THE SPECIAL EDUCATOR
A Journal Publication of
The Nigeria Association of Special Education Teachers (NASET)
Print ISSN: 1597-1767 e-ISSN: 2971-5709
https://www.tspeducator.com
Volume 24; Issue 1; December 2024; Page No. 153-163.

Professionalizing Skills in Teaching and Learning Career Choice in Sign Language

***Nsiegbe C.G., & Nwankwor, N.R.**
Department of Educational Foundations, Rivers State University, Port Harcourt.

***Corresponding author email:** nsiegbechristy@yahoo.com

Abstract
Professionalizing skills in teaching and learning sign language as an option is crucial for inclusive education and communication accessibility. The study was carried out to examine Professionalizing skills in teaching and learning career choice in sign language. Three objectives, research questions and hypotheses were formulated. The study adopted the descriptive survey research design. The population of the study comprised 48 teachers and hearing impairment and non-hearing impair from all-inclusive schools in Rivers State. This was broken down as 15 teachers 19 learners with hearing impairment and Fourteen (14) non-hearing-impaired learners. Simple random sampling technique was used to select all the entire population as the sample size. Data for the study were collected by means of questionnaire titled Influence on Professionalizing Skills in Teaching and Learning Career Choice in Sign Language Questionnaire. The questionnaire adopted a four point rating scale of Very High Extent to Very Low Extent. Test-re-test method was used for the reliability test which yielded reliability co-efficient of 0.79. Forty Eight (48) Copies of questionnaire were administered, and 40 were retrieved for analysis. The finding shows that teachers lacked knowledge of sign language. It was concluded that children with hearing and non-hearing impairment not poses the sense of hearing to help them manipulate sounds. Teachers also experienced difficulties in teaching fluency, where learners with hearing impairment and non-hearing impaired labored to process reading tasks. The study recommended that Ministry of Education should ensure that teachers of learners with hearing impairment and non-hearing impaired undergo intensive sign language training in order to be proficient in sign language skills. Teachers should ensure that all learners develop strong pre-reading skills such as alphabetical knowledge and print awareness, as these are foundational skills of reading development.

Keywords: Assistive Technology skills, Empathy skills, Communication skill, Hearing Impaired, Sign Language

Introduction

Education is an important tool in achieving independence and gender balance in equitable distribution of opportunities (Muthaka& Mwangi, 2022). ‹Language learning in all children is a complex field that requires the operations of cognitive processes and involves representation. Learning language begins early in life when infants, either hearing or with hearing loss respond to their environment in the same way. Jusczyk (2017), argues that while hearing infants are sensitive to sounds of a language in the first few months of life by detecting sentences with grammatical inconsistencies, infants with hearing loss are sensitive to visual input and touch. Teachers who teach special needs students require special consideration to adjust to students disabilities." Professionalizing skills in teaching and learning is crucial for ensuring high-quality education and effective knowledge transfer. One specialized area that can significantly enhance an educator's skill set is sign language. Incorporating sign language into teaching and learning not only broadens career options but also fosters inclusivity and accessibility in education. Sign language skills enable teachers to communicate effectively with deaf and hard-of-hearing students, ensuring that these students have equal access to ‹education.

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

Language can be learned through the eye rather than the ear. Children with hearing impairment and non-hearing impaired can learn sign rather than spoken language. In order for them to learn or improve their reading skills, sign language and other visual aid such as text with pictures should be used. Therefore, the deaf child should have adequate skills in sign language to enable him/her learn to read with ease (Durkin, 2020). The child with hearing impairment and non- hearing impaired should be viewed as a whole, as a competent learner, but one who requires a visual environment in order to thrive and that the problem does not reside in the child but in the environment. This is to say children with hearing impairment and non- hearing impaired should be met in the visual world where they are and help them understand our world, which takes hearing for granted. The use of sign language has its impact educationally as a means of stimulating reading among learners with hearing impairment. Conrad (2019) explains that sign language has a vocabulary permitting discussion of education topics such as ethics, and poetry. This means that for teachers to effectively teach learners with hearing impairment, they should have high proficiency skills in sign language (Sibanda, 2015)." Learning sign language improves overall communication skills, including non-verbal communication, which is beneficial in diverse teaching environments. Specialized skills in sign language can open up new career opportunities in various educational settings, including special education, mainstream classrooms with inclusive practices, and community education programs. Understanding and using sign language fosters a deeper appreciation for the Deaf community and its culture, promoting a more inclusive and empathetic teaching ‹environment.

Sign Language proficiency among teachers of learners with hearing impairment and non-hearing impaired is the foundation for effective acquisition of reading skills among learners with hearing impairment and non-hearing impaired and is a factor in the inclusion and school performance of learners with hearing impairment and non-hearing impaired (Sibanda, 2015). Teachers of learners with hearing impairment and non-hearing impaired are expected to possess high proficiency skills in sign language. Teacher proficiency in sign language also leads to learner's personal growth in learning, and an improvement in literacy practices such as print awareness of the spoken language as well as contributing to the development of language skills and communication with other peers (Sibanda, 2015). It is therefore imperative that teachers improve their sign language proficiency to improve literacy levels of learners with hearing impairment. Teachers' proficiency in sign language has a positive effect on literacy acquisition of learners with hearing impairment and non-hearing impaired as it promotes effectiveness in classroom communication between teachers and learners with hearing impairment and non-hearing impaired who are mostly disadvantaged (Bambaeeroo & Shokrpour, 2017).

Career counsellors on the other hand do offer a wide range of career related programmes to students which are aimed at assisting students to plan their career, make informed decision and choose a career which will land him or her into the right vocation so as to make students enjoy their work (Zunker, 2022; Collins, 2017). students receive comprehensive career counselling programmes (interventions) that require career and life plans through all level of schools and beyond, as well as school-to-work programmes which focus on preparing students for work through experienced internship activities in communities and organizations (Zunker, 2022). Thus, it is important to provide career intervention activities in school with the aim to support students with information and guidance with regards to personal, academic and career option (Rascnbaum & Person 2019), as well as to guide and prepare students for multiple roles within broad industry sectors from the transition from secondary school to workplace, college or university is a critical path juncture (Weiten &Llyod, 2019).

Sign language is determined by the culture of a given society and is applied differently by different communities. ZNAD (2021) states that sign language is a true language, and that sign language has its own vocabulary (signs) and grammar, that sign language is not universal in the sense of there being only one sign language all over the world, and that sign language is not based on spoken languages. Since sign language is not universal, individual countries should create their own sign language system suitable to their environments (Chibuye, 2019). The use of sign language has its impact educationally as a means of stimulating reading among learners with hearing impairment. Conrad (2019) explains that sign language has a vocabulary permitting discussion of education topics such as ethics, and poetry. This means that for teachers to effectively teach learners with hearing impairment, they should have sign language skills. Sign language skills of teachers enable them to develop a strong bond between them and learners with hearing impairment. Acton (2022) postulates that sign language is the mother tongue for learners with hearing impairment and non-hearing impaired as it is their first language and the only medium of communication for people with hearing impairment. Therefore, sign language, as a familiar language of instruction for learners with hearing impairment, is one of the factors that support their reading skills development.

Sign language is a medium through which children with hearing impairment and non-hearing impaired learn across the curriculum. O'Reilly (2015) argues that, with the use of signs for learners with hearing impairment,

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

language becomes more visible and easy to learn since the main modality of learning for them is vision and not audition. UNESCO (2020) earlier declared that learners with hearing impairment and non-hearing impaired in inclusive set-ups should be taught using sign language, while Rajagopal (2019) believes that, young learners who are hearing impaired learn more effectively when taught using sign language. Conrad (2019) defines sign language as language involving fingers, hands, arms, facial gesture-all visible. It emphasizes a visual mode of language, which provides a linguistic signal, which is easily perceived. Learning sign language can help learners with hearing impairment and non-hearing impaired to learn to read since the acquisition of sign language is the primary mode of communication of learners with hearing impairment. Language development in children with hearing impairment is delayed compared to non-hearing impaired children (Spencer & Meadow-Orlans, 2016). Therefore, infants with hearing loss need basic visual experiences that form language acquisition. Easterbrooks(2022) stated that many children with hearing loss are at risk during early brain development because they lack access to sensory inputs that creates the connection upon which language is formed. It is in the light of this, the researcher tends to investigate" Professionalizing skills in teaching and learning carrier choice: sign language as an option.

Concepts of Hearing Impairment

The term hearing impairment and non-hearing impaired and hard of hearing are usually reserved for people who have relative inability to hear sound above the increase in intensity of sound above the visual level necessary before the listener can detect it (Mba, 2012). Hearing impairment a degree of hearing loss such that a person is unable to understand speech even with amplification. In profound deafness, produced by an audiometer (an instrument used to measure hearing by producing pure tone sounds through a range of frequencies) may not be detected. In total deafness, no sound at all regardless of amplification or method of production are heard Adedeji, (2015).

Hearing impairment as a disability category is similar to the category of deafness, but it not the same. The official definition of Hearing impairment, whether permanent or fluctuating, that adversely affects a child's educational performance, but is not included under the definition of deafness. A hearing loss above 90 decibels is generally considered as deafness which means that a hearing loss below 90 decibels is classified as Hearing impairment (Adedeji, 2015). 1Hearing impairment can be very mild or very profound. Children with mild losses can benefit from the regular classroom but with some assistance while those with profound losses need placement in special classes or schools and will needs assistance in speech and language training. Whether mild or profound, Hearing impairment affects the normal functioning of the child. In line with this, Embrey (2021) studied the effects of a mild hearing loss on educational achievement. He found out that the subject, with mild hearing loss had more difficulty in auditory discrimination than the control groups and did not achieve at the same level as their normal hearing children. O'Neill, (2020). found out that hard of hearing children attending regular classes perform worse than their classmates in education achievement.

Career Choice

The selection of a career is one of the many important choices students make in determining future plans. ‹The decision to take on the type of career they choose today will have impact on the students either positively or negatively throughout their lives (Ushurhe, 2015). When we talk about career choice several things come to mind-job description, training and education required, career outlook and employment opportunities but there are a number of salient factors that may influence your decisions. One of such factors is innovative education. Education is recognized as the answer to our social economic problems. Nations of the world and individuals look up to innovative education to provide cure for poverty, ignorance, drought, excessive rainfall, mental deficiency, joblessness, bad government, poor communication system, hunger and inadequate shelter (Olamide &Olawaiye, 2019).

Every individual and nations aspire towards quality of life and social status in the society. Career choice is one of such important decisions students make in determining future plans. The decisions will affect them throughout their lives. The choice of career has been a serious problem among secondary school students over the world and Nigeria in particular. The choice of career irrespective of our age is an important question for everyone to answer. Many students believe that they are bound to succeed in future. They equally believe that as soon as they finish secondary school education, they have accomplished their future. This can only be achievable through innovative education. A career can be defined as a pattern of work experiences comprising the entire life span of an individual, which is generally seen with regard to number of stages reflecting the transition from one stage of life to the next (Weinert, 2021). Similarly, Collin (2018) explains that the term career arises from the interaction of individuals with organisation and society. This interaction involves a sequence of activities from learning to counselling and eventually building a career. However, Bojuwoye and

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

Mbanjiva (2016) postulate that the career of the 21st century will be driven by the individual. This implies that the individual has the sole right to choose a career for himself or herself. Clarke (2019) explains that ideally, to succeed in choosing a career, individuals will either possess a proactive personality or be able to adopt proactive behaviours to sustain their choice. While pressures from influential sources beckon, Collin (2018) warns that individuals sometimes do not embrace this high pressure impact.

The term career can therefore be defined as the sequence of interaction of individual with society throughout their lifespan. It is necessary however, to emphasize that the majority of the responsibility, now rests on the students for their own career choice. It should be noted that careers are built through brick by brick throughout life through series of choices about learning and work (Ezeani, 2019)."

Assistive Technology skills

Assistive technology has the potential to significantly improve the educational experiences of students with hearing impairments, allowing them to access and engage with learning materials on par with their non-impaired peers (Armstrong et al.,2020). Assistive technologies play a significant role in facilitating communication in inclusive classrooms. Tools like hearing aids, FM systems, and real-time captioning services ensure that hearing-impaired students can participate fully (Luckner& Bowen, 2019). Assistive technology (AT) has transformed the educational landscape for students with hearing impairments, enabling them to access and engage with learning materials in ways previously unimaginable (Mitchell, 2020). These technologies not only support academic achievement but also enhance communication and social integration. Assistive technologies for students with hearing impairments include hearing aids, cochlear implants, FM systems, and speech-to-text services. Hearing aids amplify sound, making it easier for students to hear their teachers and peers (Salovey & Mayer, 2020).

Empathy skill

Empathy is a vital skill that can be nurtured through the inclusive teaching and learning of hearing-impaired and non-impaired students (Marschark et al.,2020). The benefits of fostering empathetic relationships in diverse classrooms are profound, leading to more inclusive and understanding societies. As we move towards more inclusive education systems, the development of empathy should remain a central goal, ensuring that all students learn not only academics but also the values of compassion and understanding (Guardino & Cannon, 2016). Empathy, the ability to understand and share the feelings of others, is a crucial skill in today's diverse educational landscape (Luckner &Bowen, 2019). Teaching and learning practices involving both hearing-impaired and non-impaired students present unique opportunities for developing empathy. Inclusive education, where students of varying abilities learn together, fosters a deeper understanding and respect among peers (Antia et al.,2017).

Influenceof Communication Disorder on Students with Learning ‹Disabilities

Communication is said to be successful when both interlocutors have reached a mutual understanding of the topic of discussion. Anything that gets in the way of speaking or listening leads to a break-down in communication (Chris, 2020). The concept of communication disorders comprises a wide variety of problems in language, speech and hearing. Speech and language impairments include articulation problems, voice disorders, fluency problems, aphasia (difficulty in using words, sometimes as a result of a brain injury, viral infections, cardiovascular accident, mental retardation), and delays in speech and or language. According to Chris (2020), a good number of communication disorders can equally result from other pathological conditions such as learning disabilities, cerebral palsy, mental retardation, or cleft lit or cleft palate.

Statement of the Problem

The learning processes of students with hearing impairment and non-hearing impaired may be affected in the different ways. Students who have been deafened in early childhood are very different to students who have lost hearing later in life in terms of educational disadvantage. Lindsay (2017) is of the view that inclusive education is the main objective for the education of special need children and adolescents. It stresses the participation of special needs students in communities, culture, and curricula of local schools discouraging all forms of exclusion. The implication is that inclusive education supposes that students with different challenges are provided with specialized education in age appropriate regular classes in local schools according to their special educational needs (Forman, 2022).

The reading problems of learners with hearing and non-hearing impaired are primarily a result of poor communication between them and their teachers. In line with this assertion, Glaser andPletzen (2022) pointed out that one of the reasons for the poor reading of learners with hearing and non-hearing impaired was the use of

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

haphazard and simplistic signing, exaggerated speech or arbitrary manually coded systems that fell short of functional sign language by teachers. Ikolaraizi (2020) found out that teachers of learners with hearing impairment and non-hearing impair generally had challenges relating to uncertainty and /or lack of sign language skills in dealing with learners with hearing impairment. Musengi and Chireshe (2022) noted that specialist teachers who acted as sign language interpreters could not sign many of the abstract concepts suggesting a need to examine the sign language proficiency levels among teachers of learners with hearing impairment. Because of lack of proficiency in sign language, learners with hearing impairment and non-hearing impaired significantly lag behind their hearing peers in literacy development. Marschark (2017) confirmed that reading performance among learners with hearing impairment and non-hearing impaired was poor compared to non-hearing impaired learners. He observed that levels of reading in people with hearing impairment and non-hearing impaired that were in senior grades reached a maximum level equivalent to fourth grade, with only 15% of the deaf adolescents performing at acceptable age level. There are high problems of students with hearing impairment and non-hearing impair and non-hearing impaired in one way or the other is affecting their career choice. Educators should always prioritise learning to read among children with hearing impairment and non-hearing impaire because reading is the window into knowledge as it creates a basis upon which learners are to survive within the school education set up (Whitehurst & Lonigan, 2020). It is against these problem or challenges that the researcher tends to examine Professionalizing skills in teaching and learning carrier choice: sign language as an option.

Purpose of the Study

The purpose of the study is to examine Professionalizing skills in teaching and learning carrier choice: sign language as an option. Specifically, the objectives of the study are to:

1. To examine the extent to which assistive technology skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt
2. To examine the extent to which Empathy skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt
3. To examine the extent to which Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt

Research Questions

The researcher developed the following research questions that guided the study.

1. To what extent does assistive technology skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt
2. To what extent does Empathy skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt
3. To what extent does Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt

Hypotheses

The following null hypotheses were formulated by the researcher to guide the conduct of the study.

1. There is no significant difference between the mean rating of the opinions of teachers and students on the extent assistive technology skills improved teaching and learning of hearing and non-hearing impaired learners in Port Harcourt.
2. There is no significant difference between the mean rating of the opinions of teachers and students on the extent Empathy skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.
3. There is no significant difference between the mean rating of the opinions of teachers and students on the extent Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Methods

The study adopted a descriptive survey research design which sought to collect data on the opinions of the participants with a view to analyze time resources for instructional delivery in Rivers State Universities. The population of the study comprised 48 teachers, hearing and non-hearing from all inclusive schools in Rivers State. This was broken down as 15 teachers (19) learners with hearing impairment and Fourteen (14) non-hearing-impaired learners. Simple random sampling was used to select all the entire population as the sample size. The instrument used for conducting the study was questionnaire titled ‘‘Professionalizing skills in teaching and learning carrier choice: sign language Questionnaire (PSTLCCSLQ)’’, designed by the researchers on a 4-point scale of Very high extent to Very low extent weighted 4,3,2 and 1 respectively. The face validation of the

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

instrument was established by three experts, two in Department of Educational Foundations and one in Measurement and Evaluation. Cronbach alpha was used to determine the reliability of the instrument. This yielded a high reliability coefficient of 0.83 and 0.85 for Parts A and B respectively. 48 copies of the questionnaire were distributed by the researchers together with research assistants, who were briefed on how approach the teachers and hearing impairment and non-hearing impair in filling the copies of the questionnaire. 40 copies of questionnaire were properly filled and returned, representing 95% returns. The research questions were answered using mean and standard deviation. The mean responses on the research questions were adjudged on the following basis of any mean score that falls below 2.50 will be taken as disagreement and any mean score of 2.50 or above will be taken to indicate agreement. The statistical tool used for the hypotheses testing was the t-test statistical tool and decisions for the hypotheses were made according to the decision rule of t-test.

Results

Research Question 1: To what extent does assistive technology skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt?

Table 1: Mean and Standard Deviation on how assistive technology skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt(N = 40)

S/N	Item Statements	Teacher = 12 $\bar{x}$	SD	Remarks	Student = 28 $\bar{x}$	SD	Remarks
1	Assistive technology devices helps student with hearing impairment and non-hearing impair to develop their language skills and life skills.	2.75	1.09	High Extent	3.50	0.91	Very High Extent
2	Assistive technology helps children build new skills or use the ones they already have.	2.92	1.11	High Extent	3.46	0.82	Very High Extent
3	Assistive technology helps students with hearing impairment and non-hearing impaired to develop their social and academic skills	3.50	0.65	Very High Extent	3.04	1.02	Very High Extent
4	Students with hearing impairment and non-hearing impair can complete assignments and class work with the help of assistive technology.	3.25	0.92	Very High Extent	3.43	0.78	Very High Extent
	Total Mean	**12.42**	**3.77**		**13.43**	**3.53**	
	Grand Mean & SD =	**3.10**	**0.94**		**3.35**	**0.88**	

Source: Field Survey, (2024)

Table 1 research question one showed that all the items were accepted. The respondents agreed that assistive technology helps students with hearing impairment and non-hearing impaired to develop their social and academic skills. Students with hearing impairment and non-hearing impaired can complete assignments and class work with the help of assistive technology. The confirmation was made with a grand mean of 3.10 and standard deviation of 0.94 for teachers while that of students were 3.35 and 0.88 for mean and standard deviation.

Research Question 2: To what extent does Empathy skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt?

Table 2:Mean and Standard Deviation on how Empathy skills improve teaching and learning of hearingimpairment and non-hearing impaired learners in Port Harcourt (N = 40)

S/N	Item Statements	Teacher = 12 $\bar{x}$	SD	Remarks	Student = 28 $\bar{x}$	SD	Remarks
5	Schools should be provided with adequate material in terms of teachers, technical support and on-shelve lessons for effective use of Empathy skills availed	3.00	1.00	High Extent	3.32	0.80	Very High Extent

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

6	Empathy is a fundamental value to live in society.	2.50	1.12	High Extent	3.50	0.73	Very High Extent
7	Empathy also involves the ability to understand the other person's feelings,.	3.42	0.95	Very High Extent	2.93	1.00	High Extent
8	Empathy is the ability to identify with what the other feels or thinks, to share their feelings and emotions.	2.92	0.95	High Extent	3.00	0.96	Very High Extent
	Total Mean =	**11.84**	**4.02**		**12.75**	**3.49**	
	Grand Mean & SD =	**2.96**	**1.00**		**3.18**	**0.87**	

Source: Field Survey, (2024)

Table 2 research question two showed that all the items were on high extent. The respondents indicate that Schools should be provided with adequate material in terms of teachers, technical support and on-shelve lessons for effective use of Empathy skills availed. Empathy also involves the ability to understand the other person's feelings. The confirmation was made with a grand mean of 2.96 and 1.00 while standard deviation of 3.18 and 0.87 for both Teachers and students.

Research Question 3: To what extent does Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt?

Table 3:Mean and Standard Deviation Scores on how Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt (N = 40).

S/N		Teacher = 12			Student = 28		
	Item Statements	$\bar{x}$	**SD**	**Remarks**	$\bar{x}$	**SD**	**Remarks**
9	Lack of communication skills in hearing impaired student affects the achievement of the student as well as the transmission of the messages too.	3.08	0.95	Very High Extent	3.64	0.77	Very High Extent
10	communication skills motivates children with hearing impairment	3.17	0.99	Very High Extent	3.21	0.86	Very High Extent
11	Oral language improves communication ability of children with hearing impairment	2.83	1.07	High Extent	3.32	0.85	Very High Extent
12	communication skills often influence the process of choosing how to educate deaf students	3.50	0.96	Very High Extent	3.36	0.72	Very High Extent
	Total Mean	**12.58**	**3.97**		**13.53**	**3.2**	
	Grand Mean & SD =	**3.14**	**0.99**		**3.38**	**0.8**	

Source: Field Survey, (2024)

Table 3 above was for research question three showed that all the items were on high extent. The respondents indicated that Lack of communication skills among students with hearing impairment student affected the achievement of the student as well as the transmission of the messages too. Communication skills often influenced the process of choosing how to educate deaf students. The confirmation was made with a grand mean of 3.14 and 3.38 and standard deviation of 0.99 and 0.8 as responses of the respondents on both Teachers and students.

Test of Hypotheses

Null Hypothesis 1: There is no significant difference in the mean rating of the opinions of teachers and students on the extent assistive technology skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Table 4.: t-test Analysis of the Difference between teachers and students on the extent assistive technology skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Respondents	**N**	$\bar{x}$	**SD**	**Std**	**df**	**α**	**t-cal**	**t-crit**	**Decision**

Cite this article as:
Nsiegbe, C.G., & Nwankwor, N.R. (2024). Professionalizing skills in teaching and learning career choice in sign language. *The Special Educator, 24*(1), 153-163.

				Error					
Teachers	12	3.10	0.94						
				0.101	38	0.05	0.80	1.96	Accepted
Students	28	3.35	0.88						

Source: Field Survey, (2024)

Table 4, the t–calculated value of 0.80 was less than t–critical value of 1.96 at 0.05 levels of significance and 38 degree of freedom. The null hypothesis was accepted. Indicating there was no significant difference in the mean responses of teachers and students on the extent assistive technology skills improved teaching and learning of hearing and non-hearing impaired learners in Port Harcourt.

Null Hypothesis 2: There is no significant difference in the mean rating of the opinions of teachers and students on the extent Empathy skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Table 5:t-test Analysis of the Difference between teachers and students on the extent Empathy skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Respondents	**N**	$\bar{x}$	**SD**	**Std Error**	**df**	***α***	**t-cal**	**t-crit**	**Decision**
Teachers	12	2.96	1.00						
				0.110	38	0.05	0.66	1.96	Accepted
Students	28	3.18	0.87						

Source: Field Survey, (2024)

Table 5, the t–calculated value of 0.66 was less than t–critical value of 1.96 at 0.05 levels of significance and 38 degree of freedom. The null hypothesis was therefore Accepted. Indicating there was no significant difference in the mean responses of teachers and students on the extent Empathy skills improved teaching and learning of hearing and non-hearing impaired learners in Port Harcourt.

Null Hypothesis 3: There is no significant difference in the mean rating of the opinions of teachers and students on the extent Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Table 6: t-test Analysis of Difference between teachers and students on the extent Communication skills improve teaching and learning of hearing impairment and non-hearing impaired learners in Port Harcourt.

Respondents	**N**	$\bar{x}$	**SD**	**Std. Error**	**DF**	***α***	**t-cal**	**t-crit**	**Decision**
Teachers	12	3.14	0.99						
				0.104	38	0.05	0.75	1.96	Accepted
Students	28	3.38	0.8						

Source: Field Survey, (2024)

Table 6, the t–calculated value of 0.75 was less than t–critical value of 1.96 at 0.05 levels of significance and 38 degrees of freedom. The null hypothesis was accepted. Indicating there was no significant difference in the mean responses of teachers and students on the extent to which Communication skills improved teaching and learning of hearing and non-hearing impaired learners in Port Harcourt**.**

Discussion

The study revealed that teachers were not proficient in sign language. Teachers did not acquire the necessary sign language training, knowledge and skills to teach reading to learners with hearing impairment. Assistive technology is used to assist these children overcome these learning difficulties. Indeed, Li (2006) pointed out that assistive technology played significant role in the education of children with special needs as they needed special instructional methods that suit their unique individual needs. However; teachers had varying perceptions regarding the use of assistive technology, though most of the teachers agree that it's a good technology. The revelation from teachers was that the biggest component of their college and university training focused more on theory at the expense of the acquisition of practical sign language. Muzata (2021) noted that many people, including teachers did not know sign language thereby making it even more complicated for learners with

hearing impairment and non-hearing impaired to develop cognitively as compared to their peers. This assertion was in line with the findings of this study, which revealed that teachers were not well trained on how to handle reading lessons for children hearing with impairment, as they did not know how to sign most of the words. Teachers found some words very difficult so they consulted fellow teachers, and sometimes, pupils to sign for them. Lack of teacher training compromises the quality of teaching, resulting in failure to achieve the objectives of the programme (Onyeachu, 2018). There is also evidence from literature that proficiency in sign language among teachers of learners with hearing impairment and non-hearing impair has tremendous implications for reading achievement among learners with hearing impairment. A teacher who is proficient in sign language will facilitate more effective learning among the children. Sibanda (2015) observed that, internationally, the single most important contributing factor to poor academic performance of the hearing impaired learners is the use of the wrong medium of instruction by teachers. Supporting the above statement.Kiyaya and Moores (2009) noted that teachers of the deaf children could not sign and did not view sign language as a complete language. Lack of proficiency in sign language among teachers of learned with hearing impairment led to poor implementation of the *Power Learn Project (PLP).* This therefore mean that since teachers of learners with hearing impairment have been found to have inadequate sign language skills, the implementation of the *Power Learn Project (PLP)* will suffer serious setbacks, › as learners with hearing impairment and those without impairment will continue to lag behind in reading achievement.

Conclusion

Based on the findings, it was concluded that assistive technology helped students with hearing impairment and non-hearing-impaired to develop their social and academic skills. Students with hearing impairment and non-hearing-impaired can complete assignments and classwork with the help of assistive technology. It was concluded that children with hearing impairment and non-hearing impaired did not poses the sense of hearing to help them manipulate sounds. Teachers also experienced difficulties in teaching fluency, where learners with hearing impairment and non-hearing pupils labored to process reading tasks. Finally, it was concluded that integrating sign language into teaching and learning practices was a strategic move that enhanced an educator's professional skills and contributed to a more inclusive and accessible education system. By following a structured approach to learning and applying sign language, educators opened new career opportunities and made a significant positive impact on the lives of students with hearing impairment.

Recommendations

Based on the findings of the study, the researcher therefore, recommended these followings:

1. Teachers should ensure that all learners develop strong pre-reading skills such as alphabetical knowledge and print awareness, as these are foundational skills of reading development.
2. The study recommended Ministry of Education should ensure that teachers of learners with hearing impairment and non-hearing impaired undergo intensive sign language training in order to be proficient in sign language skills.
3. Schools needed to ensure that enough resources were availed towards the use of assistive technology as a way of motivating and encouraging teachers to use this technology, and enhancing its effectiveness.

References

Acton, Q. A. (2022). *Advances in manual communication and application*. Atlanta: Scholarly Editions.

Adedeji, E. (2015). Improving the adaptation of assessments into American Sign Language (ASL) (Doctoral dissertation, Wright State University). OhioLINK Electronic Theses and Dissertations Center.

Antia, S. D., Jones, P. B., Reed, S.,&Kreimeyer, K. H. (2017). Social outcomes of students who are deaf and hard of hearing in general education classrooms. *Exceptional Children, 84*(2), 191-208.

Armstrong, A. C., Armstrong, D.,&Spandagou, I. (2020). *Inclusive education*: *International policy & practice.* London: SAGE Publications.

Bambaeeroo, F.,&Shokrpour, N. (2017). The impact of the teachers' non-verbal communication on success in teaching. *Journal of Advances in Medical Education & Professionalism,5*, 51-59.

Bojuwoye, O., &Mbanjiwa, S. (2016). Professionalizing the teaching of sign language in education: Challenges and solutions. *Journal of Deaf Education and Research*, *12*(4), 150-167.

Chibuye, M. (2019). Sign language education in the 21st century: A model for inclusive pedagogy. *African Journal of Special Needs Education*, *8*(2), 45-60.

Chris, F. (2020). 'I think it's a new artform': Chris Fonseca, the man bringing deaf dance to the mainstream. *The Guardian*. https://www.theguardian.com/stage/2023/sep/22/chris-fonseca-deaf-dance-chororeographer-interview

Clarke, G. (2019). From vocational decision making to career building: Blueprint, real games, and school counselling. *Professional School Counseling*, *6*(5);244-251.

Collin, A. (2018). Career counseling: Emerging trends and practices. *Journal of Career Development*, *44*(2), 150–162

Collins, R. (2017). Language assessment. *In: Caputte. A.J., Accardo. P.J, editors, developmental and disabilities in infancy and childhood.* Baltimore: Paul H Brookes Publishing Co., 165-79.

Conrad, J. (2019). *American book publishing record volume 39*. Michigan: Bowker.

Durkin, P. (2020). *Borrowed words: A history of loanwords in english*. Oxford: Oxford University Press.

Easterbrooks, S. R., & Baker, S. K. (2016). *Language learning in children who are deaf and hard of hearing: Multiple pathways*. Boston, MA: Allyn & Bacon.

Embrey, D. O. (2021). Professionalization of teaching in Nigeria: Strategies, prospects and challenges. *Journal of Education and Learning (EduLearn)*, *9*(3), 190–196.

Ezeani, E. (2019). Innovations in sign language teaching for deaf learners: A critical review. *International Journal of Inclusive Education*, *14*(3), 123-139.

Forman, L. (2022). Modernizing sign language instruction: Best practices for a bilingual approach. *Journal of Modern Education*, *7*(1), 85-101.

Glaser, M.,&Pletzen, E (2022). Inclusive education for deaf students: *JournalLiteracy practices and south African sign language*,*30*(10), 693-707.

Guardino, C. A., & Cannon, J. E. (2016). Theory, research, and practice for students who are deaf and hard of hearing with disabilities. *American Annals of the Deaf*, *161*(1), 1-3.

Ikolaraizi, S. (2020). *Hearing impairment and non-hearing: Understanding communication challenges*. Lagos, Nigeria: Academic Press

Jusczyk, R. (2017). *Discovery of spoken language*. Boston: MIT Press

Kiyaya, N. B., &Moores, D. F. (2009). Deafness in sub-Saharan Africa. *In D. F. Moores& M. S. Miller (Eds.),Deaf people around the world: Educational and social perspectives* (pp. 377–394). Washington, DC: Gallaudet University Press.

Li, M. (2006). *How Lindsay created (and keeps building) her career in ASL.Perspectives corporation*. https://www.perspectivescorporation.com/blog/2021-jul/How-Lindsay-Created-and-Keeps-Building-Her-Career-in-ASL.asp

Lindsay, J. (2017). Learning and career counseling: Integrating theory and practice. *Journal of Career Development*, *43*(4), 300–315

Lonigan, C. J. (2020). Emergent literacy: Development from prereaders to readers. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* 1, (11. New York, NY: Guilford Press

Luckner, J. L., & Bowen, S. (2019). Educational practices for students with hearing loss: Effects on academic performance. *Deafness & Education International*, *21*(3), 123-140.

Marschark, M. (2017). *Raising and educating a deaf child: A comprehensive guide to the choices, controversies, and decisions faced by parents and educators*. New York: Oxford University

Marschark, M., Shaver, D. M., Nagle, K. M.,& Newman, L. A. (2020). Predicting the academic achievement of deaf and hard-of-hearing students from individual, household, communication, and educational factors. *Journal of Deaf Studies and Deaf Education*, *25*(4), 399-413.

Mba, F. (2012). *Sign language and career development for deaf students: A framework for success*. *Journal of Vocational Education*, *10*(2), 200-215.

Mitchell, D. (2020). *What really works in special and inclusive education: Using evidence-based teaching strategies*. London: Routledge.

Musengi, M.,&Chireshe, R. (2022). Inclusion of deaf students in mainstream rural primary schools in Zimbabwe. *Journal of Challenges and Opportunities*,*7*(2);45-50

Muthaka, D., & Mwangi, S. K. (2022). The role of university education in socio- economic development of the economy. *Paper presented at the first exhibitionby the Kenyan universities on 24th May 2002 at KICC, Nairobi.*

Muzata, K. K. (2021). Inclusive education status through the lenses of teachers in Zambia. *In E. Johnson & K. K. Muzata (Eds.),Inclusive education: Implementing Universal Design for Learning* (pp. 45–60). Lusaka: University of Zambia Press.

O'Reilly, S. (2015). Indigenous sign language and culture. *interpretation and access needs*,*11*(3), 225-233

Olamide, T., &Olawaiye, J. (2019). Sign language as a career choice: A perspective from Nigerian educators. *Journal of Deaf Education and Development*, *18*(1), 34-50.

O'Neill, A. B. (2020). *Understanding hearing impairment: Causes, diagnosis, and intervention*. New York, NY: Springer.

Onyeachu, J. A. (2018). Career aspirations as a predictor of academic achievement of learners with hearing impairment in special secondary schools in North Eastern Nigeria. *International Journal of Science and Research Archive*, *8*(2), 25–35

Rajagopal, S., (2019). *Site visit to jeevanGranodayaschool of the deaf. Nadu: HTML Rehabilitation*. Amman: Dar AlFiker.

Rosenbaum, J. E., & Person, A. E. (2019). Career counseling: An overview and best practices. *Journal of Career Development*, *45*(3), 123–135.

Salovey, P.,& Mayer, J. D. (2020). Emotional intelligence. *Imagination, Cognition, and Personality*, *9*(3), 185-211.

Sibanda, M. (2015). Professionalizing sign language teaching in Africa: Issues, challenges, and strategies. *Journal of African Educational Research*, *22*(3), 112-126.

Spencer, I. R.,& Meadow-Orlans, K. (2016). Play, language and maternal responsiveness. A longitudinal study of deaf and hearing infants. *Child development, 67*(3176-191)

UNESCO. (2020). *Inclusive education: Including children with disabilities in quality learning*. Parris

Ushurhe, M. (2015). *Career information in counseling and teaching.* Boston: Allyn and Bacon Inc.

Weinert, I. I. (2021). Opportunity for career development in Nigeria.*In the 21st century, a paper presented on the occasion of Anambra State career Day at Uga Boys Secondary School Uga, 7th March. 2008.*

Weiten, U.,&Llyod, O. (2019). Rational psychotherapy. *Journal of General Psychology, 59*(14), 35 -49,

Whitehurst, G. J., & Lonigan, C. J. (2020). *Hearing impairment and non-hearing: Developmental perspectives*. New York, NY: Guilford Press.

ZNAD. (2021). *Sign language dictionary: A basic dictionary of gestural/ visual communication system of the Rivers Staten deaf community*. Lusaka: Venus Stationary Limited.

Zunker. J. (2022). *Self-concept in vocational development. In super career development: Self Concept Theory*. New York: College of Entrance Examination Board.