EFFECT OF TRAINED TEACHERS IN SPECIAL NEEDS EDUCATION ON ACADEMIC PERFORMANCE OF THEIR STUDENTS WITH HEARING IMPAIRMENTS AT KAREN TECHNICAL TRAINING INSTITUTE FOR THE DEAF

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ABSTRACT
Professional training greatly influences the development of human resource capacities that in turn boost sustainable economic growth and development. Provision of quality education to educators has been given emphasis in Acts of parliaments across the world. This study determined the effect of trained teachers in Special Needs Education on the academic performance of the Hearing Impaired Learners at Karen Technical Training Institute for the Deaf. The study was supported by the Social Learning Theory by Albert Bandura. Descriptive Survey Design was used to sample 30% of the targeted population. 15 teachers and 113 students from a population size of 61 teachers and 450 students were selected through Stratified and Simple Random Sampling procedures. Two sets of questionnaires were used to collect data; one for the teachers and another one for the students. The questionnaires were validated and their reliability tested after piloting the study. Validity was achieved by discussing the items in the questionnaires with the supervisors. Reliability, on the other hand, was achieved by checking internal consistence using Spearman-Brown prophecy formula which yielded a coefficient of .87 way above the required threshold of .70. The results were presented through frequency tables and Multinomial Logistic Regression Coefficients. The researcher used the KNEC ranking system to categorize students into three levels of Good, Fair and Fail. This study established that a unit increase in teacher training in Special Needs Education increases the odds of students getting categorized as Good by 0.49 (49%). This was a huge positive association. The study recommended that teachers need to continuously undergo professional re-training to build their professional pedagogical content, knowledge, skills and attitudes that are needed to discharge their duties more effectively and professionally.

Keywords: Teacher Characteristics, Academic Performance, Hearing Impairment, Karen Technical Training Institute For The Deaf.

1. INTRODUCTION
Education greatly influences the development of human resource capacities which in turn influences sustainable economic growth and development. Education also positively influences human capabilities and improves productivity in labour and national growth through the imparted knowledge and skills. People are able to participate and function better in various aspects of life. Furthermore, education is an important tool in achieving independence in equitable distribution of opportunities (Muganda & Mwangi, 2002).
Malawi has one hundred and forty-eight trained teachers for the deaf at both primary and secondary schools serving many deaf children in these schools (Ministry of Education, 2013). However, it is difficult to capture the exact number of deaf children in these schools because most of them are not always in school. Special Education Directorate states that in order to reduce ratio of teacher to deaf pupil a massive effort must be invested (Antia, S2007). It suggests that Malawi needs to produce over five hundred trained teachers in special education per year. As the country moves towards including more deaf students in general education settings there is need for changes in teacher preparation for both general and special teachers (Spencer & Marschark, 2010). Teachers have been noted to struggle in constructing an inclusive lesson plan that suits the needs of all students including those with disabilities. Whereas most teachers have been trained in teaching regular learners in schools, most of them have limited knowledge and skills in SNE curriculum adaptation (Powers, 2011).

Learners with different abilities require specialized programmes and unique time frame for learning (Birabil, 2020). These are kind of learners who need more time to grasp concepts as compared to regular learners in the same schools. It has therefore posed a challenge to regular trained teachers to effectively manage these learners in the same class as the policy of inclusivity is implemented. The provision of education especially to children has been given much emphasis. For the child of primary school age, the right to education is provided for in the Kenyan Children Act (2001), which asserts that appropriate educational services should be provided to all children (Bunyasi, 2010). The Kenyan government is fully committed to an education system that guarantees the right of every learner to quality and relevant education that contributes and enhances equity, economic growth and expansion of employment opportunities as stipulated in Sessional Paper No.1 of 2005 which is a policy Framework for Education, Training and Research. The Sessional Paper has to do with reaching out to children with special needs by ensuring that appropriate educational interventions are put in place. It focuses its attention on education that is intended to meet the challenges of Kenyan children, especially taking into consideration the cultural and linguistic needs of the diverse Kenyan communities. (Republic of Kenya, 2005).

To ensure that the objectives of this research are achieved, technical training institutes need to be given the necessary attention if industrial transformation is to be realized by the year 2030. The 2003/2005 national development plan decries the imbalance in the labour force mix by observing that “…the current ratio of technologists to craftsmen to artisan is 1: 3: 12 as compared to an optimal of 1: 5: 30”. The imbalance in labour force, impacts negatively on development, which is crucial to industrialization (G.O.K, 2002).

As technology changes, there is need for training institutions to change their ways of training (Virgona, Waterhouse, Sefton & Sanguinetti, 2003). Technical Vocational and Entrepreneur Training (TVET) has a big role of furnishing skills required to improve levels and improve productivity, raise income levels and improve access to employment opportunities which has been widely recognized (Bennell, 2001). In the Bonn resolution of October 2004 it is noted that TVET is the “master key” for alleviation of poverty, promotion of peace and conservation of the environment. All these are geared to improving the quality of human life and promote sustainable development.
Given that the TVET sub-sector is critical to the development of industry required for human capacities and Kenya attainment of the vision 2030, high quality training services must be delivered by the sector to enhance productivity and competitiveness hence the need to enhance skills of graduates of the TVET systems through provision of quality training services (Adoyo 2004). In this respect the Government of Kenya has launched several policy documents that feature education prominently (Republic of Kenya, 2005). Education is a prerequisite for achieving national development. The success of education can be guaranteed for students through access to relevant, quality education and training opportunities to all Kenyan children (Republic of Kenya, 2005).

Statement of the Problem
Technical skills are a necessary condition for Kenya’s industrialization by vision 2030. These skills are offered by technical training institutes. Aspects of teacher training, that is, preparedness, acquired skill and perceptions seem to be a challenge. It is hypothesized that teachers of technology may not be providing adequate and quality services to students in special needs education set ups. Many regular education teachers feel unprepared and afraid to work with students with disabilities in regular classes. They display frustrations, anger and display negative perceptions towards special needs learners because they believe these learners lower academic standards. Perhaps this can be blamed on their inadequacy in SNE training. The use of sign language as a specialization skill seems to be a challenge too. Both teachers and students seem not to have command of the language and lack motivation to use it in and outside class setting.

KTTID is an institution that caters for mainly students with HI. In handling students with special needs is it required that special needs education practices be applied so that the students can benefit from the education system. The teaching by use of special needs education (SNE) techniques is also proving to be a challenge simply because little expertise knowledge has been invested in this field. It is also the concern of the researcher that students who fall under the categories of severe to profound hearing loss seem to perform poorly in academics as compared to those with mild hearing loss or those with no hearing loss.

The academic performance of students with hearing impairments enrolled in special education programs is low and has not improved significantly over time. Many people in Kenya, including the government, are worried about the future of the country's educational system because of this worrying pattern. Academically, most of the special schools for students with LWHI lag behind the national average standards. Academic failure prevents many students from graduating and it compromises their ability to find gainful employment, making it more challenging for them to become financially self-sufficient. Because of teachers’ central role in education, understanding how individual teacher characteristics affect students' progress is essential. This study therefore determined the effect of trained teachers in special needs education on the academic performance of the hearing impaired learners at Karen Technical Training Institute for the Deaf

2. LITERATURE REVIEW
To establish the effect of Teacher Training in Special Needs Education on academic performance of students the researcher evaluated the correlation between the level of education of teachers
and the success of the students they teach. According to the findings of research conducted by Rishaelly, (2019), Some reports indicate that teachers who possesses expertise in the industry tend to be more successful in their classroom (Yara, 2009).

The same effect was discovered by Sambu (2018), who discovered that students who had their arithmetic and Chinese classes taught by interns did much lower than those students whose classes were taught by graduate students. Nonetheless, Ngobeni et al., (2020) found that the educational background of a teacher accounted for anywhere from forty percent to sixty percent of the variance in student performance. They stumbled across this finding while conducting research into the relationship between the credentials of teachers and the levels of student accomplishment. According to the findings of Mumbu, (2020) research, the academic performance of students was most significantly impacted by the availability of trained instructors. According to Gabriel Lengoiboni, who worked at the Teachers Service Commission (TSC) at the time and was its secretary, some teachers had become semi-illiterate as a result of the constitutional mandate that they take competency lessons but had not done so (Mumbu, 2020).

In addition, Munyao,(2019) discovered that in-service training considerably enhanced the teaching effectiveness of instructors when compared to teachers who had not engaged in training. This was the case for teachers who had never participated in training. It should come as no surprise that educational institutions cannot hope to be successful if they do not take into account the credentials of their teaching staff (Cheruiyot, 2019). A qualified teacher is one who is well-versed in the subject matter that is being taught, possesses the mental and emotional adaptability to accommodate the needs of their students, and possesses the skills and expertise necessary to modify teaching methods to accommodate students with sensory impairments, such as hearing loss (Evans & Lunt 2002).

A necessary prerequisite for the provision of quality educational services for students with HI is to have an appropriate number of qualified teachers available to serve them. Teachers’ abilities and perceptions, which are shaped by training in college, can be of major influence to education. The training of teachers at all levels is often not adequate (Gallaudet Research Institute. 2006) . Where there is training it often tends to be fragmented, uncoordinated and inadequate. If teachers do not have positive perceptions towards students with special needs, it is unlikely that these children will receive satisfactory education (Kathare, 2020). . The number of successful students with special needs can be attributed to teachers’ perceptions towards the students (Weisel and Tu-Kaspa, 2002). Not only do general education teachers’ perceptions influence the success of students with special needs, but “research is available which show that teachers’ qualifications and perceptions can have a detrimental effect on handicap students’ psychological and educational adjustment to the regular classroom” (Johnson, 2001).

3. METHODOLOGY
According to Orodho, (2005), Descriptive Survey Design is recommended for social surveys. Descriptive Survey Design was used to sample 30% of the targeted population. 15 teachers and 113 students from a population size of 61 teachers and 450 students were selected through Stratified and Simple Random Sampling. Two sets of questionnaires were used for collect data; one for the teachers while the other for the students. The questionnaires were validated and their
reliability tested after piloting the study. Validity was achieved by discussing the items in the tools with the supervisors. Reliability, on the other hand, was achieved by checking internal consistence using Spearman-Brown prophecy formula. The results were presented through frequency tables and Multinomial Logistic Regression Coefficients. The effect of independent variable on dependent variable was tested using Multinomial Logistic Regression. The researcher used the KNEC ranking system to categorize students into three levels of Good, Fair and Fail.

4. RESULTS AND DISCUSSIONS

The respondents were asked to rate the statements on the effect of teacher training in SNE on academic performance of students with HI. Table 1 shows the summary of the results.

Table 1: Teacher Training in SNE and Academic Performance of Students with HI

<table>
<thead>
<tr>
<th>Effect of teacher training in SNE on academic performance of students with HI</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most of the teachers at the institute respond to students needs in class well</td>
<td>53.1</td>
<td>34.5</td>
<td>6.2</td>
<td>2.7</td>
<td>3.5</td>
<td>1.69</td>
<td>.96</td>
</tr>
<tr>
<td>Most of the teachers at the institute are confident handling students with HI</td>
<td>63.7</td>
<td>23.0</td>
<td>6.2</td>
<td>3.5</td>
<td>3.5</td>
<td>1.60</td>
<td>1.00</td>
</tr>
<tr>
<td>Most of the teachers at the institute don’t discriminate against students with HI</td>
<td>41.6</td>
<td>43.4</td>
<td>1.8</td>
<td>7.1</td>
<td>6.2</td>
<td>1.92</td>
<td>1.13</td>
</tr>
<tr>
<td>Most of the teachers at the institute provide positive feedback to students</td>
<td>39.8</td>
<td>43.4</td>
<td>1.</td>
<td>14.</td>
<td>2.7</td>
<td>1.96</td>
<td>1.10</td>
</tr>
<tr>
<td>Most teachers always face the class while speaking or signing</td>
<td>50.4</td>
<td>37.2</td>
<td>0.9</td>
<td>5.3</td>
<td>6.2</td>
<td>1.79</td>
<td>1.12</td>
</tr>
</tbody>
</table>

Source: Field Data (2024).

The results in Table 1 show that a majority (53.1%) strongly agreed that most of the teachers at the institute respond well to students needs in class. It had a mean of 1.69 and Std. deviation of .96. 63.7% of the respondents strongly agreed that most of the teachers at the institute are confident in handling students with HI. It had a mean of 1.60 and a Std. deviation of 1.00 meaning that there was no wider variation in opinions. 41.6% strongly agreed that Most of the teachers at the institute don’t discriminate against students with HI with a mean of 1.92 and a Std. deviation of 1.13 indicating a small variation. 43.4% agreed that most of the teachers at the institute provide positive feedback to students with a mean of 1.96 and Std. deviation of 1.10 that showed a slight variation.

The study mainly sought to investigate the the effect of trained teachers in special needs education on academic performance of their students with hearing impairments at Karen Technical Training Institute for the Deaf. the dependent variable was the academic performance of students with HI at KTTID. The study used the KNEC system to categorize the performance of students into three levels Good, Fair and Fail. The categorical dependent variable allowed the use of Multinomial Logistic Regression. Performance category. Good Grades were used as the reference group. Table 2 shows the analysed results.
### Table 2 Multinomial Logistic Regression Results

<table>
<thead>
<tr>
<th>Performance</th>
<th>a</th>
<th>B</th>
<th>Std. Error</th>
<th>Wald</th>
<th>df</th>
<th>Sig.(P)</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Either 4, 5 or 6</td>
<td>Intercept</td>
<td>-10.787</td>
<td>2.928</td>
<td>13.571</td>
<td>1</td>
<td>0.000</td>
<td>2.49</td>
</tr>
<tr>
<td></td>
<td>TT</td>
<td>0.912</td>
<td>0.754</td>
<td>1.209</td>
<td>1</td>
<td>0.006</td>
<td>2.49</td>
</tr>
<tr>
<td>Either 7, 8 or 9</td>
<td>Intercept</td>
<td>-17.045</td>
<td>3.584</td>
<td>22.572</td>
<td>1</td>
<td>0.000</td>
<td>2.54</td>
</tr>
<tr>
<td></td>
<td>TT</td>
<td>0.932</td>
<td>0.884</td>
<td>1.051</td>
<td>1</td>
<td>0.020</td>
<td>2.54</td>
</tr>
</tbody>
</table>

The reference category is: Good Grades.

The results in Table 2 imply that the relationship between trained teachers in special needs education the academic performance of their students with hearing impairments at Karen Technical Training Institute for the Deaf is not only significant (P≤0.05) but also a positive association. From the results an increase in teacher training in SNE increases the odds of students getting categorized as Fair Grades rather than Good Grades by 2.49.

The results also reveal that an increase in teachers training in SNE 0.912 (P = 0.06) times likely to result to academic performance category of Fair Grades rather than Good Grades. Additionally, an increase in teacher training in SNE increases the odds of students getting categorized as Fail rather than Good Grades by 2.54. The results also reveal that an increase in teachers training in SNE is 0.932(P = 0.02) times likely to result to academic performance category of Fail rather than Good Grades. The results imply that an increase in teachers training in SNE is associated with increase in academic performance.

The findings of the study concur with the findings of Weisel and Tu-Kaspa (2002).who report that a necessary prerequisite for the provision of quality educational services for students with HI is to have an appropriate number of qualified teachers available to serve them. Teachers’ abilities and perceptions, which are shaped by training in college, can be of major influence to insemination of education. The training of teachers at all levels is often not adequate. Where there is training it often tends to be fragmented, uncoordinated and inadequate. If teachers do not have positive perceptions towards students with special needs, it is unlikely that these children will receive satisfactory education. The number of successful students with special needs can be attributed to teachers’ perceptions towards them.

### 6. CONCLUSION AND RECOMMENDATIONS

The results of the analysis indicated that a unit increase in teacher training in SNE increases the probability of a learner getting categorized as Good by about 29% (r=2.49; p≤0.05). The researcher therefore recommended that teachers should continuously undergo retraining to build their professional knowledge, skills and attitudes needed to discharge their duties more effectively and professionally in special needs assessment schools.
7. ACKNOWLEDGEMENT
I would wish to thank the Almighty God for His guidance, grace and protection. In Him, I have gotten grace and strength to continue even when I felt like giving up. I also give thanks to my course lecturers especially my supervisors Dr. Lilian Milimu and Prof. Paul Maithya who have supported me in making my work successful whose dedication and tireless efforts have seen me complete in time. I acknowledge the Maasai Mara colleagues and University administration for providing me a learning atmosphere that was very conducive. Lastly, I thank all the Maasai Mara lecturers who taught me in initial stages of my studies for shaping my life to become a successful scholar, not forgetting Ministry of Education through Karen Technical Training Institute for the Deaf for having allowed me access her information. To all my respondents whose opinions and views helped to shape this study. May God’s grace follow you all the times of your lives.

REFERENCES


Weisel, A., & Tur-Kaspa, H. (2002). *Effects of labels and personal contact on teachers’ perceptions toward students with special needs*. Exceptionality, 10(1), 1-10.