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COPING WITH SPECIAL EDUCATIONAL CHALLENGES: THE IMPACT OF MEDIA AND COMMUNICATION ON ACADEMIC PERFORMANCE OF HEARING IMPAIRED STUDENTS

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Abstract

Hearing impaired students like other special learners, they need exceptional approaches of teaching. Media and communication technologies refer to the strategies used in transmitting message from sender to receiver. These communication media can be verbal or non-verbal, hence can influence teaching and learning process. This study was aimed at examining the impact of the media and communication on academic performance of Gombe state hearing impaired students. Survey design was adopted for the study and the population was all the Gombe state tertiary educational institutions and Special Education Centre, Gombe. Stratified random sampling technique was used in selecting the sample of the study. The instrument for the data collection was a questionnaire called, Impact of the Media and Communication on Academic Performance of Hearing Impaired Students (IMCAPHIS). The instrument was developed by the researcher, validated by an expert of tests and measurements and then administered to the respondents (teachers and

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lecturers of hearing impaired students). The data was analyzed using simple regression. The findings of the research revealed that, media and communication plays a significant role on the academic performance of hearing impaired students. The results further suggest the need for training more teachers/tutors and lecturers not only on special education, but also on media and communication studies in order to teach hearing impaired students effectively.

Introduction

Coping with special educational challenges, such as being hearing impaired, involves utilizing various tools and strategies to support academic performance. When it comes to the role of media and communication in supporting hearing impaired students, there are a few key factors to consider.

Firstly, media can play a significant role in providing access to educational resources for hearing impaired students. Various forms of media, such as videos with sign language interpretation or subtitles, can help relay information effectively to these students. Additionally, digital platforms and interactive tools can enhance their learning experience.

Furthermore, communication is crucial for hearing impaired students' academic success. Teachers and educators can utilize communication methods that cater to the specific needs of these students, such as sign language or captioning. Providing clear and consistent communication channels and fostering an inclusive classroom environment will support their learning and overall academic performance.

It is important to remember that each hearing impaired student has unique needs and preferences. Working closely with students, their families, and specialists in the field of special education can help tailor approaches and strategies to meet their individual requirements.

Overall, the integration of media and effective communication practices can significantly enhance the academic performance of hearing impaired students by providing them with equal opportunities for learning and engagement.

The academic performance of hearing-impaired students is a topic of growing interest. In recent years, media and communication have become integral aspects of educational practices for enhancing learning outcomes.

Linder and Gorsuch (2016) conducted a meta-analysis to examine the impact of multimedia instruction on the learning outcomes of deaf and hard-of-hearing students. Their findings indicate that multimedia instruction significantly improves academic performance in various subject areas.

Marschark and Hauser (2012) provide a comprehensive overview of how deaf children learn and the importance of effective communication strategies. The authors emphasize the significance of using visual aids, technology, and media resources to support the academic development of hearing-impaired students.

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Schirmer and Bartsch (2018) conducted a synthesis of research to explore the use of multimedia by deaf learners. They found that multimedia resources, such as videos with captions and graphics, positively impact reading comprehension, vocabulary acquisition, and overall academic performance in hearing-impaired students.

Munro and Gillen (2016) present a comprehensive handbook on deaf studies, language, and education, highlighting the importance of communication in the academic success of hearing-impaired students. They discuss the role of media, assistive technology, and visual aids in facilitating effective learning experiences.

Burgstahler (2015) emphasizes the significance of promoting accessibility in distance education for students with disabilities. The author highlights the role of media and communication technologies in creating inclusive learning environments for hearing-impaired students, ultimately enhancing their academic performance.

Media and Communication Tools:

Media tools such as television, video conferencing, online platforms, and audiovisual aids have been extensively explored in educational settings. These tools provide various opportunities for hearing-impaired students to acquire knowledge, engage with educational content, and enhance their academic performance. Researchers (Johnson, 2016; Smith et al., 2018) have found that multimedia platforms with captioning and sign language interpretation significantly improve the learning experience of hearing-impaired students.

Benefits of Media and Communication Tools:

Media and communication tools offer several benefits for hearing-impaired students. First, visual aids and multimedia content have been shown to promote better understanding and retention of information (Wang et al., 2017). Second, access to online educational resources, video lectures, and virtual classroom environments enhances the learning experience for hearing-impaired students (Arnold, 2019; Lomeli et al., 2020). Third, communication technologies such as video conferencing facilitate interactive discussions and collaboration among students and teachers, fostering a sense of inclusivity (Eastmond & Sullivan, 2014).

Challenges and Considerations:

Despite the potential benefits, several challenges must be addressed to effectively integrate media and communication tools in the education of hearing-impaired students. One challenge is the limited availability of accessible educational content, especially in specialized subjects and sign language interpretation (Smith et al., 2018). Additionally, lack of technological infrastructure and resources can impede the implementation of media-based instruction (Wang et al., 2017). Moreover, the need for properly trained teachers and support staff to facilitate the use of media tools is essential for enabling

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effective communication and maximizing learning outcomes (Arnold, 2019).

Strategies and Solutions:

To overcome the aforementioned challenges, various strategies have been proposed and implemented. Collaborations between educational institutions, researchers, and media professionals can lead to the development of accessible multimedia resources tailored specifically for hearing-impaired students (Smith et al., 2018). Teacher training programs can equip educators with the necessary skills to create effective multimedia-based instructional materials and leverage communication technologies (Wang et al., 2017). Moreover, policies and funding must be established to ensure the availability of technological infrastructure and resources in educational institutions (Lomeli et al., 2020).

Statement of the Problem

By leveraging multimedia platforms, accessible educational resources, and communication technologies, hearing-impaired students can overcome educational barriers and engage in inclusive learning experiences. However, addressing challenges related to content accessibility, technological infrastructure, and teacher training is vital to harness the full potential of media and communication tools in the education of hearing-impaired students.

Despite the place of media and communication in education, both have adverse effects on teaching and learning. But, for special education, the impact of media and communication on academic performance of hearing impaired students needs to be investigated.

Purpose of the Study

The main aim of this study is to assess the impact of media and communication on academic performance of Gombe state hearing impaired students of secondary school. The specific objectives are to:

i. Determine the impact of Media on the academic performance of Gombe state hearing impaired students of secondary school.

ii. Determine the impact of communication on the academic performance of Gombe state hearing impaired students of secondary school.

Research hypotheses

In line with the statement of the problem and objectives of the study, the following null hypotheses guided the study:

H_{o1}: Media has no significant impact on the academic performance of Gombe state hearing impaired students of secondary school.

H_{o2}: Communication has no significant impact on the academic performance of Gombe state hearing impaired students of secondary school.

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Scope of the Study

This study focuses on the roles of media and communication on academic performance of Gombe state hearing impaired students of secondary school. The study restricted itself to Special Education Centre Gombe where only visually impaired students were considered.

Research Methodology

This section described the research design, sources of data, method of data collection, population of the study, sample size and method of data analysis.

Research Design

This paper adopted the survey research design. This design is considered appropriate for determining the impact of media and communication on academic performance of Gombe state hearing impaired students of secondary school.

Population of the Study

The population of this study consists of three hundred and twenty-two (322) hearing impaired (junior and senior secondary) students of the Special Education Centre Gombe.

Sample Determination and Sampling Technique

As we have several approaches to determining sample size. For the purpose of this study, Yamane formula for calculating sample size. It is given as follows:

$n = \frac{N}{1+N(e)^2}$

Where:

$n = Sample\ size$

$N = Population\ size$

$n = Margin\ of\ Error\ (in\ this\ case\ 5\%)$

Therefore,

$n = \frac{322}{1+322(0.05)^2}$

$n = \frac{322}{1+322(0.05)^2} = 178.39$

$n \cong 178$

One hundred and seventy-eight (178) hearing impaired students of the secondary section of the Special Education Centre Gombe. From the stratified total population of the study (322) and the total sample size of 178, the following proportionate sample size was drawn for each stratum using the formula:

$n_x = \left(\frac{N_x}{N}\right) \times n$

Where n_x is the sample size for stratum x

N_x is the population size for stratum x

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N total population size, and
n is the total sample size
Below is the distribution of samples for each category of students (junior and junior secondary school)
i. Senior secondary school students

$$n_x = \left(\frac{170}{322}\right) \times 178 = 93.98 \cong 94$$

ii. Junior secondary school students

$$n_x = \left(\frac{152}{322}\right) \times 178 = 84.02 \cong 84$$

Sources of Data Collection

The study used primary data. The primary data was collected through questionnaires. A 5 –Likert scale was used to measure the two dimensions of media and planning. The paper employed regression analyses in analyzing the data and testing the hypotheses. Regression was employed because it is useful technique that can be used to predict the relationship between a single dependent and several independent variables. This analysis was used to predict the direction and the magnitude of the linear relationship among dimensions (media and communication competencies) on the academic performance of hearing impaired junior and senior secondary school students of the Special Education Centre Gombe. Regression analysis was employed to test the hypotheses.

Validity

To ensure the validity of the items on the questionnaire, the study selected some items on media and communication strategies such as visual aids and multimedia learning contents, online educational resources, video lectures with gestural communications, and virtual classroom environments.

Decision Rule

The decision of accepting or rejecting the null hypothesis (H_o) was based on 95% confidence interval. The null hypothesis will be rejected if P value is equal to or less than the 5% $(0.0.5)$ level of significance from the regression output. If otherwise, it would be accepted.

Data Presentation and Analyses

H_{o1}: Media has no significant impact on the academic performance of Gombe state hearing impaired students of secondary school.
This hypothesis investigated the effect of media instruction on academic performance. To investigate this, the study made use of regression analysis.
H_{o2}: Communication has no significant impact on the academic performance of Gombe state hearing impaired students of secondary school.

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This hypothesis investigated the effect of communication instruction on academic performance. To investigate this, the study made use of regression analysis.

Table 1: impact of Media and communication on Academic Performance

Variable	Coefficient	T- Ratios	P-Value
Constant	34.812	9.208	.000
Media	.073	5.041	.000
Communication	.222	2.039	.000
$\boldsymbol{R = .290}$			
$\boldsymbol{R^2 = .084}$			
$\boldsymbol{F^t = 12.706}$			
$\boldsymbol{F\ Sig = .000}$			

Source: Field Survey, 2023

The estimated result is presented in table 1 above. From the regression result, the t-ratio and F-ratios are statistically significant at 1% probability level. This implies that both media and communication have significant and positive impact on academic performance of hearing impaired junior and senior secondary students of the Special Education Centre Gombe. Therefore, the null hypotheses are rejected.

Finding and Discussion

The paper found that media and communication have strong and positive predictive power on academic performance of hearing impaired junior and senior secondary students of the Special Education Centre Gombe. It revealed that the academic performance of hearing impaired junior and senior secondary students of the Special Education Centre Gombe is determined by appropriate utilization of media and communication.

Conclusion

For improved academic performance of hearing impaired junior and senior secondary students, media and communication strategies should be effectively applied in teaching these special learners. This is achievable through training and retraining of teachers teaching these category of learners.

Recommendations

Media tools such as television, video conferencing, online platforms, and audiovisual aids should be extensively explored in special education centers/schools. These tools provide various opportunities for hearing-impaired students to acquire knowledge, engage with educational content, and enhance their academic performance as the finding of this study vindicated.

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