Students

Inclusion teachers must accommodate special education students on their Individualized education plans (IEPs) as each student will need different accommodations according to his disability. (Accommodations may include larger print for a visually impaired student, preferential seating or adaptive equipment).

2. Modify Assignments and Tests

Most inclusion students will need modified assignments. Modifications may include reducing the number of problems or test items, limiting multiple choice answers and omitting certain items.

3. Collaborate With the Regular Education Teacher

Inclusion students in the general education classroom will have a regular education teacher as well as inclusion teacher. Both teachers are required to work together to meet the needs of the inclusion students. The inclusion teacher and regular education teacher should frequently discuss and assess the progress of the inclusion students.

4. Address Parental Concerns

The inclusion teacher should be prepared to address parental concerns. The teacher should always be willing to discuss the inclusion student's progress with the parents.

5. Complete Required Paperwork

Inclusion teachers are responsible for writing annual IEPs. Inclusion teachers may also conduct alternate assessments of those students who are not able to participate in the customary curriculum tests administered annually.

The Role of Technology in Education:

In the current age we live in, technology has become an important component. Every day there is some new gadget or software that makes lives easier and improves on the technology and

software that already exists. Making lives easier is not, however, the only role technology plays in our lives. As technology advances, it is used to benefit students of all ages in the learning process.Technology used in the classroom helps students to absorb the material. For example, since some people are visual learners, projection screens linked to computers can allow students to see their notes instead of simply listening to teacher delivering lecture.Different software can be used to supplement class curriculum and can help students continue learning outside the classroom.Technology has also become part of many curriculums, even outside of computer and technology classes. Students use computers to create presentations and use Internet to write projects.

Students also learn to use the technology available to them in computer and technology classes.This ensures that after the completion of the prescribed course they are in a position to use the technology in a work setting, which may put them ahead of someone who did not have access to a particular technology or software in their own school setting.

Technology has also advanced to help children even before they have started school. Educational video games and systems for young children help them prepare for school and in some cases get a head start on their education.

There are people who may say children are "spoiled" by technology. Instead of being able to add a long column of numbers in their heads, for example, they turn to a calculator. Regardless of these arguments, technology is an important part of today's society. By incorporating it into the classroom, students will be better equipped to transition from the classroom to the work place.

Challenges of Inclusive education:

Lack of Infrastructure

A majority of schools are ill-equipped to facilitate animated learning. While some schools lack basic amenities such as electricity, drinking water and toilets, others do not have proper furniture, playgrounds or adequate lighting and ventilation in classrooms.

High Dropout Rates

Attendance figures at schools receive a temporary boost due to enrolment drives, but retaining these freshly admitted students is an uphill task due to lack of adequate numbers of staff and low teacher motivation. In the absence of adequate guidance, learners are unable to cope up with curricular demands and choose to dropout of schools.

Lack of Teacher Training & Motivation

A number of factors have lead to a widespread lack of teacher training and motivation. India has one of the highest pupil-teacher ratios in the world and teachers are often overworked and underpaid. Moreover, teachers are under pressure on account of their being inadequately trained.

Educational Technology for Inclusive Classroom:

Integrating Technology into Instruction in an Inclusive Classroom for Diverse Learners is a welcome step to overcome the challenges.Inclusive Education is based on the concept of multiple intelligence and individual difference. There is evidence to say that all individuals are different from each other and no two individuals can completely alike even if they have been brought up in the same environment. Teachers should also realize that having high scholastic ability is not the only measure of child's intelligence. What is important is to develop flexible student centered pedagogy capable of educating all students, including those who are disabled or disadvantaged. In an inclusive setting we expect greater participation of students with special educational needs in the culture and curricula of mainstream schools. In this context we have to think of some techniques that permit all students who are different from each other to learn together in the same classroom.

Major Teaching Strategies:

To make inclusive education a success and to teach students having diverse abilities in the same class the following teaching strategies may be used:

1. *Use of Multimedia and computer assisted instruction*
2. *Team teaching*
3. *Cooperative learning*

1. **Use of Multimedia and computer assisted instruction**

One major factor to enhance learning in the inclusive classroom is the use of technology. Technology provides ways for children with disability to communicate and interact on a more equal level with other children.

Adaptive technologies can open a new world to children with physical limitations and therefore children often feel better about themselves as active learners.Computer programmes can be individualized and automatically adjusted to the student's instructional level. This is more evident in the case of individuals with hearing and vision impairment. Multimedia approach of instruction (audio, video, graphics, internet, animations etc.) is essential

for effective and efficient learning because in any learning situation, the more the senses are stimulated, the more the person learns and the longer he retains. Multimedia in the classroom also includes Power Point presentations that are created by the teachers. Multimedia activities encourage students to work in groups, express their knowledge in multiple ways, solve problems, revise their own work, and construct knowledge. The advantages of integrating multimedia in the classroom are many. Through participation in multimedia activities, students can learn:

- Real-world skills related to technology
- The value of teamwork
- Effective collaboration techniques
- The impact and importance of different media
- How to present information in convincing ways
- Techniques for synthesizing and analyzing complex content
- The importance of research, planning, and organization skills
- The significance of presentation and speaking skills
- How to accept and provide constructive feedback
- How to express their ideas creatively

2. Team Teaching

The special education teacher may brief the regular teacher on the IEP (Individual Educational Plan) of the learning disabled students.The two teachers can develop instructional plans and worksheets weekly. They share the task of grading student worksheets. In actual practice, the regular education teacher assumed most of the responsibility for the overall instruction and classroom management while the special education teacher give individual support to both special and regular students. Throughout the year the two teachers can refine their team teaching skills and can become a finely tuned instrument of education serving all the students in an enhanced classroom organization. For eg. if a blind student writes his/ her answer in Braille the general teacher may require the help of specialist to correct the answers.

3. Cooperative Learning

A working definition of *Cooperative Learning* is the use of small groups through which students work together to maximize their own and each other's learning. In cooperative learning, students work with their peers to accomplish a shared or common goal. The goal is reached through interdependence among all group members rather than working alone. Each member is

responsible for the outcome of the shared goal. Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson & Johnson, 1989). Cooperative learning makes sense in inclusive classrooms because it builds upon heterogeneity and formalizes and encourages peer support and connection. However, cooperative learning is not of value only to children with disabilities, it is equally important for the normal children. Important skills such as critical thinking, creative problem solving, and the synthesis of knowledge can easily be accomplished through cooperative group activities in inclusive classrooms. Not only can students get to know each other's abilities within a cooperative process, but teachers can as well. A general education teacher and a special education teacher planning together often find that they have unique skills and ideas to contribute to the process. The general education teacher may have a broader perspective on the curriculum and on curriculum integration, whereas the special education teacher may have special skills in modifying instruction and developing adaptations that benefit many children. General education teachers who are used to working with larger groups of children often can contribute important classroom management and organizational strategies to balance some of the individualized approaches proposed by the special education teacher.

Cooperative learning is a strategy used by group/ number of students to achieve a common goal with mutual collaboration and support. Teachers should organize the three (1special and 2 normal children) or five members groups so that students are mixed as heterogeneously as possible. In this method the teacher divides the class into mixed ability groups to achieve a goal. In cooperative learning groups, students have two responsibilities:

1. To learn the assigned material
2. To make sure all other members do likewise.

However, cooperative learning groups must be structured to include the essential elements of:

- Positive interdependence (each member can succeed only if all members succeed)
- Face to face interaction
- Individual accountability (each member do their fair share of work)
- Interpersonal and small group skills.
- Group processing (reflecting on how they work and improve)

When learning situations are structured cooperatively, regular and special education students can work together in pairs or teams to accomplish their common goals. All students can learn to

accept different views from team members, understand each other, and support each other. Computer technology is an important part of an inclusive classroom (Friend & Bursuck, 1996). It can provide individualized, sequenced instruction in a highly motivating format. When students work together on computers, the problem of non-completion of independent work is eliminated. For eg. **Mathematics** can be taught effectively in an inclusive classroom setting using computers as a tool combined with cooperative learning models. When teachers and students are empowered by innovative strategies, the curriculum becomes accessible to all students.

4. Peer –tutoring

This involves one-to-one instruction from one student in the tutoring role to another student. In this method, students teach each other on one-to-one basis. Peer is defined as the individual of the same social gathering. For example, in a class a fellow student would be a peer. Therefore, when a student from the same class provides instruction to another student of the class the technique is called peer-tutoring. Sometimes peer tutoring may prove to be quite effective and both the student and the peer tutor may gain from the process. Research findings (D. Greaves) show that we learn:

> 10% of what we Read
>
> 20% of what we Hear
>
> 30% of what we See
>
> 50% of what we both See and Hear
>
> 70% of what we Discuss with Others
>
> 80% of what we Experience Personally
>
> 90% of what we Teach Others

We can pay now or pay later

The children we educate will grow up to become the citizens of tomorrow. Whether we have school-aged children or not, we all have a stake in maintaining a healthy public education system—because if we do not we will all suffer the consequences. Dr. Shirley McBride, in her comments to the Langley Special Education inquiry, said, "Society has a choice: you can pay now or you pay later. When teachers do not have time to spend with vulnerable children who have emotional or behavioural difficulties, these students are less likely to become grounded in their relationships within the school. Without the resources to help, schools are more likely to suspend or expel students. These students then seek attachments elsewhere, on the street where

they may become a ready supply of candidates for gangs. Obviously this has implications for the entire community. Many homeless young people have learning disabilities that have not been properly identified and treated. Many adolescent suicides are the result of learning disabilities that have not been properly identified. Much of the substance abuse amongst adolescents is the result of learning disabilities that have not been adequately identified and treated.

When children with unique emotional, behavioural, and learning needs receive appropriate support, they can flourish, feel respected and grow up to be happy, responsible members of society.

What is the need of the hour?

a) *Education and Computer Skills Training for teachers*

Prior to the instruction, both regular and special education teachers should be given training on computer skills including utilizing a keyboard, mouse, and menu bars in the school setting. Subsequent training should be provided to practice on each software package and read the instructional menu until the teachers were knowledgeable and comfortable with the computer and the programs. In order for school personnel to build capacity in dealing with the diversity of student needs and learning styles, classroom teachers need on-going education and training on inclusive education practices and counselling skills. In order to build human resources in the field of education, training must be done both at the pre-service and in-service levels.

b) *Attitudinal Changes and Creating Awareness:* For inclusive education to succeed, it is vitally important that teachers, principals and other education stakeholders maintain a positive attitude towards inclusion. They must be firmly convinced of the benefits that inclusive practices bring to all children.

a) *Organize training workshops for key community members* on general inclusive education techniques, especially those which highlight how such techniques can benefit *all* children by improving overall quality of teaching.

b) *Integrate knowledge about the benefits of inclusive education* into initial training programs for student teachers in colleges and universities.

c) *Collaborative and participative techniques* not only enhance learning outcomes, but also reduce prejudice and discrimination among children.

Teachers must:

> ➢ Have positive attitudes towards children with disabilities
> ➢ Hold good qualifications and pedagogical performance records
> ➢ Be confirmed as long-term resources for schools and districts by local education authorities
> ➢ Demonstrate good collaboration and communication skills
> ➢ Have good skills as a trainer and facilitator
> ➢ Have a sound professional reputation
> ➢ Possess good counselling skills

Conclusion:

It is hoped that the above exercise would lead the community to value and respect the roles and responsibilities of teachers. For the teachers too this would create awareness in them of the challenging task facing them. They must understand that there are individual differences among students with learning disabilities. The teachers must understand how to implement inclusive practices, by teaching techniques such as hands-on activities, group work, and computer based learning for all students. They must also understand the process of collaboration and team teaching with other teachers. They have the responsibility to seek out all available support from school authorities, the community, families, children, educational institutions as well as health services to help all children to learn. It is a daunting task but a hopeful one for all the children who have a right to education.

References:

Adams, J. "Including special education services in the general school curriculum." NASSP Curriculum Report. 22(5), (1993): p. 1-5.

Carpenter, Stephanie., & McKee-Higgins, Elizabeth. "Behaviour management in inclusive classrooms." Remedial and Special Education. 17(4), (1996).

Florian, Lani. "Inclusion: Special or inclusive education: future trends." British Journal of Special Education. Vol 35, Issue 4, (2008)

Forlin, Chris. "Promoting inclusivity in Western Australian schools." International Journal of Inclusive Education. 8(2), (2004): 185-201.

Forlin, Chris. "Promoting inclusivity in Western Australian schools." International Journal of Inclusive Education. 8(2), (2004): 185-201.

International Bureau of Education, UNESCO

Singhal, Nidhi. "Mapping the field of inclusive education: a review of the Indian literature." International Journal of Inclusive Education. Vol 9 (4). (2005): p 331-350.