

Strategies for Addressing Educational Needs of Students with Hearing Impairment

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Abstract

This paper addresses some of the educational needs of students with hearing impairments (Deaf). This group has unique learning needs, especially in relation to language acquisition. Throughout the course of history, there have been two dominant approaches to deaf education - oral (speech) and manual (sign language). Despite conflicting opinions between medical professionals and educators in the field of Deaf education, current research suggests that flexibility and an openness to utilize a combination according to the individual needs of the students is the best approach to forming language proficiency. This paper uses these findings to suggest a holistic range of effective management strategies for educators, which target the physical, academic, social, emotional and communicative wellbeing of deaf students.

Keywords: deaf, hard of hearing, education, strategies, wellbeing

Introduction

Hearing impairment, which is also known as deafness, is the inability of an individual to hear sounds adequately. According to Azubuike and Okorie (2018), hearing impairment refers to any degree of hearing loss, mild to severe, and can occur when there is a problem with a part of the ear, including the inner, middle, and outer ears, or the nerves needed for hearing. Hearing impairment may be due to improper development, damage or disease to any part of the hearing mechanism. Hearing is a prerequisite for the development of normal speech and language. A child learns to speak by hearing the speech of others in the family and surroundings. Deafness is an invisible impairment. Keen observation is necessary in order to identify a deaf child/individual. Hearing impairment/deafness at birth or in early childhood has disastrous effects on the child's overall development. These effects vary depending upon the age of onset, nature and degree of hearing impairment.

Hearing impairment is one of the health problems in the world today. According to Maduka (2022), over 5% of the world's population, which is about 430 million people,

require rehabilitation to address their disabling hearing loss. Among these people, 398million are adults while 34 million are children. The World Health Organization (2020) also estimated that by 2050, over 700 million people – or 1 in every 10 people will have disabling hearing loss. “Disabling” hearing loss refers to hearing loss greater than 35 decibels (dB) in the better hearing ear. Nearly 80% of people with disabling hearing loss live in low- and middle-income countries. The prevalence of hearing loss increases with age; among those older than 60 years, over 25% are affected by disabling hearing loss.

Just like other human beings in the society, the Deaf community (people who are deaf or hard of hearing) have some needs and interests in social issues and processes. Some of these needs include educational needs, vocational needs, emotional needs, among others (Ubani, 2019). One of the ways of meeting these needs for this group of people include education.

Education is the act and art of inculcation of knowledge, skills and attitude from the teacher to the learner (Edwards, 2012). Education is a purposeful activity directed at achieving certain aims, such as transmitting knowledge, fostering skills and attitude and character traits. According to Olaleye (2013), education is the act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life. The aims of education may include the development of understanding, rationality, kindness, and honesty. In the context of this article, education is the transmission of idea, knowledge, skills, behaviour and attitude from one person to another. The main aim of education is to enable the recipient to be well informed so as to contribute meaningfully to the wellbeing of the society irrespective of their disabilities (hearing impairment) thereby improving the lives of humanity. This means that people with hearing impairment need education for their psychosocial development. Therefore teachers ought to utilise effective teaching strategies for teaching students with hearing impairment.

Teaching strategies refer to the methods, techniques, procedures and processes that a teacher uses during instruction. It is generally recognized that teaching strategies are multidimensional and their effectiveness depends on the context in which they are applied. There are specific teaching methods that could be deployed in teaching students with hearing impairment. These methods include listening, facial expression, lip-reading, gestures, speech, writing, mime, America Sign Language (ASL) which has its own structure and syntax, and is different from English which may effectively be their second language, and combination of these. This paper examines how these strategies could be adopted in addressing educational needs of students with hearing impairment.

Deaf and hard of hearing students

The term "hearing impaired" is often used to describe people with any degree of hearing loss, from mild to profound, including those who are deaf and those who are hard of hearing. Many individuals who are deaf or hard of hearing prefer the terms "deaf" and "hard of hearing," because they consider them to be more positive than the term "hearing impaired," which implies a deficit or that something is wrong that makes a person less than whole. "Deaf" usually refers to a hearing loss so severe that there is very little or no functional hearing. "Hard of hearing" refers to a hearing loss where there may be enough residual hearing that an auditory device, such as a hearing aid or FM system, provides adequate assistance to process speech.

Students with hearing impairment are made up of a diverse group of people who have a wide range of hearing loss. Some Deaf people are able to hear at lower frequencies (deep sounds like drums and bass), but are unable to hear at higher frequencies (high pitch noise like vocals and guitar) and vice versa. There are Deaf individuals who are 'profoundly' deaf (Rochester Institute of Technology, 2023), meaning that they are unable to hear any sound below 95 decibels. By definition, "hearing impaired" classifies any individual who is "partially or completely deaf" (Hearing Impaired, 2017). Within the Deaf community, there are people with hearing loss who are "oral" (primarily use speech) and individuals who primarily use sign language to communicate, as well as those who use both (Edwards, 2012). These forms of communication represent the main approaches to deaf education and have long been debated and pinned against one another throughout the course of deaf history.

Teaching Strategies

There are a number of strategies which can be used by teaching staff which will help enormously; and there is an important role for tutors in educating other student members of seminar groups, so that the simple tactics outlined below are used by everyone. To effectively meet the communication needs of a deaf student in the context of higher education settings, the following should be considered:

1. Personal Delivery

Lip reading requires great concentration. Three quarters of it is guesswork and, for this reason, clear speech and contextual clues are vital for understanding.

a) Speech

- Speak clearly and at a reasonable pace. Try to keep the rhythm of your speech as natural as possible. If in doubt, ask the deaf student if the pace is right.

b) Visibility

- To be able to lip-read, the deaf student needs to be able to see your face.
- When speaking make sure that your mouth is not covered in any way and ensure that you face the person to whom you are speaking. Try to keep beards and moustaches trimmed; do not cover your mouth with pens, cigarettes, coffee cups or hands while speaking.

- Try not to nod your head too much or speak while writing on the board or walking around the room as this creates nearly impossible lipreading conditions.

- Ensure that the light is on your face and never from behind you as this will leave your face as a silhouette (Humphries et al., 2014).

c) **Face**

- Try to maintain eye contact when talking to a deaf student one to one.

- Try to use expression in your face as well as gesture as this helps to convey the sense of your words to a lip reader. Make use of natural gesture and facial expression as a clue to meaning.

- Speak clearly; but avoid speaking artificially slowly, exaggerating your lips, or shouting as this affects the natural rhythm of speech.

- Check comprehension; encourage and direct questions.

d) **Position**

- The deaf person should be seated to best advantage. She or he will know where best to sit. This will usually be a seat near the front, slightly to one side of the speaker; the optimum distance for lip-reading is about 6 feet.

- Allow the student to position themselves so that he/she can lip-read you easily and see the projector or board and as much of the class as possible if there is to be a group discussion.

e) **Distractions**

- Try to keep light reflecting or bright jewellery to a minimum, and wear plain clothes. Bright clothes, especially checks, stripes or dots can make concentration difficult.

f) **Gaining attention**

- Be aware that you will need to attract the deaf person's attention before you start speaking. Firstly, try to get into their line of sight, and if that is not effective consider touching the person gently on the arm, bearing in mind it may startle them. It may be useful to agree a "signal" with the student for when you are about to start. This could be a wave of your hand at the student, flashing the lights on and off or, if necessary, asking the person's neighbor to tap a shoulder or arm to alert him or her (Kid Sense Child Development Corporation, 2017).

g) **Equipment**

Deaf or hearing impaired students in your lectures and supervisions may be using one of the following amplification devices:

- Hearing aids.
- Radio frequency system or
- Cochlear implant.

Many lecture theatres have been fitted with an induction loop which enables people using hearing aids to have direct input from the lecturer's microphone, thus eliminating background noise. Please remember to turn on the microphone!

None of these devices replaces hearing but all will benefit the student in some way (Azubuike & Okorie, 2022).

2. Working with interpreters

- BSL sign users will need interpreters during lectures. Make sure that the interpreter is within hearing distance and ready before you start talking.
- Speak directly to the student not the interpreter.
- The interpreter always lags a little behind the speaker. Be aware of this. You may have to pause or speak more slowly to ensure the interpreter is keeping up.
- If the interpreting has been intensive, provide a rest break every 15-20 minutes or negotiate an appropriate time with the interpreter as signing is intensive and tiring work.

3. Presentation

a) Context

- Before starting a discussion or changing the subject, let the deaf person know the topic being discussed.
- Try to include contextual clues whenever talking most lip-reading is guesswork. Lip-reading is much easier when the subject area is known.

b) Structure

- Try to follow a logical structure for your session as this makes lip-reading easier to follow.
- If possible, let the student have a copy of your written notes before the lecture as this will help with following an argument.

c) Pace

- Try to allow a little extra time for the deaf student to assimilate information and respond before going on to the next stage.
- Break the session up so that the deaf student is not lip-reading for long periods at a time.

d) Contributions

- If you are speaking to a deaf person in a group, try to ensure that only one person at a time speaks so that he/she can more easily follow the thread of the conversation.
- Questions and contributions from elsewhere in the room, especially if they are from behind the student will not be heard. Repeat the question before going on to answer it.
- Check comprehension; encourage and direct questions (Rochester Institute of Technology, 2023).

4. Use of visual aids

a) Vital information

- Ensure that students receive important information such as assignment details and changes in class time. Remember that deaf or hearing-impaired students may miss it if it is only advertised verbally so back it up with an email or written note for everyone.
- Write out vital information such as changes of meeting time or venue on the board or overhead projector to make sure that the deaf person is not left out.

- Make use of visual material, i.e. handouts, key vocabulary, diagrams, written instructions.

b) New vocabulary

- Try to provide new vocabulary in advance or write it on the board or Overhead projector (OHP). Unknown words are impossible to lip read.
- Write important new words on the board to fix their form.

c) Reading time

- When using OHPs, boards or flipcharts, allow the students time to read what is written before starting to speak.
- Be aware that a deaf person cannot read or take notes at the same time as lip-reading; allow time for a student to look at the relevant section of a handout, and then make sure you have his or her attention before you comment on it.

d) Boards and flipcharts

- Try not to speak when writing on the board. Students cannot lipread the back of your head.

e) Overhead projectors (OHPs)

- These can be particularly helpful, but remember that OHPs can be noisy which may be difficult for those who use hearing aids.

f) Slides

- When using slides in a darkened room, leave a curtain open or a spotlight on the speaker or interpreter or turn up the lights again before beginning the commentary.
- It is generally considered good practice to provide all students with a copy of slides.

g) Videos and tapes

- Try to use subtitled videos where possible or obtain a transcript of the commentary.
- Alternatively, an interpreter may interpret the video if the student uses BSL, but it will be useful if they have seen the video in advance.

5. Lectures

a) Handouts

- Well prepared handouts provided in advance to allow reading time will increase the amount that a deaf student gains from your lecture.
- Some deaf people who communicate in BSL may find written English more difficult to understand, as the two languages are very different. Therefore, printed materials may need to be in plain English to assist deaf people to access these.

b) Position

- Try to stay in the same place and not move around while you are talking.

c) Booklists

- Make sure that you give the deaf student relevant booklists well before the start of the course. A deaf student may rely more heavily on text books than lectures and so easy availability is a great help.

6. Seminars

For deaf students, group discussions are probably the most difficult situations to deal with. But there are ways of overcoming some of the problems.

a) Size

- The optimum size of group for a deaf person is between 6 and 10. If a group is bigger than this, it is unlikely that people will be near enough to lip read and following contributions to discussions becomes more complicated.

b) Seating

- Arrange the room so that the student can see everyone by putting chairs in a circle or horseshoe shape – this allows the deaf student to locate the speaker more quickly. Make sure no one is silhouetted against the light.

c) Chairing

- Allow the deaf student to take his or her share in chairing the discussion.
- When someone else is chairing, make sure that this person controls the discussion, encourages mumblers to speak up and prevent unnecessary interruptions when people are speaking.

d) Equipment

- If the student is using a radio microphone or loop system, remember that all contributors to the discussion will need to speak into the microphone.
- Ensure that this is known to the group before discussion starts.
- Ensure that members of the group raise their hand before speaking, so that the deaf student is alerted to a change of speaker.
- Do not allow more than one person to speak at a time.

7. Practicals, laboratory and studio work

A variety of different situations can arise in practical sessions. Examples could be:

- Do not stand behind the student when he or she is working. Remember also that the student cannot watch the work and lip read at the same time.
- When teaching points arise during the session as a result of supervising the work of other students, remember to attract the deaf student's attention before speaking.
- Make sure that the deaf student can see clearly what you are saying and doing, when giving a demonstration.

Conclusion

Students who have been deafened in early childhood can be very different to students who lost hearing later in life in terms of educational disadvantage. For example, their range of vocabulary may be limited, which in turn may affect their level of literacy. Deaf and hard of hearing students can sometimes prefer visual learning strategies. This can be a challenge in an environment where much essential information is delivered exclusively by word of mouth. Students with a hearing loss may need to use assistive technology to participate in class. This assistive technology can be the laptop where software such as Skype can be used to deliver Auslan interpreters or captioning. For some it will be in the form of listening devices. For others it will be a combination of technology that includes both listening devices and computer based software. Hence

teachers ought to adopt effective teaching strategies to address the educational needs of these students with hearing impairment.

Recommendations

Based on the article, the following recommendations are made

1. There is need for government to provide inclusive instructional materials in schools for general educational development
2. There is need for teachers to make use of instructional materials (both ready-made and improvised) for improving the teaching and learning of students with hearing impairment
3. There is need for training and retraining of teachers to adopt effective inclusive teaching strategies for improving general educational development.

References

- Azubuikwe, C. & Okorie, P. (2022). *Encyclopedia of Special Education: A Reference for the Education of Children, Adolescents, and Adults with Disabilities and Other Exceptional Individuals* (4th ed.). Hoboken, NJ: Wiley.
- Azubuikwe, C. A. & Okorie, P. (2018). Educating students with impairment. *International Journal of Inclusive Education*, 1(6), 12-23.
- Edwards, I. O. (2012). Mental health of Deaf people. *The Lancet*, 379(9820), 1037–1044. DOI 10.1016/S0140-6736(11)61143-4
- Hearing Impaired (2017). In *Oxford English dictionary online*. Retrieved from <https://en.oxforddictionaries.com/definition/hearing-impaired>
- Humphries, T., Kushalnagar, P., Mathur, G., Napoli, D. J., Padden, C., & Rathmann, C. (2014). Ensuring language acquisition for deaf children: What linguists can do. *Language*, 90(2), 31-52.
- Kid Sense Child Development Corporation (2017). *Hearing Impairment*. Retrieved April 5th, 2017, from <https://childdevelopment.com.au/areas-of-concern/diagnoses/hearing-impairment/>
- Maduka, N. (2022). Oral versus manual communication. In C. R. Reynolds, K. J. Vannest, & E. Fletcher-Janzen (Eds.), *Encyclopedia of Special Education: A Reference for the Education of Children, Adolescents, and Adults with Disabilities and Other Exceptional Individuals* (4th ed.). Hoboken, NJ: Wiley.
- Olaleye, J. (2013). *Social Work and Social Care*. Retrieved from <http://www.oxford.reference.com/view/10.1093/acref/9780199543052.001.0001/acref-9780199543052-e-779>
- Rochester Institute of Technology (2023). *Deaf and Hard-of-Hearing: Some Definitions*. Retrieved April 3rd, 2017 from <https://www.deaftec.org/content/deaf-definitions>
- Ubani, O. N. (2019). *Word Made Flesh*. Retrieved from <http://ebookcentral.proquest.com.databases.avondale.edu.au/lib/avondale/detail.action?docID=865423>
- World Health Organization (2020). The Deaf community. Retrieved from <https://www.hearing.com.au/milestone/who-are-the-deafcommunity/>