

Instructional Captioned Film, Conventional Sign Method And Academic Performance Of Hearing Impaired Students In Economics In Special Schools In Akwa Ibom State, Nigeria

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ABSTRACT

The study was carried out to examine the effect of Instructional Captioned Film on academic performance of hearing impaired student in economics as compared with conventional sign methods in a Special School in Akwa Ibom State, Nigeria. Non-randomised pretest posttest design was adopted. To achieve the objectives of the study therefore 37 SS I economics students in Special School in Uyo Local Government Area were used as the sample for the study. The subjects were divided into experimental and control groups. Experimental group were treated with instructional captioned film while control group were treated with conventional sign method. Economics Performance Test (EPT) was used for data collection. Two research questions and two hypotheses were formulated and tested using the Analysis of Covariance at 0.05 significant level. The result revealed that there is an overall significant difference of hearing impaired students academic performance when taught with the use Instructional Captioned Film and those taught using conventional sign method. It was also revealed that gender does not significantly influence academic performance of hearing impaired economics students. The study therefore recommended the use of Instructional Captioned Film for teaching the hearing impaired students in Special School in Akwa Ibom State, Nigeria.

Keywords: Instructional Captioned Film, Conventional Sign Language, SSI Hearing Impaired Economic Students, and Academic Performance.

Introduction

Nigeria educational planners have deliberate plans to provide appropriate education for special learners in our society. The goal of Education For All (EFA) in the case of disabled persons can be achieved when the general education system is geared to meet the educational needs of children with minimal or no assistance from special teacher. By treating education as the right of the disabled child, the society will be able to see the ability of children rather than harping on their disability. Hence, a creative teacher makes use of the impaired student's environment to develop appropriate concepts instead of insisting too much on theoretical learning. The teaching of children with hearing impairment is a long, slow and steady process where they need external help either from parents or from their teachers for a long time. The teaching should start at an early age of the child to assist them develop rational, analytical and cognitive skill essential for their adjustment into the environment. At the primary school level, the teachers train them in lip-reading, learning language, basic arithmetic and cognitive skill. After reaching a certain age and mental maturity, these children need special individuated attention towards higher stages of education. This is achieved by using sign language. Basic sign and symbols make a whole new world for the deaf. According to Moores (1996) in Udosen, Itighise and Enang (2012) sign language is a visually transmitted sign pattern to convey meaning. Thoughts are expressed easily by using movement of hands combined with hand shapes, facial expressions and movement of lip. In linguistic terms, sign languages are quite as rich and complex as any oral language. Moores further comments that sign language need to start from day one in training as neurolinguistic studies have proved that if a child learn any language by the age of three then cognitive understanding to earn more language come up in a better way.

Heward (2000) reported that over 5.7 million special needs children were identified in various public schools of United States. The same trend exists in some developing countries such as Nigeria, where the prevalence of disability is likely to be higher than what is obtains in advance countries Meadow-Orlans and Erting (2000). However, the physically impaired students have slimmer chances of accessing quality education compared to their colleagues in advance countries. In 1975 and continuing to the present, the special education movement has been experiencing critical turning points. This is primarily due to the enactment of the Federal Law and the subsequent reauthorizations which include the individual with Disabilities Education Improvement Act of December 2004. Heward (2000) pointed out that countries like Sweden recorded decrease in the number of students in special education; India recorded 2.7 million United State of America recorded 1.8 million deaf persons. The education of Handicapped children Act became law in 1978 United State of America and the egalitarian philosophy behind the Act was 'mainstreaming'. This led to the provision of Individualised

Educational Programme (IED) and removal of handicapped children from the regular educational environment to special education centre. The public education for students with special needs in Britain can be traced back to 1980.

Special education has historically been supported by the office of education which was a part of former department of Health, Education and Welfare (HEW). It then evolved into the Bureau of Education for the Handicapped (BEH). Currently, special education is under the authority of the Department of Education Office of Special Education and Rehabilitative Services (OSERS). However, in early 1900s institutional programme for students with sensory impairment and mental retardation were widespread. The United States Department of Education Office of Special Education Program, Data Analysis System (DANS)), cited in the twenty second Annual Report of Congress on the Implementation of the Individuals with Disabilities Education Act (2000) states that 13% of the school age populations are exceptional children.

At the present time more than 50 genetic syndromes have been identified in which hearing loss may occur. Hearing loss is an invisible condition resulting in communication problems that can ultimately interfere with learning and social development. Many children have hearing loss that fluctuates due to recurring ear infections. Ear infection ranges from very slight to moderate and averages. Additionally, 2% of children have permanent hearing losses from damage to the inner ear/auditory nerve due to illness, heredity, head trauma, complication at birth and other cases Davis (1990). Davis further comments that sensorineural hearing losses often cause damage to the high frequency regions of hearing resulting in a muffled sound to speech and reducing speech understanding even for loud voices. With this Davis concluded that hearing loss significantly causes educational and social problem to children as shown in figure 1 below.

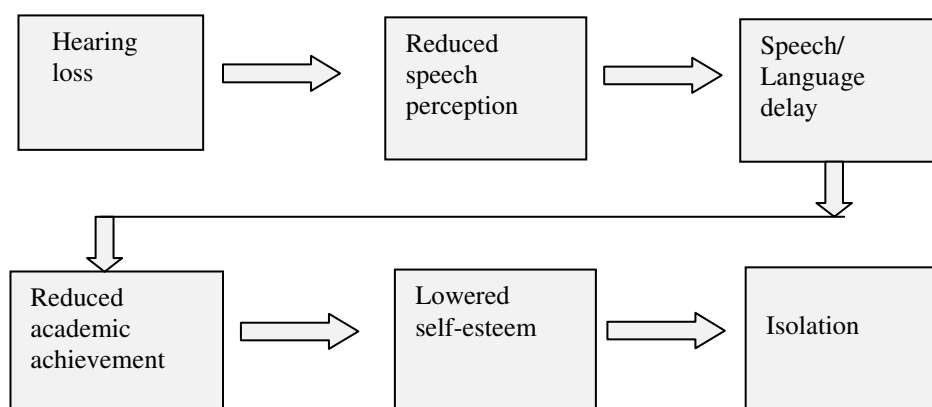


Figure 1 : Effect of hearing loss in learning

Educational goal for hearing handicapped students have traditionally been based on normalization; the emphasis was on language, speech reading and speech training so that the child would be prepared for entry into normal world. It is also aimed at promoting each child's skill and attitude for maximum flexibility in selecting the society to which he want to belong. Udosen, Itighise and Enang (2012) asserts that hearing impaired students have little opportunity to communicate meaningfully in educational or social context. The degrees of sound intensity or loudness used in interpreting hearing loss are decibels (dB) and are scaled in terms of the standard of the International Standard Organisation (ISO) or American Standard Association (ASA). Davis (1990) grouped the level of sound loss into four; slight hearing loss, referring to decreased hearing ability amounting to a 25 to 40 decibel loss, mild/moderate deafness, a 40 to 55 decibel loss, and 70 to 90 decibel loss to be profound deafness. However, hearing impairment is based on the decreasing in hearing ability resulting from decibel loss.

One of the Instructional Media available for the deaf and those hard of hearing is Captioned Film because written messages accompany pictures. Captioned film was a popular educational film for the deaf used in United States of America. It was passed into law to provide enriched educational and cultural experiences through which deaf persons can be brought into better touch with the realities of their environment and to provide a wholesome and rewarding experience which deaf persons may share together. The bill was approved by the president of United States of America and it was enacted into law on September 2, 1958. In 1966 the conference of Executives of American schools for the Deaf (CEASD), under contract with Captioned Films for the deaf established the Captioned Film for the Deaf Distribution Centre (CFDDC). CFDDC assumed responsibility for selection and distribution for Captioned Films. The first lesson guides for educational Captioned film were published in 1968. In the spring of 1974, Captioned Film for the Deaf underwent a major

reorganisation. Captioning is the visual presentation of spoken words onto a screen. Braverman (1980) in Udosen, Itighise and Enang (2012) defined Captioned Film as digital display or the audio message in word. They also maintains that Captioned Film or videotape is one produced for hearing audience that add captions or subtitle to make its message clear to hearing-impaired viewers.

Itighise (2012) comments that the nature of teaching which can be useful for children with disabilities includes stimulation and games, gestures, teacher assisted peer-group learning, fieldstrip, use of supplementary teaching aid and appliance for developing appropriate concept, individualized education programmes, video film and captioned film. Research by Itighise et al (2012) revealed that there is significant difference between students performance when taught with teacher-led stimulation technique compared with those taught using conventional teaching method. Fuller (2008) said that the use of gestures, facial expression and other body language help convey the message to hearing impaired student when speaking in American Sign Language (ASL). Gestures such as pointing and bending, using pictures and flashcards are imperative. Fuller also opines that the use of visual learning is the hearing-impaired student primary means of taking in new information.

Adeyanju in Etim (2006), reported that instructional materials could be used by thinking and discuss concepts that are too abstract. The combined effects of clear signing, use of media, structured lesson material and the involvement of deaf students through the use of adjunct questions throughout the lessons have been found particularly important in terms of performance in posttest. In the same vein, Udosen, Itighise and Enang (2012) noted that captioned film instructional package (CFIP) was the more effective approach in enhancing students' high performance in English Language while conventional sign approach was the less effective approach. Keifer (1989) in his study on Effects of Captioned Film on Engineering hearing impaired Students observed that 32 deaf engineering technologies students viewed two captioned versions of a film about cement manufacturing; that both high and low reading groups benefited from instruction when the captions were on an 8th grade level, while only the high reading group benefited from the 11th grade level captions. This study showed how the development of technology along with a sound educational research program may lead to optimal teaching and learning strategies. Achuonye (2004) opines that film when combined with other types of teaching material and methods are relatively effective in learning and development of skills.

The World Health Organization Fact Sheet on deafness and hearing impairment in September 2009 edition reported that deaf children can learn skills as quickly as hearing children but their capabilities are measured against understanding the written word. It was further observed that the widely, most effective form of information and communication Technology to use with deaf children are highly visual rather than reliant on the written word or sound. The students at Elmfield community special School for deaf children enjoy using interactive smart board to explain, performed economic calculation and describe economic concepts. Captioned film gives deaf students independence, self esteem and increases their motivation to read, write and initiate communication. It also offers a reality of experience which stimulates self activity on the part of the students. Gandu (2004) in Udosen (2007) said that effective use of selected instructional materials to create gender awareness can be done by teachers using materials that are gender-friendly. Udosen said further that gender-friendliness and convenience should be maintained in selecting and utilisation of instructional media. Fakomogbon (1997) in using captioned video tape to teach and learn some aspects of introductory technology by hearing impaired students in the Junior Secondary Schools reveals that there is no significant difference between male and female impaired students performance. Gupta (1975) in Udosen (2007) said that the variable for predicting knowledge and critical thinking among girls included the proper use of TV as instructional aid. Anulobi (2009) in his study on effect of the use of video compact Disc Instructional package on academic performance of Junior Secondary school fine Art students in Owerri posits that there is significant gender difference on the performance of female student taught fine Art through VCDIP and conventional teaching modes. Abiodun (2006) also indentified that by age eleven male children catch up with their female counterparts in language skills. On the other hand, Gesell in Ademokoya (2006) stated that girls perform better than boys in mathematic until they reach age eleven when the two begin to perform relatively the same in mathematics. Udosen (2007) in her study on utilisation of media on gender, reported that, the difference in gender is in favour of males and concluded that 53% of variations in student's performance can be attributable to the joint effect of teacher-made VCD and gender. However, Ademokoya found no significant difference in academic achievement of male and female hearing impaired secondary school students following an eleven week reasoning training on the students.

Instructional Captioned Film has been recognized as the driving force on knowledge-based and skill-oriented development activities in special school. It enriched general education and cultural experience which deaf persons can be brought into better touch with reality of life. For the goals of teaching economics in special schools to be achieved, proper selection of instructional media (captioned film), proper matching of video clips'

pictures on VCD and proper application to the course content to replace what is typically done in the classroom using sign language must be evolved. This implies that using Instructional Captioned Film will bring rewarding experience which deaf persons may share. It is against this background that this study examines the effects of instructional captioned film, conventional sign method on the academic performance of hearing impaired students in special school in Akwa Ibom State, Nigeria.

Theoretical Framework

This study guided by Tolman's Sign learning theory. The theory is derives from the cognitive or sign learning theory by the American Psychologies Edward C. Tolman who was an eclectic theorist (Oladele, 1998). For Tolman learning is connecting significance or meaning with stimulus patterns which he called sign. In other word what is learned is expectance or the value of signs rather than Stimulus-Response (S-R) connection. Tolman believed that learned behaviours are always 'goal directed' or 'purposive'. To him learning depends upon 'cognitive maps' or cognitive structure which is build upon experience. As a result of experience the learner builds up new expectancies that is, he learns what will leads to what. For instance if a person is exposed to say "a door lead to a kitchen", he then develops an expectation that door lead to a kitchen, and then integrated into cognitive maps of the house. With the creation of expectation in the mind-set of the learner learning is established. With this latent learning concept in Oladele (1998) Tolman stimulate learning into performance, hence, concept development is fundamental in the education of children with disabilities particularly for those who are cognitively impaired like mentally retarded children and sensorial impaired such as visually and hearing impaired children.

Specific concept development areas are applicable for specific types of children with disabilities, some concept development are general including body awareness, object situations distance awareness, spatial awareness, measurement orientation of environment etc. Most of the concept grows naturally in a non-disabled child but a disable child living in a mainstreaming environment will be able to acquire this concept in a natural way. Therefore, special school setting is more conducive for the concept development skill of children with disabilities. The sign theory is related to the study in the sense that conventional sign language teaching method is used in teaching the hearing impaired students. Hence, learning is basically on concept development and creation of expectation in their mind set which enable impaired students adapt to the methods of lesson presentation, display the ability level of the content of the lesson and enhance their learning experiences.

Statement of the Problem

The impaired learners need an effective instructional strategy to meet with their physical challenges and subsequent good academic performance. Presently at the Special Education Centre, Akwa Ibom State, the hearing impaired students are taught with the conventional sign language method. The continuous adoption of conventional teaching using sign language method does not seem to enhance effective participation in the teaching learning process or explanation of the content to facilitate good performance during examinations. The poor performance of hearing impaired students in economics can be attributed to the mode of instructions which does not involve the utilization of modern technology to facilitate learning. For instance only 39.5% students have credit in Economics May/June 2006/2007 West African School Certificate examination. This implies that special education teachers do not use appropriate instructional materials like instructional captioned film to teach the hearing impaired learners in Akwa Ibom State. The resultant consequent therefore will be low interest, low enrolment figure of students as well as poor academic performance. The question now is: Can Instructional Captioned Film Utilization enhances academic performance of hearing impaired students in economics compared to conventional sign method? Can innovation in the teaching of impaired economics students be introduced during instruction? The gap in knowledge that this study seeks to fill is the effects of Instructional Captioned Film utilisation on academic performance of hearing impaired economics students in special schools in Akwa Ibom State, Nigeria.

Purpose of the study

The purpose of the study is to investigate the effect of Instructional Captioned Film, Conventional sign method on academic performance of hearing impaired student in economics.

The study seeks to achieve the following objectives:-

1. To determine the effects of utilisation of Instructional Captioned Film and conventional sign method on academic performance of hearing impaired students in Economics.
2. To examine the difference between the academic performance of male and female hearing impaired students in economics when taught with Instructional Captioned Film and when taught with conventional sign language method.

Research Questions

To guide the study, the following research questions were posed:

1. How do hearing impaired students differ in their performance in economics when taught using Instructional Captioned Film and when taught using conventional sign language?
2. How do male and female hearing impaired students differ in their performance in economics when taught with Instructional Captioned Film compared to using conventional sign language method?

Research Hypotheses

The following hypotheses were formulated for testing:

1. There is no significant difference in the performance of hearing impaired students in economics when taught using Instructional Captioned Film and those taught using conventional sign language.
2. There is no significant difference in the performances of male and female hearing impaired students in economics when taught using Instructional Captioned Film and those taught using conventional sign language.

METHODS

The non-randomised pretest-posttest control group design was used for this study. This design was suitable because it enables the researcher to determine the joint effect of two or more independent variables on the dependent variables. The structure of the design is as follows:

O_1	X_0	O_2	C
O_1	X_1	O_2	E
O_1	-	Pretest	, O_2 - Posttest
X_0	-	Conventional Sign Language,	X_1 - Instructional Captioned Film
C	-	Control group,	E - Experimental group

The study was conducted in Uyo Local Government Area. It is one of the 31 Local Government Areas in Akwa Ibom State. It is bounded in the North by Itu, Uruan and Ikono Local Government Areas, in the South by Etinan, Nsit Ibom and Ibesikpo Asutan Local Government Areas and in the West by Abak and Ikot Ekpene Local Government Areas and in the East by part of Uruan Local Government Area. Uyo is one of the oldest educational centers in Nigeria. Uyo Local Government Area is situated between Latitude $4^{\circ} 48'$ and $5^{\circ} 23'$ North and Longitude 7° and 8° East of the equator. Uyo Local Government Area was created on 23rd of September 1987. It is the administrative headquarter and the commercial nerve center of Akwa Ibom State. It belongs to the sub-equatorial climate region and experiences two main seasons: the wet and dry season. The settlement patterns in the region are – Rural, Urban and Semi-urban. Uyo Local Government Area is composed of four clans, namely, Oku, Offot, Etoi and Ikono clans. Uyo Local Government Area hosts the Special education centre with adequate infrastructure and qualified teachers to meet the various needs of the impaired students. It also has well equipped computer laboratory with the computer having Job Access With speed Software (JAWS) for the blind and other impaired students.

The population of the study consisted of all the 37 impaired students in SS 1 in the Special Education Centre in Uyo Local Government Area during the 2009/2010 academic session (School Record at Special Education Centre, Uyo) .

The total of 37 hearing impaired students in the only public Special School in Uyo was used for the study. In order to accommodate all the variables (gender and academic ability level) a total of 37 hearing impaired students (13 males and 24 females) were used as the experimental and control group. These were 20 hearing impaired students in the experimental group while 17 formed control group. The purposive sampling technique was used because it is the only Special Education Centre with qualified teachers in Sign Language. The School also presents hearing impaired students for external examination in Economics.

Instruments for the data collection was the researcher-made/standardised Economics Performance Test (EPT). The test contained 20 items, 4-option multiple choice items to determine the performance of pretest and posttest of both control and experimental groups. The instrument was administered to the subjects before and after the lesson taught either with Instructional Captioned Film for experimental group and conventional sign method for control group. The students were required to circle the correct option from A – D.

The draft of the instrument which contained 20 items, 4-option multiple choice tests was submitted to experts in Test and Measurement, Educational Technology and hearing impaired Economic Teacher. The expert in Test and Measurement checked for the appropriateness of the items for the level and content coverage; Educational Technology experts checked for the suitability of the instrument for the level of impaired students in question while the hearing impaired economics teacher made sure that appropriate terminologies related to the subject were maintained. The reliability of the instrument was established through a pilot study in one of the secondary schools for the deaf which was not part of the actual study. The instrument was administered to the 10 hearing impaired students. The data collected were coded and arranged using the split half method. This was

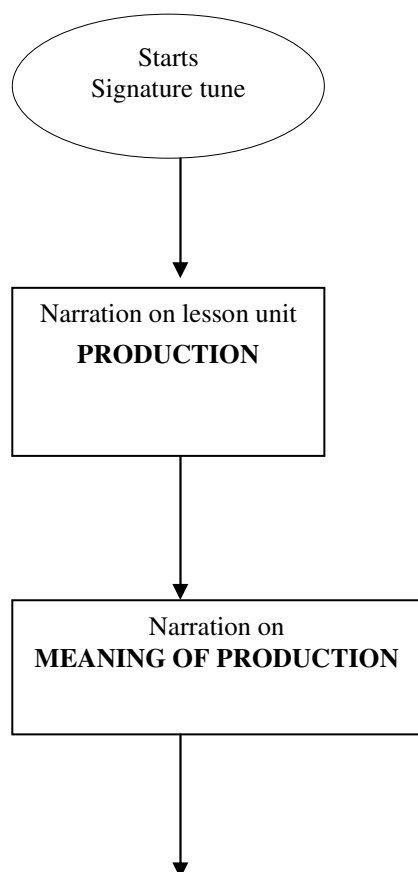
further treated to the Pearson Product Moment Correlation statistics to gain the r-value of 0.79. This r-value was later subjected to Spearman Brown's Prophetic formula to have a reliability co-efficient of 0.88. The reliability coefficient is high enough indicating that the items in the instrument are reliable and thus suitable for the data collection of the study. The mean scores from both the pretest and posttest were used in answering research questions while Analysis of Covariance (ANCOVA) was used in testing the Hypotheses at 0.05 levels of significance.

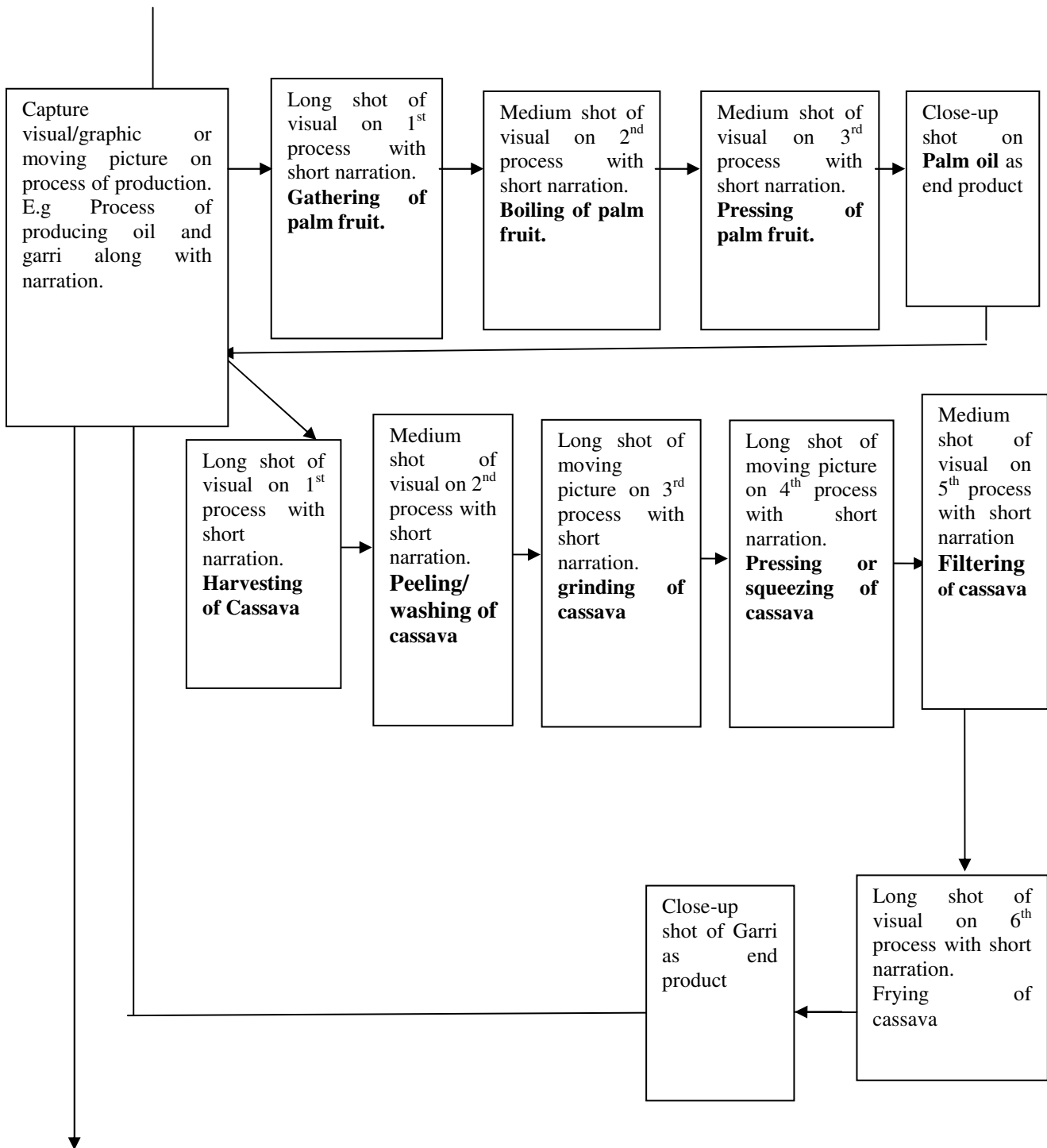
Instructional Captioned Film Design

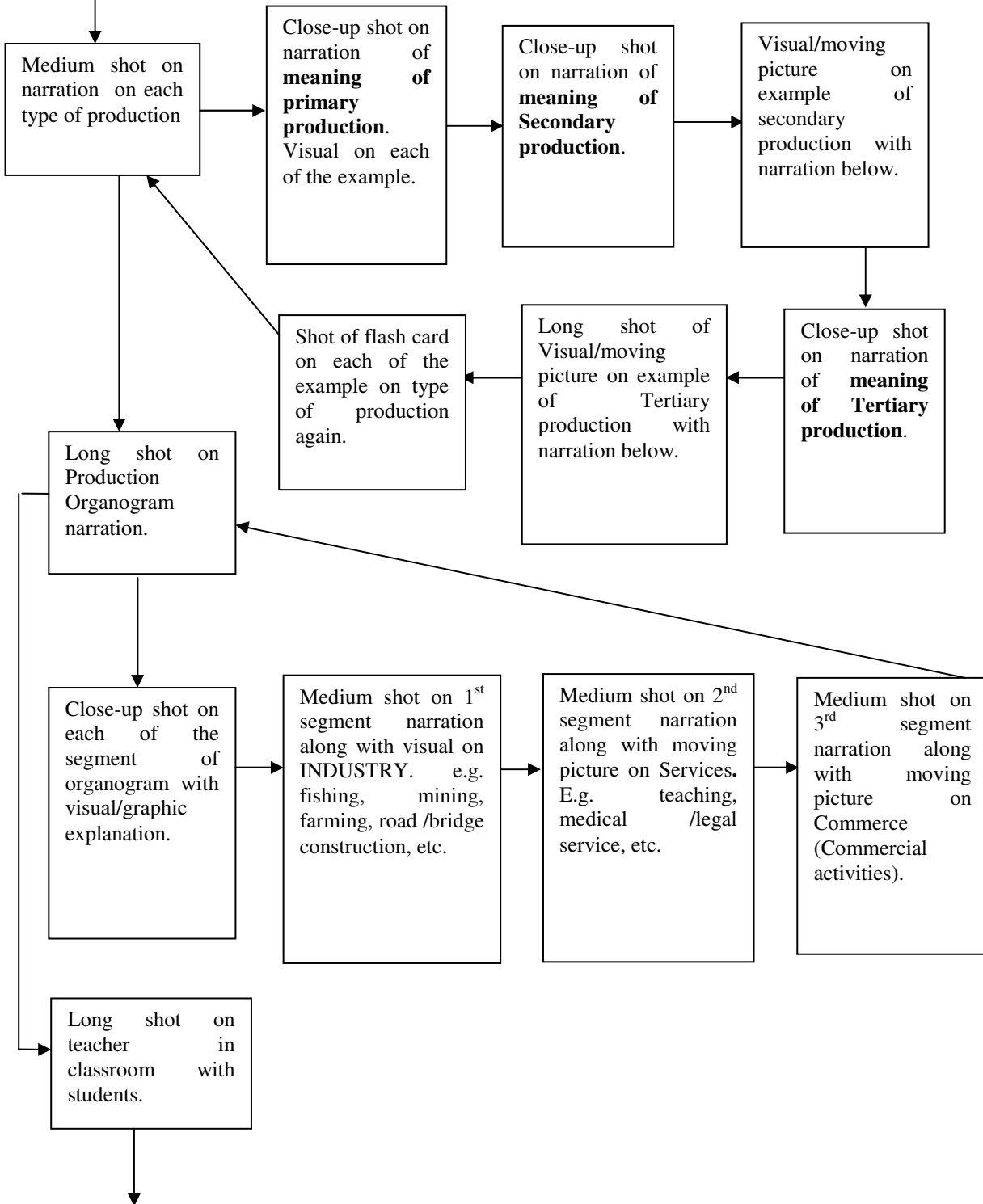
The Instructional Captioned film in Economics presented in this paper was designed with various graphic, visuals and moving picture which are synchronized and complemented by the written word or narration. The needs of hearing impaired learner were put into consideration in term of content of the lesson and moving pictures captured. The shot were carefully selected to bring concrete learning experience which was suited to have the best chance of reaching the hearing impaired students at their own levels.

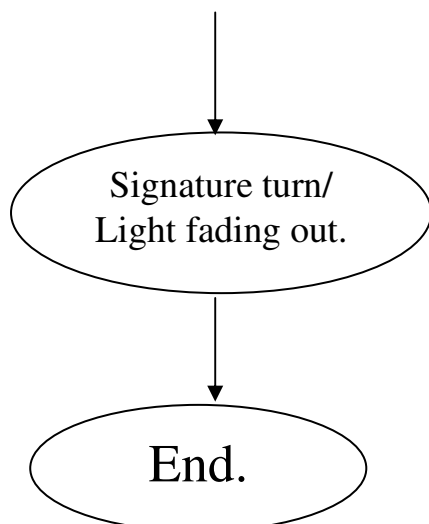
Long shot, medium shot, close-up shot and extremely close-up shot were appropriately taken on moving pictures, objects and visuals to complement the subject matter communicated in term of the level of hearing impaired students conceptual ability. The viewing sequence is arranged based on the objectives of the lesson unit and the shot are also chosen to complement the narration. The design and production process is presented in the flow chart below.

FLOW CHART ON INSTRUCTIONAL CAPTIONED FILM DESIGNED IN ECONOMICS WITH THE LESSON UNIT ON PRODUCTION.









Source: Adapted and modify from <http://www.dcmp.org>. Accessed on February 21, 2011. Described and Captioned Media program U.S. Department of Education.

RESULTS

Research Question 1: How do hearing impaired students differ in their performance in economics when taught using Captioned film and when taught using conventional sign language?

In answering this research question, test scores of the students from the experimental and control groups in economics as shown in table 1.

Table 1: Mean and standard deviation of students' scores from the pretest and posttest group and their performances in Economics.

Treatment Groups	Sample size	Pretest		Posttest		Mean Diff.
		\bar{X}	SD	\bar{X}	SD	
Captioned Film (Experimental)	20	44.25	8.63	72.50	10.32	28.25
Conventional Signing (Control)	17	35.06	13.28	55.59	9.50	20.53

From the table above the gain in mean scores shows that the impaired students in the experimental group performed better than their counterparts in control group.

Research Question 2: How do male and female hearing impaired students differ in their performance in economics when taught using Instructional Captioned film compared to using conventional sign language?

The analysis is as shown in table 2.

Table 2: Mean and standard deviation of students' scores from the pretest and posttest group and their performances in economics classified by gender

Treatment Groups	Gender	Sample Size	Pretest		Posttest		Mean Diff.
			\bar{X}	SD	\bar{X}	SD	
Captioned Film (Experimental)	Male	7	41.43	9.00	71.43	11.44	30.00
	Female	13	45.77	8.38	73.08	10.11	27.31
Conventional Signing (Control)	Male	6	31.00	15.49	57.50	11.29	26.50
	Female	11	37.27	12.12	54.55	8.79	17.28

From table 2 above, a comparison of the gain in scores shows that the male students in the experimental group performed better than their counterparts in the control group. The gain in mean scores of the females in both the experimental and control groups respectively, also indicated that the females in the experimental group performed better than their counterpart in the control group. This result shows that male students performed better than their female counterparts when taught using captioned film. However, both male and female students performed better than their counterparts that were taught using conventional teaching strategy.

Hypothesis 1: *There is no significant difference in the academic performances of hearing impaired economic students taught using Instructional Captioned film and those taught using conventional sign language.*

Scores from experimental and control groups were used for analysis with the help of Analysis of Covariance as shown in table 3.

Table 3: Analysis of Covariance (ANCOVA) of students' post-test scores on their performance classified by treatment with pre-test as covariate

Source of Variation	Sum of Squares	Df	Mean Square	F (Cal.)	F (crit.)	Decision at p<.05 level
PRETEST: Covariate)	1083.34	1	1083.34	15.23	4.13	Significant
Main Effect: (Treatment)	1186.09	1	1186.09	16.28	4.13	Significant
Error	2485.97	34	71.76			
Corrected Total	6097.30	36				

R Squared = .605 (Adjusted R Squared = .582)

In Table 3, the calculated F-value for the main effect of instructional strategy is 16.62, while its corresponding critical F-value is 4.13 at .05 level of significance and with 36 degree of freedom. This calculated F-value is greater than the critical F-value, indicating that the instructional strategies adopted had a significant effect on the achievement of the students in Economics. The null hypothesis is therefore rejected. This implies that, *there is significant difference in the performances of hearing impaired students in economics when taught using Instructional Captioned film and those taught using conventional sign language.*

Hypothesis 2: *There is no significant difference in the performances of male and female hearing impaired students in economics when taught using Instructional Captioned film and those taught using conventional sign language.*

Pretest and posttest scores from male and female students were used for analysis with the help of Analysis of Covariance as show in table 4.

Table 4: Analysis of Covariance (ANCOVA) of students' post-test scores on their performance classified by gender with pre-test as covariate.

Source of Variation	Sum of Squares	Df	Mean Square	F-cal	F(crit.)	Decision at p<.05 level
Covariate: Pre-test	1168..92	1	1168..92	16.60	4.15	Significant
Main Effects:						
Instructional Strategy	871.16	1	871.16	12.37	4.15	Significant
Gender	98..21	1	98.21	1.39	4.15	Not Significant
2-Way Interaction						
Instructional Strategy*						
Gender	66.69	1	66.69	.95	4.15	Not significant
Residual	253.94	32	2253..94		-	-
Total	6097..30	36	6097..30		-	-

Table 4 shows that the calculated F-value for the main effect of gender is 1.39, while its corresponding critical F-value is 4.15 at 0.05 level of significance with df 36. The observed calculated F-value of 1.39 is less than the critical F-value of 4.15. This implies that gender does not have any significant influence on hearing impaired students performance considering the instructional strategy used hence, this hypothesis was upheld.

Discussion

From the results displayed in Table 2, it was observed that a significant difference existed between the performances of hearing impaired students in economics when taught using Instructional Captioned film and those taught using conventional sign language. Those taught using Instructional Captioned film performed significantly better than those taught using conventional sign language. The study has shown that hearing impaired students who studied with instructional captioned film performed academically better than hearing impaired students who were not exposed to the use of captioned film. This result supports the view of Rubin-Mindell (2000) which opines that video captioning promotes essential students learning benefits including the enhancement of deaf students' understanding of scientific processes, review and self correction. The use of Instructional captioned film will serve as supplement to the classroom teachings and can as well assist the hearing impaired students in the absence of the teacher, as it will motivate and can spark their interest in learning.

Gender on the other hand has not been found to influence academic performance when taught with instructional captioned film compare with conventional sign method. The results in Table 4 also shows that there was no significant difference between the performances of male and female hearing impaired students in economics when taught using Instructional Captioned film and those taught using conventional sign language. That is the male and female students did not differ significantly in their academic performance. This result supports the earlier works of Fakomogbon (1997) in using captioned video tape to teach and learn some aspects of introductory technology by hearing impaired students in the Junior Secondary School. The study revealed that there is no significant difference in male and female impaired student's performance. Agommuoh and Nzewi (2003), Bodunde (1998) also support the view that there is no sex difference in motivation, learning and performance.

Conclusion

Judging from the findings of this study, it was found that the use of instructional captioned film enhances academic performance of impaired students when compared to conventional sign language and that impaired students' academic performance is not affected by their sex differences. It was also noted that the combination of different teaching methods, instructional media and film-based lesson enhances performance of hearing impaired students.

Recommendations

Based on the finding, the following recommendations are made.

1. The educational planners and policy makers should include instructional captioned film in the Special Education Centres curriculum for effective teaching and learning process of hearing impaired students.
2. Funds for production of instructional captioned films for onward distribution to Special Schools in Akwa Ibom State should be provided by government
3. The educational planners and policy makers should mount workshop and seminars for special education teachers on the use of instructional captioned film in Special Schools in Akwa Ibom State.
4. Since visual served as effective communication devices with more concrete and long retention to hearing impaired students, the Special Education Centre in Akwa Ibom State should be well structured to have audio-visual department for the hearing impaired students personal learning.
5. Parents of the hearing impaired students should be guided and encouraged to assist their wards to watch educational programmes on television and visit educational sites at leisure.

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