

Teaching Students with *Down Syndrome*: Perspectives of Special School Teachers and Psychologists

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Abstract

Imparting education to students with Down syndrome is a difficult process since it requires the use of a variety of pedagogical strategies. This study used qualitative case study method and aimed to develop an understanding of the learning difficulties faced by students with Down syndrome through the perspectives of special school teachers and psychologists. This study also aimed to understand the pedagogical practices used by teachers to manage the learning difficulties of students with Down syndrome. The criterion sampling technique was used to select participants. Data were gathered through a self-constructed semi-structured interview guide containing seven dimensions. Qualitative content analysis of these seven dimensions clearly showed that teachers and psychologists perceived that students with Down syndrome certainly face many problems and hurdles in their learning such as lack of required skills, low IQ level, memory storage issues, communication problem, behavior problems, passivity, and distraction issues of students with Down syndrome. Moreover, the findings also showed that these teachers and psychologists employ a variety of pedagogical strategies to teach and manage students with Down syndrome. However, some aspects need to be addressed to make the education of these students effective.

Keywords: Perspectives, Qualitative Case Study, Learning Difficulties, Students with *Down syndrome*, Special School Teachers and Psychologists

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Introduction

Physical, mental and health features by nature get together to make a pattern that can be defined as a syndrome. Down syndrome is named after John Langdon Down as he identified it at first and it is referred to as a genetic disorder which delays motor, language, and cognitive skills of an individual—leading to a range of physical abnormalities (Onyedibe, Ugwu, Mefoh, & Onuri, 2018). Down syndrome is caused by the presence of abnormality in chromosomes, that is, 47 chromosomes rather than 46 are developed for some reason. These individuals can be identified without any significant effort due to their natural outlook (Carr, 1995).

Intellectual disability is usually caused by Down syndrome (Deakin, 2014). The American Association of Intellectual and Developmental Disabilities (AAID) provides the definition of intellectual disability: “Intellectual disability is characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18” (Deakin, 2014, p. 2). There are two overlapping features of mental incompetency associated with Down syndrome: Problems in cognitive function and adaptive behavior (Jones, Neil, & Feeley, 2014; Westwood, 2009).

Students with Down syndrome face various problems in their school life—and teachers must handle these problems effectively to ensure not only their physical skill development but also cognitive skill development (Clarke & Faragher, 2014). For instance, they face slow mind and body development, less intelligence level, ear infections, ocular diseases, cardiac, pulmonary and gastrointestinal anomalies, thyroid dysfunctions, fatigue, muscle-weakness, hyper flexibility, broad feet with short toes, small neck and small head, small oral cavity, persistence nasal discharge, constipation, problems in communication, especially, in using complicated words, trouble in storing knowledge in long-term memory, little encouragement towards the task, distraction, problems in generalization of previous knowledge in order to do new tasks, trouble in managing activities and tasks and problems associated with attitude (Westwood, 2009). If these issues are handled effectively by teachers through appropriate and good teaching skills along with effective teaching materials, they may show improvements in learning (Westwood, 2009).

This research study aimed to develop an understanding of the perspectives of special school teachers and psychologists on learning difficulties faced by students with Down syndrome. It was also useful in understanding the teaching techniques, styles, and methods used by special education school teachers for teaching students with down syndrome. Moreover, it explored teachers' and psychologists' perspectives on how they overcome the difficulties faced in teaching and also difficulties faced by the students with Down syndrome while learning. To understand more effectively the factors behind the difficulties which teachers faced in teaching the students with down syndrome. Psychologists were also asked to be a part of this research. Since the purpose of this research was to explore the learning difficulties faced by students with Down syndrome, this study only focused on the main research problem—and did not explain in detail about the production, characteristics and general problems of children with Down syndrome in society.

Since this research focused on the difficulties faced by teachers during teaching Down syndrome students, the study included seven important aspects related to teaching in this context such as individual difference and teaching methodology, passivity and distraction issues, environmental effect on learning, communal effect, communication skills, the difficulties faced in independent living and motor skills of students with Down syndrome. This research would be important for us to understand how to prepare new teachers according to the difficulties they may face while teaching students with Down syndrome. This research focuses on daily school life aspects of students with Down syndrome including problems in acquiring learning skills, physical and motor difficulties, communication problems and problems in individual living.

Literature Review

There is an argument being placed in literature that most teachers working in contexts where students with Down syndrome are taught with less knowledge of techniques and strategies to teach (Cologon, 2013). Also, it is asserted that their teaching approach—which implies the way of teaching, teaching methodologies being used, competency and philosophy of life responsible for the teacher's behavior (McFadden, 2014) needs up-gradation at a holistic level. Peterson and Hittie (2010) stated that: "When we use good teaching strategies, students with

intellectual disabilities learn much more than anyone thought possible” (p. 86). Snell and Brown (1993) raise a point that a teacher should have in view the existing knowledge and skills of the learner so that he would set a road map for the future in educational processes (Westwood, 2009). This is only possible when teachers use upgraded teaching approach.

Mostly, mental disability is caused by Down syndrome and the number of such children is also increasing day by day (Cologon, 2013). Therefore, to support the education of students with Down syndrome, teachers must be given satisfactory and useful knowledge (Cologon, 2013) which can be applied to most of the situations they face while teaching students with Down syndrome. It is argued by some researchers that in educational settings viewing Down syndrome as having less mental ability or low learning level poses the image of Down syndrome as “dependent, helpless, passive, needy and requiring compensation” may affect their general and learning life (McFadden, 2014, p. 17). Therefore, teachers must be given adequate knowledge not only related to teaching methodologies but also a positive and correct understanding of Down syndrome.

Teachers of students with Down syndrome must know the following significant dimensions in order to effectively teach such students: individual difference and teaching methodology, environmental effect on learning, communal effect, communication skills, passivity and distraction issues related to students, sensory and motor difficulties and the difficulties faced in independent living by students with Down syndrome.

Individual differences in students with down syndrome make their characteristics different than those of other students (Cologon, 2013). This factor is as common as it is in normal children (Cologon, 2013). Teachers of students with Down syndrome must keep in view individual differences of the students to teach these students effectively.

Another problem of the students with Down syndrome is the lack of long-term memory (Couzens & Cuskelly, 2014; Westwood, 2009). Jahromi, Gulsrud, and Kasari (2008) studied that students with Down syndrome show more indifference to task and love for their guide or tutor (Clader, 2010). If teaching methods and techniques with the use of proper instructional materials are given proper attention instead of IQ test results then their reading, writing, and completion of tasks can be upgraded to the next level (Westwood, 2009).

Understanding lessons mostly requires good language and communication skills, and these are present at a very low level in students with Down syndrome (Neil & Jones, 2018; Westwood, 2009).

Students with Down syndrome, especially medium to high-level disabilities, have a very low level of communication skills (Westwood, 2009). Moreover, students with Down syndrome with severe disabilities are not even able to learn any type of communication skills (Westwood, 2009). As a result, this might cause big trouble for them to understand the lesson (Westwood, 2009).

The surroundings of a student with Down syndrome also affect their mental state and level (McFadden, 2014). Aggression and stereotypic obsessive-compulsive behaviors are some common practices of students with serious disabilities.

Furthermore, students with Down syndrome deficit in motor skills as compared to non-specific developed students (Clader, 2010). The adaptive ability of students with Down syndrome is linked with their motor ability (Clader, 2010). Fidler (2005) observed that students with Down syndrome have greater adaptive ability when they are in their early years as compared to when they become adults.

Moreover, abstract ideas are very difficult for such students to comprehend. Therefore, a teacher must keep in mind that the use of factual and concrete knowledge is often more useful and may highly affect the teaching-learning process. It is stated that Down syndrome students with low and medium level difficulties can easily learn a topic if it is reality-based or is linked with reality (Westwood, 2009).

It is argued that students with Down syndrome become less talkative and less sociable as they grow older while on the other hand it was found an increase in social contacts of the students with Down syndrome (McFadden, 2014). However, it is observed that the values, beliefs, and attitudes of teachers have a strong effect on their pre-planned teaching outcomes for students with down syndrome (McFadden, 2014). Moreover, students with Down syndrome are more receptive in their early year of schooling, they should also be taught necessary social skills at this level (Westwood, 2009). Some researchers have witnessed that students with Down syndrome have a low level of motivation and limited curiosity (Clader, 2010). They take more time than typical peers and motivational factors also affect them but slower as compared to normal children (Gilmore & Cuskelly, 2014).

It is necessary for teachers to take into account the student's level of mental disorder, his/her potential, aptitude and to provide him/her every sort of help he/she needs during teaching. Research also suggests that differentiating students with Down syndrome due to their physical outlook should be best avoided and instead focusing on their abilities should be applied as a routine to get better results regarding their daily

life exposures and encounters. Evident and clear guideline, outline and information prove to be effective in the teaching process for students with Down syndrome (Westwood, 2009).

Unfortunately, there is very less knowledge related to teachers' experiences, techniques, and strategies they use to teach students with Down syndrome (McFadden, 2014). Historically speaking, methodologies related to teaching and usage of teaching tools have not been a part of extensive research (Westwood, 2009). It also implies that there is very less emphasis given on the pedagogy which enhances improve the learning experiences of students with Down syndrome and reducing the difficulties faced by teachers in teaching (McFadden, 2014).

It has been found that methods of teaching, if not appropriate and suitable for students, may cause trouble for them in their learning process (Westwood, 2009). Moreover, most of the times teachers are not given appropriate and enough training to help them in their teaching skills required for teaching students with Down syndrome (McFadden, 2014).

Objectives

Following were the research objective: To explore the pedagogical practices used to deal with individual differences of students with Down syndrome; to explore the pedagogical practices used to deal with issues related to passivity of students with Down syndrome; to explore the pedagogical practices used to provide the environment/surroundings best for students with Down syndrome learning; to explore pedagogical practices used to deal with communal effects on learning of students with Down syndrome; to explore pedagogical practices used to improve communication skills of students with Down syndrome; to explore pedagogical practices used to manage behavioral problems of students with Down syndrome experience while learning and to explore pedagogical practices used to deal with individual learning and independent living of students with Down syndrome.

Methodology

Qualitative case study research design (Bassegy, 1999; Stake, 1995; Yin, 2003) was used to conduct this study. Qualitative research helps us understand the meaning of a social phenomenon in a way that natural setting is disrupted minimally (Merriam, 1988, 2002, 2009). Yin (2014) suggests that a case study investigates a contemporary phenomenon (the

“case”) in its real-world context, especially when the boundaries between phenomenon and context may not be evident” (p. 2). Qualitative case study research design provide an opportunity to explore the pedagogical practices and perceptions of the participants with the least disruption in the natural settings of the participants.

Participants

Methodological literature suggests various techniques to select participants but criterion sampling technique was the one that fulfilled the purpose of research. Therefore, criterion sampling (Patton, 2015) which is a type of purposive sampling technique was used. Nine participants including teachers and psychologists from selected schools were recruited through this technique. For the selection of participants, following inclusion criteria was used: The participant worked in a special education school as a teacher or psychologist; at least took one class/day of Down syndrome students or deals with Down syndrome students; was easily approachable; had himself/herself agreed to give interview and had work experience of minimum one year. Nine participants were finally recruited to be part of this research study.

Data Collection and Analysis

For data collection, semi-structured interviews were conducted to gather the meaning teachers or psychologists gave or extracted from the experiences they had lived. Help from several resources was taken for the construction of appropriate and to-the-point questions. These resources included literature review, interview guides made by some other researchers, journals and research scholars. However, the information gathered from these resources was edited, modified and rephrased.

Seven different dimensions were chosen for the interview guide. These dimensions were divided further into different aspects. Those aspects were written as the questions which were then asked by the first researcher to the participants of research. One general and initial question were also added in this research study which was about the working experience research participants had.

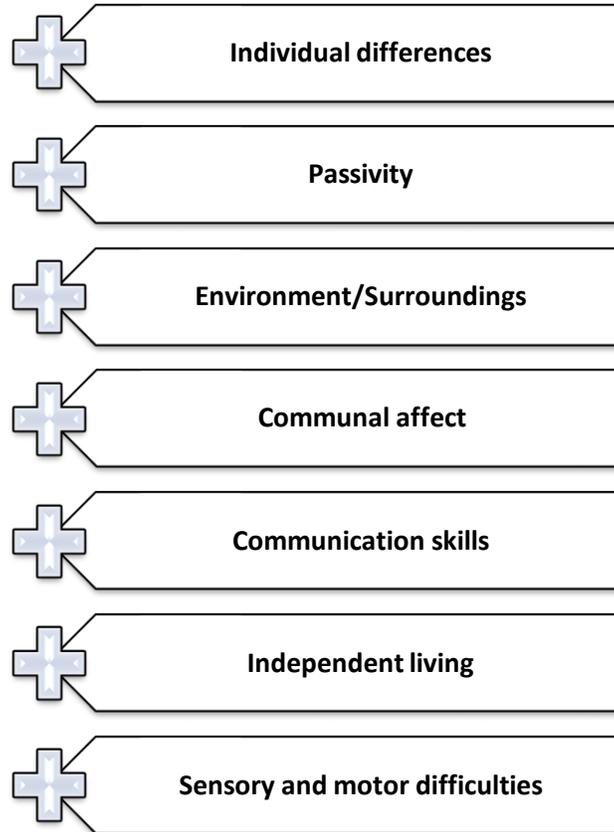


Figure 1: Dimensions of Down syndrome focused on this study

Before the conduction of interviews, selected schools were contacted to get the approval from the administrative authority; head teacher or principal of the school. Furthermore, the selected research participants were asked for the permission of recording their interviews, not only for further help but also to keep the record of their responses (Kvale, 1996; Mears, 2009). Teachers' ease was the central point considered during that meeting (Seidman, 2006). All this helped research participants to be more confident and comfortable towards the researcher.

Urdu was used as the selected language for the conduction of interviews as participants were well versed in Urdu. It was one of the most important priorities of the first researcher to get the detailed and to the point responses. For that purpose, sometimes, the first researcher had

to use probing questions as some responses were not to the point. However, the responses of each research participant were translated and written in English by the first researcher. Face to face interviews was recorded accordingly and these recordings were further used to transcribe those interviews.

Data analysis refers to an enduring course carried on during the collection of data and strengthens/deepens after full data collection. Analyzing any form of content whether, in words, a vocal or pictorial form is called qualitative content analysis (Schreier, 2012, 2014). This study was a qualitative case study and qualitative cross-case analysis (Miles, Huberman, & Saldaña, 2014; Saldaña, 2013) was done. A summary of each dimension was written and later coded (Roulston, 2014). Comparing the differences in the responses of research participants, codes and themes were developed.

Results

As described earlier, this study was guided by seven important dimensions concerning teaching students with Down syndrome. Therefore interview guide comprising of twenty-five interview-questions was also structured around these dimensions. As a result, the interview data were also collected and subsequently analyzed using these dimensions. The findings related to these dimensions are provided below:

Responses regarding teachers' pedagogical practices and their effects on Down syndrome students uncovered two groups of participants. One group believed that students with Down syndrome could live like normal human beings under certain circumstances, especially when certain key provisions were made part of their life. According to them, if students with Down syndrome had the basic concepts of time, money, sent to school, taught some daily life skills according to their abilities and capabilities and provided with good surroundings and if we let them enter in practical life then they can live like normal human beings. The other group had a slightly different point of view. According to these participants, students with Down syndrome could live like normal human beings only to some extent. However, the reasons they gave were almost the same as the reasons which the first school of thought argued upon. One participant had an extreme view: According to her, students with Down syndrome could not live like normal human beings. She did not blame the Down syndrome community for that. She blamed teachers and

others who were responsible for the upbringing of them. She argued that no effort was being done on students for that. Further probing revealed that students with Down syndrome could live like normal human beings either fully or to some extent with certain efforts done upon them. However, motivation was needed for that. Most of the participants mentioned practical work and activities for this purpose.

According to all the participants included in this study, students with Down syndrome had individual differences just like normal children. Most of the participants focused on tasks and activities to be performed while in class in which students took an interest. They motivated students through reinforcements and loving behavior. According to one participant, "You should use different approaches like showing videos, flash-cards and go for outing to cater for individual differences" (Participant VII).

To identify individual differences, most of the participants mentioned the use of diagnostic tests and frequent observations to get the full idea of the differences present in students with Down syndrome. Some of the participants reported that observing a student during the first meeting often gave quite an idea about how much different he was from the others. One participant claimed that she often examined students' moods to identify the differences they had compared to the other participants as students with Down syndrome had mood-swing. One participant said that she had been using scales to identify these differences.

Very diverse opinions were found while getting the data from the participants about the usage of teaching methods according to the individual differences possessed by students. Few participants acknowledged that they used the one-to-one teaching method for each student presented in class; the syllabus was pre-designed for each participant and work was done on participants according to that. One participant explained that due to a lack of resources, teaching methods were not standardized. One participant claimed that her focus was on making a friendly environment in the class and reducing hatred between students instead of on teaching methodologies. One participant argued that students learned when they were in a mood to learn and to make their mood to learn teaching methods and activities of their interest with reinforcement were used.

All participants except one reported that students face passivity issues and explained the ways and methods they used to minimize that. One of the participants mentioned teachers' behavior, affection, and reinforcements as tools to reduce distraction. One participant mentioned

the inclusion of activities and games as a source to reduce the distraction level of the students. Most of the participants included activities which the students prefer and like to perform to reduce the passivity of students. One participant argued that, if teachers showed loving behavior and the classroom environment was friendly, then students would obey and follow commands. If students were scolded, then they would not follow the commands. Most of the participants believed that classrooms should be well decorated to reduce the passivity issue and motivate students for active work. One of these participants further included that he asked parents to give their child a good and friendly environment at home. Most of the participants argued that activities of students' interest are organized while teaching to make teaching strategies more effective for learning of students with Down syndrome and to reduce passivity and distraction issues. Reinforcements were also given to the students to make them learn better. Few of the participants inclined towards one-to-one interaction with students and stated this interaction for increasing motivation and response rate of students.

Most of the participants believed that surroundings affect negatively or positively and identified various pedagogical practices to minimize effect of surroundings. Noise pollution and distracting environment also affected students learning negatively. Some of the participants raised a point that students usually learned more from their surroundings and surroundings normally provided them a distraction from studies. According to one participant, "If teachers support them, do not let them sit idle, arrange small activities for them and deal them with love instead of asking awkward things to them... can increase their interest in learning" (Participant III). Most of the participants pointed out the factors like friendly environment, calm surroundings, effective teaching methodology, and usage of audio-video ads, colorful classrooms and activities according to the students' interests were the best for students' effective learning. The surroundings which provided independence like playgrounds were not good as students with Down syndrome would start playing and would not come to teachers for learning. According to one participant, teaching tools if used according to the interest of the students could positively affect their learning and would increase their pace of learning.

All participants believed that students with Down syndrome could not communicate effectively. However, all participants agreed on the point that whatever the level of communication skills students with Down syndrome possessed, they followed the commands and tried to deliver their message using the best method they knew to communicate. A few participants held teachers and parents responsible for the lack of communication skills of

students with Down syndrome. According to the students with Down syndrome could only communicate to the extent they were taught to communicate. Most of the participants mentioned audio-visual aids and pictorial representation as the method to be used for teaching communication skills to students with Down syndrome. Most of them also mentioned repetition as a key aspect in making the communication skills of students with Down syndrome better.

All participants agreed to the point that students with Down syndrome could not focus on more than one tasks at a time. Most of them also argued that there would be deficiency remained in each task and no task would be completed effectively if Down syndrome students worked on more than one tasks at a time. According to one participant:

Low IQ level, distraction, less attention span, and less short-term memory are the issues which are the causes behind it. If they are given two instructions at a time, then they won't understand those. We must take them to step by step and from easy to difficult. (Participant VII)

Several activities were mentioned by the participants which they used, and which, they believed, should be used to make fine and gross motor skills of Down syndrome students better. Some of the participants mentioned that the gross-motor skills of Down syndrome students were already developed to a good extent. For improvement of fine motor skills, activities like moving blocks, dusting the table, picking up beads from sand, scribbling, working with scissors, folding papers, pressing softballs with the help of the wrist, inserting beads into a thread, joining the blocks properly and making something with the help of blocks were given to students. Few participants explained that behavior rigidity is not the only issue, but students with Down syndrome also show possessiveness which was very difficult to manage. However, according to these participants, students with Down syndrome show friendly behavior towards their teachers and it was not a very problem for teachers. Few participants told that when students with down syndromes show rigidity in behavior, some assistance or activities are given to settle them down.

Some of the participants also mentioned the betterment of the environment, surroundings, and inclusion of parents to give motivation to students with down syndrome. One of the participants reported that carrying out observations and counseling sessions with Down syndrome students helped in finding their problems and motivating them accordingly. Most of the participants argued that parents' interaction was necessary for the betterment of the lifestyle of students with Down syndrome because parents knew the characteristics of their kids with

Down syndrome will. One of the participants argued that students with down syndrome students needed parents, teachers, school staff and peer interaction to make their lifestyle better—a good and flexible environment at home and school was also necessary to make a lifestyle of students with Down syndrome better. One of the participants included guidance and counseling as a part of teaching to make the lifestyle of Down syndrome students better. Few participants reported that they often used workshops, seminars, and other media sources to develop awareness about Down syndrome section of the society.

Discussion and Conclusions

This research provides insight into the perspectives of teachers and psychologists about the difficulties faced by students with down syndrome on learning. Specifically, it provides data relating to individual differences and teaching methodologies used according to these differences, problems occurring due to passivity show while learning, effect of environment/surroundings on learning, communal effect on learning, effect of communication skills on their learning, managing motor difficulties of Down syndrome students, reducing behaviour problems students experience while learning and linkage of teaching methodologies and pedagogical practices with the individual living and lifestyles of students with down syndrome. The results from this qualitative case study suggest that teaching students with Down syndrome are a complex educational endeavor since students with an intellectual disability having multiple dimensions and aspects are involved. In addition, findings also suggest that each student with Down syndrome is distinctive and, therefore, to educate students considerably varying in ability and interest, serious efforts and commitment are required from a teacher desirous to bring change in the life of students.

Perspectives of research participants show that students with Down syndrome lack skills in almost all the dimensions mentioned in the conceptual framework. However, it shows that interviewed teachers are working hard to overcome hurdles which their students face. Although most of the participants use certain pedagogical strategies in their practices, there are certain aspects which need to be addressed. From the analysis of the dimensions, it seems that teaching students with Down syndrome is a hard job to do as compared to teaching normal students. For teaching students, a teacher must be ready from every aspect as the main point is not whether students are ready for learning—but the main point is whether a teacher is ready to teach students.

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