

## Research Article

# Teaching Information Technologies to Students with Intellectual Disability

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**Abstract:** This paper reflects some of the authors’ findings on the subject of study, namely teaching students with intellectual disability information technologies. We present an overview of the theoretical impact of that matter with strong reference to the moderate degree of intellectual disability.

**Keywords:** Information technologies, education, teaching, students with intellectual disability.

Information technologies (IT) are inseparable part of modern world. They have become an important part of daily routine of the common “modern society” member that it is almost impossible to imagine how life would happen in case that there are no technologies nearby. It is all true when it comes to the teaching-learning process as well. A representative school should possess good samples of IT in its equipment when it comes to teaching the school subject IT and when dealing with the other school subjects as well—what it would be if students are learning Geography or Mathematics on an interactive white board. All these are sometimes challenging for teachers—to catch up with the newest and most attractive teaching methods but for students they are always beneficial. This is even more effective when it comes to teaching students who are challenged in some way. For example, students with different kinds of disabilities—sensory, intellectual, motor, multiple.

In this paper we are focusing both our attention and efforts to deal with the issue of teaching IT students with moderate degree of intellectual disability.

First, we should state the most common and accepted by us definition of intellectual disability. According to the latest revision of the American Psychiatric Association, the fifth one—DSM-5, we agree on the following statement: “Intellectual disability involves impairments of general mental abilities that impact adaptive functioning in three domains, or areas.

These domains determine how well an individual copes with everyday tasks:

- ✓ The conceptual domain includes skills in language, reading, writing, math, reasoning, knowledge, and memory.
- ✓ The social domain refers to empathy, social judgment, interpersonal communication skills, the ability to make and retain friendships, and similar capacities.
- ✓ The practical domain centers on self-management in areas such as personal care, job responsibilities, money management, recreation, and organizing school and work tasks.

While intellectual disability does not have a specific age requirement, an individual’s symptoms must begin during the developmental period and are diagnosed based on the severity of deficits in adaptive functioning. The disorder is considered chronic and often co-occurs with other mental

conditions like depression, attention-deficit/hyperactivity disorder, and autism spectrum disorder.” (Intellectual Disability-American Psychiatric Association, 2013).

As some of the clinical characteristics of intellectual disability include the below listed, we should consider all of them when teaching students with this condition. The DSM-5 diagnosis of ID requires the satisfaction of three criteria:

- 1) Deficits in intellectual functioning-“reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience”-confirmed by clinical evaluation and individualized standard IQ testing (APA, 2013, p. 33);
- 2) Deficits in adaptive functioning that significantly hamper conforming to developmental and sociocultural standards for the individual's independence and ability to meet their social responsibility; and
- 3) The onset of these deficits during childhood.

The DSM-5 definition of ID encourages a more comprehensive view of the individual than was true under the fourth edition, DSM-IV. The DSM-IV definition included impairments of general mental abilities that affect how a person functions in conceptual, social, and daily life areas. DSM-5 abandoned specific IQ scores as a diagnostic criterion, although it retained the general notion of functioning two or more standard deviations below the general population. DSM-5 has placed more emphasis on adaptive functioning and the performance of usual life skills. In contrast to DSM-IV, which stipulated impairments in two or more skill areas, the DSM-5 criteria point to impairment in one or more superordinate skill domains (Papazoglou *et al.*, 2014).

One of the common concerns instructors have about accommodations is whether they will change the nature of the course they are teaching. However, accommodations are designed to give all students equal access to learning in the classroom. When planning your course, consider the following questions (Scott, 1998):

- 1) What is the purpose of the course?
- 2) What methods of instruction are absolutely necessary? Why?
- 3) What outcomes are absolutely required of all students? Why?
- 4) What methods of assessing student outcomes are absolutely necessary? Why?
- 5) What are acceptable levels of performance on these student outcome measures?

Answering these questions can help a teacher define essential requirements for them and your students. Additionally, is an in-class written essay exam the only means of evaluating a student who has limited use of her hands? Could an in-person or taped oral exam accomplish the same goal? (Scott, 1998, Bourke *et al.*, 2000).

Some students with intellectual disability may be highly motivated by using technology based tools. Computer games and tasks are often written so they are instantly rewarding and motivating, and provide immediate feedback about correct or incorrect answers. This is useful in freeing up some of the teaching time while still providing ample chance for students to practice their skills (Vize, 2015). According to the same source, some students enjoy listening to taped stories either through headsets at a listening post, or via an iPod or similar tool. Ensure the story is age appropriate and is read in a voice which is clear and readily able to be understood by the student.

Other students may enjoy tasks such as writing up a class activity into a book using a program such as PowerPoint. Photos can be inserted and combined with a short sentence or key words about the action in the photo. Skills and writing styles which can be developed include:

- ✓ Report writing
- ✓ Instructional writing
- ✓ Creative writing
- ✓ Descriptive writing (especially using key words)

- ✓ Use of adjectives and verbs
- ✓ Naming of people and places
- ✓ Recall of important events (Vize, 2015).

Teaching students with intellectual disabilities does not need to be overwhelming or daunting. A teacher should strictly plan the teaching process with individual goals in mind, and use the tools at their disposal to help students reach their goals for the future (Vize, 2015).

We need to specifically accent on the so called “hands-on” learning. When we teach students with intellectual disabilities, we need to keep in mind several factors. First of all we need to set goals that are most important for the child. According to the source *Teaching Students with Intellectual Disabilities* (2016), learning the names of the planets may not be as important as learning about how plants grow. Next we need to make materials and set up the environment so that it supports the child’s learning. We need to use some teaching strategies to teach and motivate the child to learn. Here we explore a few effective teaching strategies for students with intellectual disabilities.

Hands-on learning is the process of using activities and other hands-on tasks to teach skills. All children and especially children with intellectual impairments learn best through this process. An example would be to do science experiments to learn science concepts. Another idea is to use play dough and make letter shapes to learn letters. Hands-on learning is also a great way to learn math. We can conclude that learning IT via hands-on learning can be as fun and motivational for the child as academic and developmental for the students with intellectual disability. This is the reason why we have focused on this subject with the intention to continue our research on this matter.

**Conflicts of interest:** There is no conflict of interest of any kind.

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