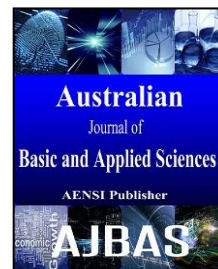




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### Using Total Communication Technique in Teaching Students with Hearing Impairment in Inclusive Classrooms in Enugu State - Nigeria: Teachers' Perspectives and Difficulties

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#### ABSTRACT

This study investigated teacher's perceptions on the use of total communication technique in teaching students with hearing impairment in inclusive classrooms in Enugu State, Nigeria. The study adopted descriptive survey design using a population of 47 teachers. Three research questions and three hypotheses guided the study. The instrument for data collection was Total Communication Questionnaire (TCQ). Data collected were analyzed using mean, standard deviation and student t-test. Findings of the study showed that teachers perceived the use of Total communication as a technique that would improve the academic progress of SHI in schools. But most of the teachers found the technique difficult to use, they need time and training to apply the technique. In light of the findings, the researchers recommend that the institutions that prepare teachers should train teachers on this technique in order to improve their performances in the school.

#### INTRODUCTION

There remains a debate regarding the best communication mode to use in order to educate students with hearing impairment (SHI). In the past, SHI were served in special school settings where different communication modes such as sign language, finger spelling, facial expression and body movement were used. Currently, in many developing countries SHI are placed in general education settings where they are taught by general education teachers without the support of a special education teacher (Onuigbo & Ugwuanyi, 2012). The general education teachers may not have the necessary skills to teach SHI in inclusive classrooms. In light of the above assertion, Smith, Polloway, Patton & Dowdy (2004) noted that for these students to receive appropriate education, a variety of accommodations may be needed, ranging from minor seating adjustments to the use of total communication technique (TCT) and assistive hearing devices. For instance, they require total communication and assistive hearing devices such as hearing aids, and cochlear implants to enable them maximize their communication abilities (Marschark, Lang & Albertini, 2002).

Total communication is a technique that makes use of speech, finger spelling and signs (Olawole, 2000). He added that the idea is to provide several opportunities for children with hearing impairment to learn to communicate and use speech as aid for social interaction. Total Communication helps majority of general

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education teachers to solve their communication and teaching problems with SHI. TCT is an approach that strengthens and enhances skills SHI need to function in general classroom.

General education teachers seem to view the use of total communication with apathy because they do not have the skills. Such teachers may not be aware of the principles and techniques of teaching using total communication and consequently, they become counterproductive (Raji, 2003). Furthermore, if teachers do not have the skill and competences then the necessary environment that would spur the students to learn and optimize their potentials may not be provided (Onuigbo & Ugwuanyi, 2012). These students may fall behind their hearing peers in academic performance (Musa & Bila, 2007). The teachers may also do certain things that can be inimical to effective teaching and learning of SHI especially in general education classrooms (Kolo, 2007).

Physically situating SHI in general classroom does not make them members of the class due to the problems associated with hearing (Andrews & Jordan, 1998). They must be able to use language to communicate with their teachers and hearing peers for them to become effective members of the class otherwise any communication gap can result in academic failures or under achievement by these students. It can also frustrate the students out of school and make them resign to begging.

Inclusive classroom has been considered as the best option for SHI and other learners with disabilities. This is true as Education for All (EFA) carries with it the principle that all should have the opportunity to learn together in the same setting. Inclusion is an education option for all students including those with disabilities, regardless of the severity of their disabilities (Kaval & Forness, 2000). Smith & Dowdy (1998) also perceive inclusion as a veritable learning environment that provides services to students with disabilities in general classroom settings. Similarly, Smith (1995) perceives inclusion as a learning place where students with disabilities (including students with hearing impairment) belong to their peers.

Students with hearing impairment (SHI) are those students who lost their hearing either due to diseases or accidents. The hearing loss could be congenital or adventitious. It can adversely affect a child's educational performance (Individual with Disability Act, 2004). Hearing impairment poses a variety of challenges to general classroom teachers (Smith *et al*, 2004) This means that the importance of language acquisition and usage with regards to SHI and general education teachers in the development of communication abilities and academic achievement of these students is unassailable (Polloway, Miller & Smith, 2003). While the greatest effect of hearing loss is on the students' ability to hear someone speak, its impact on communication development dramatically alters their social and academic skill acquisition (Brackett, 1997). For Mayer, Akamaksu & Stewart (2002), communication is a dominant consideration when discussing appropriate education for SHI. To achieve the goal of an appropriate communication, general education teachers should be able to acquire and use total communication technique during teaching or interaction.

Unfortunately, majority of these students are in regular classrooms where learning activities are presented orally by general education teachers who they do not have the skills to teach SHI in inclusive classrooms (Onuigbo & Ugwuanyi, 2012). By virtue of their training, they do not have the resources, time and skills, as well as academic qualification to teach both students with and those without hearing impairment in an inclusive classroom. Many of the students complain about being unable to follow what is being discussed in inclusive classroom due to communication problems.

Some studies have been carried out on the use of total communication in inclusive classroom. Brouillete, (2010) revealed that some teachers object to the teaching of deaf students within an inclusive classroom due to the extra load of using the technique, their lack of preparation, not having enough training in specific subject teaching methods and time constraints in providing special instruction. In the same vein, a study by Cavanaugh (2011) on total communication and inclusion found that resources, time and training were determining factors for teachers who have been found to be successful with inclusion.

Few other studies on use of total communication for the students with hearing impairment in inclusive classroom have focused on quality of teaching and students achievement. Adoyo (2011) conducted a study to determine if the use of TCT by teachers in Kenya would improve the academic achievement of SHI in inclusive classroom. The study revealed that the use of TCT has not provided the expected large scale improvement in the students. On the contrary, studies have shown that SHI taught using TCT performed significantly better in reading than those taught with American sign language and local sign languages (Ugwuanyi, 2009) achieve higher in sentence construction, and correct use of tenses (Ezema, 2012). Ugwuanyi, Obiyo & Anyanwu (2013) in their study on total communication as a panacea for students with hearing impairment in inclusive classrooms in Enugu revealed that teachers agreed that total communication should be used when teaching SHI.

Despite these studies there is a significant lack of published data on perception of teachers concerning the use of total communication in teaching students with hearing impairment, their difficulties and various ways to overcome such difficulties. Therefore, the present study investigated perceptually the difficulties male and female teachers encounter in using TCT in teaching SHI in inclusive classroom, and to seek ways to help teachers overcome such difficulties.

**Statement of the Problem:**

Students with hearing impairment in Enugu and indeed Nigeria complain about being unable to follow what is being discussed in inclusive classroom due to communication problems. This has resulted in frustration and outright dropout from schools. The researchers also noticed that most of SHI get low marks in all the school exams in Therapeutic Secondary School (TSS) and College of the Immaculate Conception (CIC) due to communication gap between them and their teachers. The researchers believe that if total communication is used, it will significantly help SHI to become well adjusted and learn like others in the same classroom. But the problem is that general education teachers receive the use of TCT with mixed feelings due to fear and lack of skill to use the technique. The general education teachers use oral presentation of lesson which may significantly attenuate the ability of students with hearing impairment to acquire the language skills to comprehend all the school subjects efficiently and achieve well in their academic pursuit. Another issue of academic concern is to ascertain if gender could influence teachers' view on the use of total communication in teaching SHI in inclusive classrooms.

**Purpose of the Study:**

The current study aimed at investigating the use of total communication technique in teaching students with hearing impairment in inclusive schools in Enugu, Nigeria from the teachers' perspectives. It will also ascertain whether the difficulties teachers encounter could be embedded in their perceptions and the strategies to overcome such difficulties.

**Research Questions:**

In the light of the study problem, the following three questions emerged.

- (1) What are the male and female teachers' perceptions on the use of total communication technique in teaching SHI in inclusive schools in Enugu?
- (2) What are the difficulties male and female general education teachers' encounters in using total communication technique?
- (3) What are the strategies to overcome difficulties male and female general education teachers encounter in using total communication technique?

**Hypotheses:**

The following hypotheses raised to guide the study were tested at 0.05 level of significance.

H<sub>01</sub> There is no significant difference between the mean ratings of male and female general education teachers' perceptions on using TCT.

H<sub>02</sub> There is no significant difference between the mean ratings of male and female general education teachers on difficulties in using TCT.

H<sub>03</sub>: There is no significant difference between the mean ratings of male and female general education teachers on strategies to overcome the difficulties in using TCT.

**Method:**

The researchers employed a descriptive survey research design. This design was adopted to describe and analyze the information or data generated from questionnaire designed to explore the teachers' perceptions and difficulties in using TCT in teaching SHI in inclusive classrooms. A descriptive survey research is a research that describes group of characteristics or behaviors in numerical terms (Nworgu, 2006).

**Population of the Study:**

The population of the study consisted of 47 teachers from Therapeutic Inclusive Secondary School, Abakpa and College of the Immaculate Conception (CIC) Enugu where inclusion is practiced in the state.

**Sample of the Study:**

There was no sampling. All the 47 general education teachers made up of 14 males and 33 females who teach in Therapeutic Inclusive Secondary School (TISS) Abakpa and College of Immaculate Conception (CIC) Enugu were used for the study.

**The Instrumentation:**

The researchers used questionnaire titled Total Communication Questionnaire (TCQ) that was carefully structured to ascertain the perceptions of general education teachers. The use of the questionnaire is very advantageous as the researchers believe that it helped to reveal facts that cannot be obtained in oral (interview) form as people are more confident and willing to write on paper than speak out their minds. The questionnaire was used to ascertain the perception of general education teachers on the use of TCT. The questionnaire contained 30 items and structured in three clusters. Cluster A addressed the perceptions of the teachers on the

use of TCT; Cluster B addressed the difficulties teachers encounter while using TCT and Cluster C dealt with strategies for overcoming the difficulties. The questionnaire was structured in a four point scale of Strongly Agree (SA) 4, Agree (A) 3, Strongly Disagree (SD) 2, and Disagree (D) 1, respectively.

#### **Validity and Reliability of the Instrument:**

The researchers tested the questionnaire through a pilot study of twenty general education teachers from Nsukka High School to ascertain its reliability. The twenty general education teachers were given the questionnaire to respond to as a pilot study. Twenty copies of the questionnaire were distributed (10 males and 10 females) according to the gender of the respondents. The twenty general education teachers were from the schools that were not used for the actual study to avoid biased responses. Their responses indicated that some questionnaire items were not in line with the research questions. They also complained that some questionnaire items were too long. In light of their revealed responses, the researchers modified the questionnaire according to the respondents' comments. Some items were deleted and some modified. For validity, the questionnaire was proved valid through referees' validity as a panel of referees checked the relevance of the questionnaire items and then modified them according to the referee recommendation. Data obtained was used to determine the internal consistency of the instrument using Cronbach alpha and a reliability estimate of 0.82 was obtained

#### **Development of the Questionnaire:**

The first step in developing the questionnaire was to review extensively several different previous studies related to the topic. Then, the initial draft of the questionnaire was printed out and was given to a panel of referees to ensure referee validity. Then, after the referees' notes, the modification of the questionnaire followed. The second step was to administer the questionnaire on the pilot sample. The third step was to administer the questionnaire on the actual sample of the study.

#### **Conducting the Survey:**

Prior to the commencement of the survey, the researchers visited the schools and informed them about the survey. The researchers administered a consent form to the respondents after they had explained the purpose of the study and its significance to them. The teachers filled the consent form, and then the questionnaire for the survey was administered. It took each respondent 20 to 40 minutes to complete the questionnaire. The survey was conducted during the break period when the respondents were less busy. The researchers guided the respondents on how to fill the questionnaire without preempting their opinions. After filling the questionnaire, the researchers collected them making sure that no one was left out.

#### **Method of Data Analysis:**

The data collected from the survey was answered using mean and standard deviation for research questions while t-test statistics was employed to analyze the hypotheses raised for the study at 0.05 level of significance.

#### **Results:**

Research Question One: What are the perceptions of male and female teachers' perceptions on the use of TCT in teaching SHI in inclusive schools in Enugu?

**Table 2:** Mean and Standard Deviation on Male and Female Teachers' Perception on the use of TCT in teaching SHI in inclusive schools

General education teachers perceive TCT as a technique that:	Male			Female		
	X	SD	D	X	SD	D
1. Makes teaching and learning easy.	2.83	0.52	*	2.93	0.49	*
2. Encourages the use of speech.	2.91	0.48	*	2.92	0.50	*
3. Makes student appreciate the value of speech.	2.68	0.58	*	2.78	0.80	*
4. Motivates students to learn.	3.43	0.54	*	3.42	0.05	*
5. Increases concentration.	2.71	0.54	*	2.78	0.51	*
6. Increases verbal skills of students.	2.83	0.52	*	2.81	0.64	*
7. May bring about distraction in the class.	2.64	0.62	*	2.62	0.64	*
8. Is very easy to use.	2.37	0.67	*	2.14	0.62	*
9. Encourages healthy relationship with their hearing peers.	2.92	0.76	*	3.05	0.48	*
10. Makes students happy.	2.84	0.53	*	2.85	0.46	*

Key: N = 47, A\*, and D \*\*

Data from Table 1 show the perceptions of general education teachers on TCT. Their reactions were mainly positive. This can be seen in their positive responses to all the items.

Hypothesis One: There was no significant difference between the responses of males and females general education teachers on the use TCT in teaching

**Table 3:** Result of t-test Analysis of the Difference in the Mean Perception Ratings of General Education Teachers on the use of TCT based on Gender

Group	No	$\bar{X}$	SD	Df	T	Sig (2 tailed)	SL	Remarks
Male	14	46.63	6.01	45	0.81	0.62	0.05	Accepted
Female	33	47.48	4.88					

The t-test analysis on Table 2 indicated that there is no significant difference between the perceptions of male and female general education teachers on the use of total communication technique in teaching SHI in inclusive schools,  $t(45) = 0.81$ ,  $p = 0.62$ . Thus the null hypothesis of no significant difference was accepted.

Research Question Two: What are the difficulties facing male and female general education teachers in using TCT in teaching?

**Table 4:** Mean and Standard Deviation of male and female general education teachers on Difficulties they encounter in the use of TCT

s/n		Male			Female		
		X	SD	D	X	SD	D
11	Takes teachers time.	3.85	.30	*	3.91	.00	*
12	Saps a lot of energy.	3.69	.00	*	3.78	.58	*
13	Brings about distraction in the class.	3.81	.68	*	3.78	.80	*
14	Requires a long term practice.	3.81	.68	*	3.59	.10	*
15	Is not easy because voice and signs are used at the same time.	3.78	.80	*	3.74	.81	*
16	Leads to teachers using speech only.	3.81	.68	*	3.68	.65	*
17	Is difficult because it is not in teacher preparation curriculum.	3.96	.67	*	3.94	.48	*
18	The TCT generates a lot of noise in the classroom.	3.44	.68	*	3.55	.56	*
19	Is not easy to use TCT in explaining certain concepts or <i>ideas</i> that do not have exact signs?	3.98	.80	*	4.00	.10	*
20	Does not help the teachers to cover a lot of the syllabus.	3.64	.64	*	4.00	.10	*

Key: N 47, Agree \*, Disagree \*\*

Data from Table 4 show general education teachers' reactions to difficulties in using total communication technique in teaching in inclusive classroom. Their responses to all the items were above the criterion mean of 2.50. The teachers generally agreed in more strong terms in items 11, 14, 17, 18 and 19 as difficulties facing them.

### Hypothesis Two:

**Table 4:** The t-test of the Difference between the Mean Ratings of Male and Female Regular Education Teachers on Difficulties they encounter in using TCT in Teaching SHI in Inclusive Schools

Group	No.	$\bar{X}$	SD	Df	T	Sig (2 tailed)	SL	Remarks
Male	14	46.19	3.08	45	0.39	0.85	0.05	Accepted
Female	33	45.02	4.44					

The t-test on Table 3 revealed that there is no significant difference between the opinion of male and female general education teachers,  $t(45) = 0.85$ ,  $p = 0.39$ . This is because the t-value reported is greater than 0.05. The result showed that the opinions of male and female general education teachers on difficulties in using TCT were similar. Therefore, the hypothesis of no significant difference was accepted.

Research Question Three: What are the strategies to overcome the difficulties male and female general education teachers encounter in using TCT?

**Table 6:** Mean and Standard Deviation of male and female General Education Teachers on Strategies to overcome the difficulties the teachers encounter

s/n		Male			Female		
		X	SD	DEC	X	SD	DEC
21	Through the use of facial expression and body movement.	3.28	.69	*	3.17	.87	*
22	Through organizing short courses on TCT for the teachers on weekends in their schools.	3.55	1.01	*	3.46	.76	*
23	Through introducing the use of TCT skill in teacher education curriculum.	3.96	.78	*	3.90	1.06	*

24	Through including TCT as a course of study in all the colleges of education and universities in Nigeria.	3.55	.73	*	3.15	.76	*
25	Through organizing part time teaching on TCT for teachers in colleges and universities.	3.26	.71	*	2.91	1.04	*
26	Through organizing refresher course on TCT for teachers in their schools.	3.17	.87	*	3.45	.66	*
27	Through encouraging teachers to use concrete materials during teaching.	3.58	.47	*	3.59	.45	*
28	By making use of chalkboard especially when making important point.	2.58	.47	*	2.58	.85	*
29	Through constant practice on the use of TCT.	2.86	.66	*	3.19	.84	
30	By recruiting sign language interpreters in regular schools to support general education teachers.	3.83	.86	*	3.86	.75	

Keys: N = 47, SA, A \*, D and D \*

Results in Table 6 indicate general education teachers' responses to strategies to overcome the difficulties in using TCT. Their reactions towards the strategies were mainly positive. This can be seen from their responses in all the items of the questionnaire.

### **Hypothesis Three:**

**Table 7:** t-test Analysis of the Significant Difference between Mean Ratings of Male and Female GET on Strategies to overcome the Difficulties in Using TCT.

Group	No.	$\bar{X}$	SD	Df	T	Sig (2 tailed)	SL	Remarks
Male	14	45.71	4.89	45	0.56	0.58	0.05	accepted
Female	33	46.53	4.47					

The t-test analysis on Table 7 reveals that there is no significant difference between the opinions of male and female general education teachers on strategies to overcome the difficulties in using TCT,  $t(45) = 0.56$ ,  $p = 0.58$ . This is because the t-value of 0.56 is greater than 0.05 level of significance. This implies that both male and female general education teachers have similar opinions on strategies for overcoming the difficulties facing general education teachers in using total communication technique. Thus the hypothesis of no significant difference was accepted.

### **Discussion:**

After analyzing the responses of all the general education teachers used for this study in relation to their gender, the researchers found that the opinions of general education teachers on the use of total communication technique in inclusive set up did not differ according to gender. Concerning research question one, what is the perception of male and female general education teachers on the use of TCT in teaching SHI in inclusive schools in Enugu? All the general education teachers' perceived the use of total communication as a teaching technique that helps to motivate and bring about healthy interactions among the teachers, the students with hearing impairment and their hearing peers in the class. They also agreed that TC increase verbal skills of students and concentration of SHI. On the other hand, both male and females general education teachers perceive TC as a technique that is not easy to use and could bring about distractions especially among the hearing students. The findings could be based on the fact that many of the general education teachers may not have acquired the skill of using the Sign language so they perceive it as being difficult. The students may also forget to concentrate on what is being taught and may focus their attention on the signs and finger spelling involved in the use of Total communication. The findings of this study are in line with findings of Ugwuanyi (2009), Ezema (2012) and Ugwuanyi, Obiyo & Anyanwu (2013) that total communication has the capacity to help SHI to achieve like others in the inclusive classrooms in Enugu,

Regarding the second study question on the difficulties teachers face in using total communication technique? All the teachers' responses were similar. Their difficulties in using this technique were due to the fact that it is not included in the teacher preparatory curriculum, takes a lot of time and they experience difficulty in using total communication technique to explain some concepts and ideas that do not have exact signs. This also highlights their inadequate knowledge and training on how to apply this technique in teaching SHI in inclusive schools in Enugu Nigeria. This agrees with the findings of Brouillete (2010) that extra load and lack of preparation, not having enough training, as well as time constraints in providing special instruction were

difficulties faced by teachers in using total communication technique in teaching students with hearing impairment in inclusive classrooms.

The teachers agreed that the strategies to overcome these difficulties include organizing short courses for the teachers on weekends, introducing the use of TCT skill in teacher education curriculum, encouraging teachers to use concrete objects while teaching and recruiting sign language interpreters in regular schools to support general education teachers.

### **Conclusion:**

Total communication is a technique that is worth using in teaching in inclusive classroom in Nigerian schools. The teachers agree that it helps learners' to grasp what is being taught, recall what is learnt and follow what is going on in the classroom. It also makes for healthy classroom interaction among the teachers, students with hearing impairment and their hearing counterparts; however they consider it difficult to use due to their lack of skills and the difficulties they encounter when they want to use TCT to communicate ideas or concepts that do not have specific signs. They suggested that employing sign language interpreters to serve as support to the general education teachers in the inclusive classroom will help to overcome the challenges.

### **Recommendations:**

Based on the conclusion arising from this study, the researchers recommend that those institutions that prepare teachers in Nigeria should incorporate total communication skills into the curriculum to enable teachers to accommodate students with hearing problems in inclusive schools. Additionally, they recommend capacity building of in-service general education teachers through workshop and seminars to acquaint them with the skills of using this technique in teaching in inclusive schools.

### **Recommendation for Further Studies:**

The Federal Ministry of Education of Nigeria should sponsor further researches to investigate the effectiveness of total communication technique in inclusive primary schools in Nigeria.

Further studies should be conducted to investigate the strategies and techniques employed by regular education teachers to teach in inclusive classrooms in Enugu State secondary schools.

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