

TEACHING STRATEGIES TO TEACH HEARING-IMPAIRED STUDENTS AT SPECIAL EDUCATION SCHOOL IN SARAWAK, MALAYSIA

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Received: 13 June 2021, Revised and Accepted: 29 July 2021

ABSTRACT

Whatever teaching strategies adopted by the teacher, it has to be the one best suited for a specific target group of students, even if it will be a tall order for hearing-impaired students who have language and communication problems. With different hearing-impaired student abilities, the teacher is very much challenged and must be equipped with skills in order to successfully teach and accommodate the needs of all the students. A qualitative study was done in a special education school in Sarawak, Malaysia. Five teachers participated in the structured interview to answer the three objectives of this study. The objectives are to identify the teaching strategies used to teach hearing-impaired students, to determine the reasons for the choice of teaching strategies used to teach hearing-impaired students and to identify challenges in teaching hearing-impaired students. The study shows that there is lack of communication competence among students and also a lack of teaching competency to teach hearing-impaired students by the teachers. The teachers also expressed their worries about the social, academic, and emotional challenges that the students face.

Keywords: Teaching strategies, Hearing-impaired, Language and communication problem.

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INTRODUCTION

Teacher quality and effectiveness have always been a link to student learning. According to a review by the World Bank (2012), "a number of studies have found that teacher effectiveness is one of the most important school-based predictors of student learning and that several years of teaching by outstanding teachers can offset the learning deficits of disadvantaged students." By far and large, research has also indicated that teachers can significantly impact student learning. One of the pertinent question is how a teacher will know if her teaching strategy is effective? At this reflective turn, it would be appropriate to say that whatever teaching strategies are adopted by the teacher has to be the one best suited for a specific target group of students, even if it will be a tall order for hearing-impaired students who have language and communication problems. To keep up with communication could prove to be daunting for a student with a hearing impairment. The teachers must be that hearing-impaired pupils have a problem articulating their views through the use of language. These pupils find it difficult to develop the vocabulary of any language since they hardly hear when other people are communicating. Students with hearing impairment could be referred to hearing losses of varying degrees from hard-of-hearing to total deafness. Hence, they also vary extensively in their communication skills. In the Malaysian context, Sufean Hussin concurs (as cited in Alias, Azahari, & Ismail, (2015) emphasized the main problem of education in special education for the blind, deaf and dumb that emphasizes the language and communication problems. How significant hearing is to them would be meaningless when they have to live with that loss all through their lives. Problems such as social, communication and educational ones would arise from the difficulty in expressing and receiving language by students with hearing impairment. (Hall, Oyer, & Hass, 2001) It is then the role of teachers to adapt and make modifications to teaching strategies when working with hearing-impaired students. It is difficult to specify which teaching strategies best fit students with hearing loss. For

this purpose, the teacher must make the decision of careful selection of teaching strategies. With different student abilities, the teacher is very much challenged and must be equipped with skills that are necessary for improved student achievement in order to successfully teach and accommodate the needs of all the students (Karuppannan, & Moksan, 2020). What defines teaching strategies would be the instance when a student has the ability to construct her fundamental thinking-learning operations and arrives at a stage where she is able to efficiently apply the same in different situations. By the same token, teaching strategies can be viewed as methods used to help students learn the desired course content and be able to develop achievable goals in the future. Teaching strategies identify the different available learning methods to help them develop the right strategy to deal with the target group identified. Hence, assessment of the learning capabilities of students provides a key pillar in the development of a successful teaching strategy. Strategies used by teachers can help the students to have a better understanding of the text that they read. Teaching strategies were seen as a choice and range of teaching methods used for a lesson. Of utmost importance, teachers who are conscious of using various evidence-based teaching strategies, both instructional and behavioral, are better prepared to educate in these diverse learning environments. They will also conversely excel as an educator. Understanding and using specific strategies will allow teachers to improve student achievement levels, provide a wider range of instructional alternatives, and promote diversified learning methods for any degree of student ability. It is a teacher's awareness of the various tools and resources that build a bridge across educational achievement gaps.

REVIEW OF THE RELATED LITERATURE

Alduais (2012) states that a teaching strategy is any method that is used by any teacher inside the classroom to introduce, interact and communicate with his or her student. The strategy which is adopted will motivate, encourage, and stimulate the students so that they participate as much as possible inside and

during the classroom. Within tangent, a teaching strategy that promotes a student's initiation would result in a student being autonomous or being an independent student. In this case, the student will show the behavior of being able to interact inside the classroom interactively and effectively (Flanders as cited in Alduais, 2012). Teaching strategies have a close relationship with student's learning and outcome. The teaching strategy that works to teach deaf impaired students can be described as Sign Language. In enabling the teacher to teach hearing-impaired students, the most important strategy would be sign language. It is worth noting that the difference between sign language and common language is in the method of communicating information. Sign language is understood and accepted as the common language among deaf people due to properties that suggest that there is no sense of hearing is required to understand sign language and no voice is required to produce it. In the Malaysian context, sign language is referred to as gesture language. Sign Language is a gesture language that visually transmits sign patterns using hand shapes, orientation and movements of the hands, arms or body, facial expressions and lip patterns to convey word meanings instead of acoustic sound patterns. Standard sign language is Malaysian Sign Language used as everyday communication for the deaf community. Malaysian Sign language has a different dialect based on the state in Malaysia. This sign language differs due to the cultural and social norms in Malaysia patterns to convey word meanings instead of acoustic sound patterns. According to a survey conducted by Marschark, Sapere, Convertino and Pelz (as cited in Ibrahim, Alias, & Nordin, 2016), deaf students can learn as regular students only if they are taught by teachers who are skilled in sign language. On the contrary, when most teachers use the services of a language interpreter in the classroom, there are bound to occur some disruptions during the learning process, which will constantly be occurring. What makes matters worse; inappropriate interpreter positions and interpreters have limited knowledge to translate. Ibrahim et al. (2016) claim that deaf students need a different approach than non-deaf students. Studies showed that deaf students experienced learning difficulties due to the mismatch of methods used by teachers and the learning styles of the student. Identifying the unique learning style is very important to ensure students are engaged in the learning process. Highlighting what teaching strategies that work, Marschark and Hauser (as cited in Alias et al., 2015) in their book entitled "How Deaf Children Learn: What Parents and Teachers Need to Know Perspective on Deafness" drew attention to both visual-spatial memories (in the form of visual images) and verbal memories (in the form of language). It was on this ground that they claimed that teachers and classroom practitioners alike should continue emphasizing using both visual and spatial memories in teaching and learning for deaf learners. It was with this conviction that they claim the visual images have significant value in enhancing learning activities among deaf students and others alike. Norziha et al. (as cited in Alias et al., 2015) stated that visual communication is defined as using a visual symbol such as pictures and graphics to express an idea and convey meaning. The relevance is due to its own strength and values in the real world. As suggested by Jackson and Jackson that photography can be a valuable aid to learning disabled people. Furthermore, it can be used to resolve problems and improve understanding. The recent study by Allen, Mayhew and Hill (as cited in Alias et al., 2015) suggests that visual literacy refers to the ability to comprehend, evaluate, and compose visual messages. Visual literate persons are able to read visual messages, compose visual language statements and translate from visual to verbal. The student will learn attitudes, behaviors, and questions to ask, which them to think abstractly and analytically. The viewer, therefore, will need to engage in a variety of viewing experiences, both in comprehending and composing. The study on Enhancing Learning Ability among Deaf Students By using Interactive Images (Alias et al., 2015) revealed that they identified four (4) 'models' that were suitable for teaching and learning. It showed that the deaf students were keen on using

visual images may it be moving images, interactive and still visual images. This clearly illustrated that these would add to the teacher's repertoire of methods. Another salient point was there were four (4) models suggested: Interactive Images/Video, Still visual images, Sign Language/Text and Translator. An interesting point raised by the students was they wanted Interactive Visual Images and Still Visual Images to be added to the teaching and learning processes. In addition to the routine using Sign Language & Texts and Translators. It is important when teaching hearing-impaired students that the teachers need to take special considerations when teaching hearing-impaired students. Much of the consideration involves a common sense that sharpens through close collaboration with the student, the student's family. The student and student's family can certainly offer the teacher support on a daily basis through constructive criticism of what works and what does not for the child in the classroom. According to Hall et al., (2001), there are a number of teaching strategies for teaching hearing-impaired children that teachers could employ. What can be suggested is teachers must ensure that there is an optimal hearing and listening environment in the classroom. To enable communication to be understood, practice lip reading within the minimal distance required. This is to ensure communication and message is clearly understood. Similarly, for more effective oral communication, it is advisable that the teacher must face the student. A teaching strategy to adopt in terms of reinforcing clear sight of visual aids is good lighting. To encourage student learning, it is advisable that teachers should avoid over pronouncing or exaggerating pronunciation. This could lead to misunderstanding or it could hamper understanding. When the teacher encounters the need for reinforcement of auditory information, then the teacher needs to exploit and immerse in a variety of visual information. It is also necessary for the teacher to ensure minimal environmental noise to order to avoid interference with listening devices. Thus, the teacher ensures regular checking and monitoring of listening devices to ensure that they are working properly. On this note, it is worthy of mention that it is the onus on the teacher to be able to make careful and special considerations when teaching hearing impairment students. Making these considerations would need common sense to foster collaboration with students and their families. It would be helpful if the student's family could propose support by providing constructive criticism on what works and what does not for their children. In the real world, challenges are not new to hearing-impaired students. As teachers, we need to be alert and conscious of those challenges when teaching them. To quote a case in point, environmental noise is one of those challenges that schools need to address more seriously as it interferes so much with support for hearing-impaired students. To be ignorant of these real challenges would only lead to frustration for the hearing-impaired student that could lead to classroom management problems for the teacher.

Statement of the problem

The researcher believes that the teacher has the responsibility of knowing how to best teach the student within the context of the classroom. As the biggest problems experienced by deaf students are in hearing what goes on in the classroom, therefore executing specific and effective teaching strategies could optimize opportunities and has an increased effect on student learning outcomes. With this in mind, the researcher believes that this gap in research would warrant greater attention to be explored. The researcher seeks to identify the teaching strategies adopted by special education teachers in teaching hearing-impaired students at a Special Education School in Kota Samarahan, Sarawak, Malaysia.

OBJECTIVES

- 1 To identify the teaching strategies used to teach hearing-impaired students.
- 2 To determine the reasons for the choice of teaching strategies used to teach hearing-impaired students.

- 3 To identify challenges in teaching hearing-impaired students.

RESEARCH QUESTIONS

- 1 What are teaching strategies used for teaching hearing-impaired students?
- 2 What are the reasons for the choice of teaching strategies used for teaching hearing-impaired students?
- 3 What are the challenges that you faced in teaching hearing-impaired students?

METHODOLOGY

Research design

The method adopted for this study was qualitative and it is a case study. It is a qualitative approach in which the researcher explores a bounded system (a case) or multiple bounded systems (cases) over time through detailed, in-depth data collection involving multiple sources of information. (Creswell, 1998) The instrument used to collect the data was through semi-structured interviews and field notes.

Location

Special Education school in Kota Samarahan. It is a semi-urban special education school as it is near the town. It is the school for the learning disabilities focusing on hearing impairment students.

Sample

The participants for the study consist five (5) female teachers. They will be referred to as P1, P2, P3, P4 and P5 in this study. They were from 37 to 56 years of age. Due to the wide age group, they have different numbers of years for teaching experiences. In terms of academic qualification, four (4) participants possessed a Degree in Education and only 1 participant obtained a Diploma in Education. The participants were trained in different disciplines: one (1) participant was trained in Special Education and one (1) in Physical Education. On the other hand, three (3) others were trained in English. This clearly illustrated that the participants were not Special Education trained. In terms of formal training or course for Continuous Professional Development, they have not been offered any special education or hearing impairment course. Nonetheless, they learned from the other teachers of the same disciplines or other disciplines on how to teach these students over time. To ensure the smooth transition process of collecting data, the five (5) potential participants were contacted through Whatsapp and telephone two weeks earlier to seek consent pertaining to their willingness and possible participation in the study. The sampling was purposive sampling. Purposive sampling appears to be most suitable as it reflects the population of interest (Stewart & Shamdasani, 1990). More so, it is based on the study itself and the potential contributions of the participants. This sampling technique maximized the researcher's ability to identify emerging themes within the context of the study.

Data analysis

The data analysis is discussed in light of the objectives of the study: To identify the teaching strategies used to teach hearing-impaired students, to determine the reasons for the choice of teaching strategies used to teach hearing-impaired students and to identify challenges in teaching hearing-impaired students. The instrument used to collect the data was through interviews and field notes. The data obtained from the interview required a qualitative analysis. The data was summarized and interpreted in order to arrive at appropriate conclusions and interpretations. The interview field notes transcripts were grouped, coded and quoted in order to find the basis of the argument. In identifying the teaching strategies used to teach the hearing-impaired students, the researcher employs the semi-structured interview. As the research questions are the impetus of the research, therefore, they are the point of reference to develop the interview questions. (Stewart & Shamdasani, 1990). The semi-structured interview was designed in order to determine the teaching strategies

among the teachers, the reason for it and challenges faced in teaching hearing impairment students. The interview data was collected through field notes. The data was analyzed, interpreted and categorized into themes. The research objectives were addressed through the interview and field notes.

RESULTS AND DISCUSSION

The section will focus on the findings of the research questions to navigate the discussion.

Research question 1: What are the teaching strategies you used for teaching hearing-impaired students?

The strategies outlined were based on those expressed by the participants. These would only be effective when used in the context of good planning, knowing who your students are and what makes each of them unique, setting goals and inquiry of what works and what does not. The participants (100%) expressed eagerness and passion when they were interviewed and willingly spoke on their teaching strategies. Table 1 summarized the strategies mentioned according to themes.

Table 1: Strategies adopted by the participants

Strategy	Examples
Total Body movement	Kinesthetic actions, role play, actions,
Facial expressions	Mime, gestures, different moods
Visuals	Mind-map, pictures, cue cards,
Storytelling	Sign language, bodily movement, drawing, storyboards, dressing up
Environment	Comfortable, safe, lighting, ambiance
Positive interaction	Face-to-face, personal communication (sign language)
Demonstrations	Functional language, vocabulary, concept
Art & craft	Use of realia (flowers, stones, twigs, leaves)

The participants specified that they had been experimenting with various possible strategies they knew how to overcome the disappointment of not being effective or stressed in teaching the hearing-impaired students. They did not want to let themselves down, most importantly, not to disappoint the students. Most importantly, they took a reflective stance as a reflective classroom practitioner. The participants (100%) were very enthusiastic when asked about the teaching strategies they employed during the teaching and learning process. Four (80%) of the participants expressed that this was the first time someone from outside their school came to interview them about their teaching. A third eye would pave the path for the room for improvement and continuous professional development. All the participants (100%) mentioned that they used a lot of whole-body movement. The students could understand what they learn and how they want to learn. This was also due to the students were being kinesthetic learners and they just did not stop moving. The students were very energetic in even answering the teacher's questions. They have to task all the time. The participant's responsibility was to make students stay on task and at their spot (their seats). When they are hands-on, they will automatically be required to do the task (minds-on). They were able to express themselves artistically. This could further develop aesthetic values in them. An intriguing point was highlighted was the facial expression as a teaching strategy. All (100%) of the participants conveyed their zest and positivism in using facial expressions and body language to communicate with the students. According to the participants, the students were very engrossed in demonstrating their understanding of learning in that manner. One participant mentioned that the students in her class were also rather dramatic in expressing their emotions and understanding. Their paralinguistic features speak volumes of their learning. At this point in time, the students do use sign language too to convey meanings or messages of intent. An interesting point raised here by the

participants was the use of mind-map; only 3 participants (60%) stated that the students love mind-map at years 2, 3 and 6. The rest of the participants voiced that this was not the attraction of students in Year 1 and 4. For year 1, it would be too difficult to understand the word association and the connection between all the words. Nonetheless, the majority of the students were very keen on pictures and cue cards. A strategy that attracted many students was storytelling. This was the most interesting strategy used by the participants and most irony because of how the voiceless can voiced? Even though they were not able to speak, but they actively engaged in sign language and using all resources available to them to tell and retell the story. Three participants (60%) also emphasized their interests that aspects such as art and craft and demonstration would be a complementary strategy and added value task as students would integrate them into the storytelling. But two participants (40%) disagreed on that point. The use of art and craft did not always work for their Year 4 and 5 students. As for 3 participants (60%) enjoy using

this strategy as the students were still young. But for the Year 6 class, the participant (20%) stated that the students enjoyed storyboards more because this could help and motivate them to face the UPSR examination. One of the aspects that the participants spoke so firmly about was the environment. All the participants (100%) assuredly mentioned that environmental noise must be curbed and controlled. They found it very distracted and felt disturbed. The students will feel restless when they encountered external noises. The participants articulated that positive interaction was one more important strategy they adopted. The two strategies worked like a glove. The participants unanimously agreed that they often opted for conventional yet effective strategies as they thought fit for the context where they were in.

Research question 2: What are the reasons for the choice of teaching strategies used for teaching hearing-impaired students?

The participants stated various reasons for the choice of teaching strategies used to teach hearing-impaired students.

Table 2: Reasons for the specific strategies adopted

Strategy	Examples	Reasons
Total body movement	Kinesthetic actions, role play, actions,	To raise awareness of how concepts and understanding can be achieved better.
Facial expressions	Mime, gestures, different moods	To express emotions and understanding appropriately in different situations
Visuals	Mind-map, pictures, cue cards,	To draw a mental map of understanding information
Storytelling	Sign language, bodily movement, drawing, storyboards, dressing up	To elicit understanding through the storyline and integrate/display feelings
Environment	Comfortable, safe, lighting, ambiance	To ensure a non-threatening ambiance and support for learning to take place
Positive interaction	Face-to-face, personal communication (sign language)	To encourage intrapersonal and interpersonal skills, to build confidence in communication
Demonstrations	Functional language, vocabulary, concept	To be competent in language use and could illustrate the concept
Art & craft	Use realia (flowers, stones, twigs, leaves)	To develop aesthetic values and love the environment

The justifications for all the teaching strategies are specified in table 2. There is an endless reason why each teaching strategy was chosen. The reasons described in the table would be one pertinent one. Yet there were other significant reasons too, to substantiate the choice of teaching strategies.

These would be added value to the existing reasons. They could be specified as:

- 1 Adjust the instructional process and classroom environment.
- 2 Use visual clues and demonstrations in the teaching process.
- 3 Help students to develop their communication skills.
- 4 Supply students with sufficient time and an optimal acoustic environment in order to enable them to execute their daily activities.

As an added value and a creative strategy to the existing teaching strategies, it would be appropriate to propose that adding moving visuals or pictures to text. Being hearing-impaired students, by adding moving visual messages and pictures will hopefully help the student's reading comprehension. This would be a useful strategy to aid comprehension of a text. To substantiate the salient point on this further, a study conducted by Mich, Pianta, and Mana (2013) by comparing stories with pictures to stories without pictures has paved a new insight that adding pictures to a story supports the reading comprehension of hearing-impaired students. Their findings revealed that "the simplified and illustrated stories, having a higher readability index, make the comprehension exercise easier and both children groups (deaf and hearing) got the best results (Mich et al., 2013, p. 42). It also added value to the comprehension process as pictures are always helpful when introducing new vocabulary or content.

These two elements will occur at a faster rate. Thus, visuals or pictures could be beneficial in multiple ways.

Research question 3: What are the challenges that you faced in teaching hearing-impaired students?

The challenges, which were very prominent ones, were articulated by all five (100%) participants.

1. Lack of communication competence

The participants have attempted many times and over time to encourage and develop the student's communicative competence. Despite the attempts and effort made, there were still students who were still weak to display basic and minimal competency of language. Acknowledging the importance of communication as the key to teaching students who are deaf or hard of hearing may still find it challenging to understand the teacher and other students too. It is therefore suggested that more practice of lip-reading and sign language be used extensively and intensively in and beyond the classroom. Learning opportunities must be provided so that students will be exposed to the various contexts to operate efficiently.

2. To be sensitive to social, academic, and emotional challenges

The participants expressed their worries about the social, academic, and emotional challenges the students faced. Perhaps at this point, extra synergy and energy are needed to understand the lip reading that was required to interpret the information. To fully comprehend, there are extra steps in processing audio information that a hard-of-hearing student needs to take. A student with a hearing device will use more energy in having to concentrate on sound from a direct source like a teacher while blocking out environmental noise like the humming of lights or air conditioners. Comparatively, in terms of the level of energy, a student with hearing loss will therefore

spend much more energy coping than a student without hearing loss.

3. To be sensitive to the reality

The participants expressed their dismay by stating that they have to be sensitive to the students and to realize that students needed more process time when two incidents happen simultaneously: one visual of a teacher talking but expecting students to take notes in the class. It is not realistic to expect a student to take notes and at the same time lip-read. It is suggested that the main notes could be provided to that student beforehand so that the student can focus on lip reading the lecture. Perhaps any volunteer note-takers could be assigned to support hearing-impaired students.

4. Teachers' Low self-efficacy

The participants (60%) mentioned that two of her students were reluctant to participate and avoid active participation due to low self-esteem and the negative stigma towards her in the neighborhood. She is often considered handicapped and looked down upon. They were also considered as being at the mercy of the welfare department. It could be suggested that perhaps there could be some sort of outreach program conducted by the Special Education department to raise awareness in the community.

5. Teacher's lack of teaching competency to teach hearing-impaired students

The participants (80%) expressed their worries about their own knowledge competency in teaching hearing-impaired students. There were only one (20%) of the teachers who specialized in Special Education. The problem for the worries was due to the fact that they were not trained to specialize in special education for the Deaf or hearing-impaired students. Therefore they felt handicapped most of the time when the teaching was most demanding. Nonetheless, they were passionate enough to experiment each day to try new ideas and strategies to motivate the students and, in turn, will motivate themselves. It could be suggested that the participants apply for Continuous Professional Development courses specifically on teaching hearing-impaired students to upgrade their content knowledge of the subject matter. In meeting the demands of the 21st century, the participants must keep abreast with the school of the future.

CONCLUSION

The landscape of the future school in the 21st century remains fluid and dynamic with the advent of the most vibrant innovation in education, the explosion of the age of information technology. Therefore, aligning future schools to education for the 21st century gives rise to questions such as how can future Special Education schools be connected and still remain relevant in the world of the 21st century? With technology in the 21st century future Special Education school, what teaching strategies do we apply and how are we going to teach the hearing-impaired students to be digital natives? What will the future Special Education school for the hearing-impaired be like in the 21st century? Would we make the difference then?

ACKNOWLEDGEMENT

The researchers would like to thank the Department of Education and the Special Education school teachers for sharing and allowing the data gathering of the study.

AUTHORS CONTRIBUTIONS

The authors of the study had worked collaboratively in all aspects of the research, from the data gathering, data analysis, and manuscript preparation. The study also helps the Ministry of Education Malaysia to make necessary changes to improve the teaching of special education.

CONFLICT OF INTEREST

The researchers declare no conflict of interest in the conduct of this study.

FUNDING SOURCE

The researchers declare that there is no funding agency.

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