

## **Constraints to Inclusion of Students with Hearing Impairment for Training at Kenya Technical Teachers Training College in Kenya**

Kimathi, Susyline Gatakaa<sup>1</sup>, Rukangu, Simon Meru<sup>2</sup>

*1(Department of Special needs Education, Kenyatta University, Kenya)*  
*2(School of Education, Meru University of Science and Technology, Kenya)*

**ABSTRACT:** This study was carried out to investigate the constraints faced by students with hearing impairment as they trained at the college. The study was a descriptive survey and used non-experimental method, which effectively described the true socio-ecological contexts of Kenya Technical Teachers College (KTTC). The indicators of the constraints sources were conducted using semi-structured questionnaires for students, lecturers and heads of department (HODs); and interview guides for the principal and 2 ex-students of KTTC with hearing impairment (HI). Observation checklists were used in observation checklist for both lessons and physical facilities available for teaching; and their applications in classroom contexts. Snow ball sampling was used to get former trainees with HI at KTTC. A sample of 85 students with hearing ability were selected using stratified random sampling while, 12 lecturers, 11 HODS, the second year class students and one Principal were purposively selected. The results indicated that lack of trained teachers in Special Needs Education (SNE), inadequate resources and particularly lack of supportive services, inappropriate modes of communication which lacked basis for total communication were the main constraints to the admission of the trainees wit HI at KTTC. The study also established that there was no policy for inclusive education in Kenya. The study therefore recommended that educational policy especially with regard to inclusive education in technical training institutes be established and provided by the Government of Kenya to ensure that the education quality and effective training in inclusive settings for hearing impaired in tandem with the current global trend in education.

**Keywords:** *Inclusive Education, Students with Hearing Impairment, Technical Teachers' College, Vocational Training, Total Communication.*

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### **I. INTRODUCTION**

#### **1.1 Development of Inclusive Education in Kenya**

The evolution of inclusive education as a result of critical analysis of the various stages of Special Needs Education development is summarized in Figure 1 as described by Malikin [1], Clough [2] and Hegarty [3]. Human rights movements of 1950s and 1960s raised criticisms on special schools which were seen as stigmatizing handicapped children and their parents students who are educated in separate classes often feel unmotivated inferior and helpless (Lombardi [4]). Similarly, O'Hanlon [5] reports that international surveys have given strong evidence that the integration of children said to have special educational needs is seen as being a matter of priority in both developed and developing countries. Despite this recognition integration has drawn criticism from both the regular education and special education communities that has failed in achieving its goal of educating children with special needs in the least restrictive environment. This is because integration attempts to modify the learner with disabilities to fit in an ordinary school, instead of modifying the school to meet the needs of the learner with disabilities. Specifically, Hegarty [3] points out that there was an urgent need to bridge this gap and all those involved in schooling, whatever their roles, should join, together in pooling their energies and resources in order to create schools that could educate all students effectively. This led to an increased emphasis on the notion of integration, meaning that students learning with their non-disabled colleagues. But was integration in education for necessary and sufficient for inclusive education?

Due to this synergism and arising from the critics of integrative education, it has been possible to care for persons with special needs, particularly the hearing impaired (HI) through inclusive education in supportive of mainstream schools. Classrooms where all student's needs are met (Hegarty [3] in inclusive education challenges much existing practices in the special needs field. The movement away from traditional views of special education towards inclusive practices has been described as a new paradigm of thought requiring transformation in teacher beliefs and instructional practices (Lipsky and Gartner [6]; Hegarty [3] inclusive education requires proper planning and adequate support in terms of resources, legislation and commitment from the stakeholders. It also calls for a complete attitudinal change by the government, educators and service providers as well as the learners both with and without special needs in education (MOEST [7]). If such

challenges are experienced in lower institutions, it is possible for teacher training colleges such as Kenya Technical Teachers College (KTTC) to experience more challenges.

Education for the hearing impaired learners in Kenya traces its history back in 1958. Initial effort was meant to train them in life skills. Such training was done in segregated institutions specialized in particular challenges. Learners with diverse disabilities accessed vocational training institutions which were also not equitably spread in the country. To date such learners lacked access to middle level training after acquiring a crafts certificate course in two vocational technical institutes (Karen and St. Joseph) for the deaf. Those who wished to seek further training could only join one regular technical training institution at Kenya Technical Teachers College (KTTC). This was done once and the college stopped admitting trainees with Hearing Impairment (HI) for training in circumstances that had not been empirically explained for reasons that were not systematically documented. These were investigated and documented in this study.

### **1.2 Need for Inclusive Technical Teacher Training Facility in Kenya**

In Kenya the government realizes that it is important to diversify training opportunities for persons with special needs in order to enhance their chances for occupational employment; and that persons with impairments are entitled to share their experiences in contributing to the communities common good (Republic of Kenya [8]). The reason for this is to emphasize on the ultimate goal of rehabilitating individuals with challenges to work. The rehabilitation and training for such occupation would also provide opportunities to provide role models among the challenged communities. This diversification, however, has not been reflected in middle level institutions. For example have got two vocational technical institutions certificate namely Karen and St. Joseph which offer a crafts after which their education and training is terminal. This leaves them with the option of joining regular technical training institute for further training. This is in line with the current global trend of inclusive education.

KTTC is a government institution fully maintained by the ministry of education in Kenya. Admission is open to all Kenyans with appropriate educational qualification, including persons with HI. The qualification for a certificate course in technical teacher education is a crafts certificate offered by Karen and St. Joseph institutes for the HI. KTTC records indicate that the institution had trained some student teachers with HI and graduated them with a certificate in technical teacher education. At the time of this study however; available records showed that there were no students with HI admitted for training in the institution for reasons that had not been systematically explained. The study therefore sought to investigate challenges that led to this syncretism in inclusion of students with HI for training at KTTC. This was in the view of the dynamic global trends in special needs education which leave trails. Hence, the historical trail for development of special needs education from segregated to inclusive education can be summarized in stages as presented in Figure 1. The figure shows that Inclusive Education is a dynamic educational that needs a participatory approach among the learners especially when such individuals are admitted to learn together irrespective of their handicap challenges. The characteristics of each of these stages are diverse and any training institution would require proper preparation to accommodate learners with HI challenges. Such challenges cannot be overemphasized in the view that there is no other technical teacher training facility in the country beyond life skills training in vocational training institutions. With such facility available, it was not easy to comprehend why the college stopped training students with HI. Even then, what adjustments would be needed in order to accommodate learners with HI? This was one of the key issues that were to be addressed by this study.

### **1.3 Needed Adjustments for HI Pre-Service Teacher training at KTTC**

The complexity of hearing impairment needs qualified teachers, certain facilities that would enhance student's learning within a comfortable learning environment and within the global trends in special need education. Unlike integrated practice in which impaired learners struggled to fit into their institutions for learning where the methods of teaching remained the same, resources were not changed despite impairment diversity including the HI (MOEST [7], 2003 and Ogweno [9]). It is for that reason that from on set, Mamlin [10] and Chow and Kasari [11] observed the need to support the global policy for impaired children to inclusively learn together with those who were not impaired (Clough [2], Karagiannis, Stainback and Stainback [12]). This study sought to establish issues that needed to be addressed at KTTC in order facilitate training HI trainees in their specialized areas. It was meant to establish preparedness of KTTC in training technical teachers at KTTC by accommodating the diversity of needs being trained

(<http://www.Armlawreview.or/guide/Hamazasp%20Harutyunyan.co>) [13].

### **1.5 The need for Inclusive Education in training**

Initially, education for children with HI in Kenya was structured in such a way that all the primary schools for the HI had a vocational training section for life skills. Those who sat for Kenya Certificate of Primary Education (KCPE) and qualified joined any of the three secondary schools for the HI (Kuja, Mumias

and Reverend Muhoro) to prepare for advanced training beyond KCSE level. After sitting for their Kenya Certificate of Secondary Education (KCSE), qualified candidates joined one of the two vocational technical institutions for the HI: St. Joseph and Karen, which offer crafts training courses. Those who qualify for further training thereafter have nowhere to go for advanced training. There are no other institutions for the HI to cater for them, particularly in training and mentoring them to become technical teachers specially trained for the HI. The only technical institute that trains technical teachers for secondary schools for diploma and certificate levels is Kenya Technical Teachers' College (KTTC) which could support individuals with HI through inclusive education. But are there suitable, relevant and adequate facilities to facilitate KTTC train HI students?

The college, which admits students for training every year and has so far, graduated only three diploma technical teachers with hearing impairment (HI), the last one in 2006. Since then and by the time of this study, no student with HI was admitted into the college for training for reasons that had not been systematically explained. In this context, the study was designed to establish specific constraints to inclusion of students with HI for training at KTTC which led to stoppage of such training. In particular, the study sought to establish the preparedness of KTTC to train students with HI complexities to become technical teachers. Addressing preparedness characteristics of the college to receive and prepare such trainees to teach in vocational institutes was a crucial way to explain why KTTC stopped training pre-service teachers with HI challenges, which had remained unresolved. Were there specific issues that needed to address in order to enhance the training of the HI? This study was designed to document them.

## **II. METHODOLOGY**

This was a descriptive survey study and used *ex-post facto design* of non-experimental method, whose data were categorical and fully described its training context with regard to the locale of the research. This method effectively described and characterized by true social and ecological training contexts of KTTC where the research was done, checking its suitability for training students with HI (Tolmie, Muijs and McAteer [14], 2011, Panneerselvam [15]2004; Cohen, Minion and Morison [16], 2000). The target population for the study included 850 students, 117 lecturers, 12 HODS 1 principal and 3 former KTTC students with HI, making a total of 983 respondents. From this population, a convenient sample of 111 respondents was selected comprising 85 students (45 male, 40 female) 12 lecturers (6 male, 6 female) 11 HODs, 1 Principal and 2 former students with HI. The sample was obtained using various sampling methods. Purposive sampling was used to select the Principal, HODS and second year students. Stratified random sampling was used to select the required number of lecturers and students while snow ball sampling was applied to select former students with HI who trained in the institution.

The research was conducted using semi-structured questionnaires for students, lecturers and Heads of department (HODS); interview guides for the principal and old students of KTTC with HI and observation checklists for both lessons and physical facilities. Once the instruments were constructed, they were pilot tested in the same institution because KTTC is the only technical teachers' college in Kenya. As such one department was randomly selected for piloting purposes and later excluded from the main study. The Deputy Principal was involved in the pilot study but not in the main one. The reliability of the instruments was ascertained based on the Split – half test resulting to two sets of data and tested using Spearman's Product moment (George and Malley [17]. A reliability coefficient of 0.8 determined using Pearson's rho as described by Kothari, [18]; Saunders, Lewis and Thornhill [19] and . This was considered to be sufficient enough for this study's reliability.

The validated instruments were used to collect data in the field. Data were analyzed qualitatively. Responses from the structured questionnaires were measured using descriptive statistics mainly frequencies and tallies. Attitude responses were analyzed using the liker scale observation data were analyzed thematically data for the structured interview were converted into a write up using pre-determined coding categories and reported in narrative form. After data had been analyzed they were presented in form of frequencies tables and percentages.

## **III. RESULTS AND DISCUSSION**

The results from this study attempted to address two questions: What attitudes did students with hearing ability and administrators had towards the inclusion of students for training at Kenya Technical Teachers College (KTTC)? What teaching learning resources were available at KTTC that would promote the learning process for students, with HI discussed in this paper show that human factor including students with HI? The reason for this was that attitudes towards persons with HI formed a major component of their education in a regular education setup. It was therefore necessary to establish the attitudes of the students with hearing abilities, lecturers, HODs and administrator. These would directly interact with these students and would therefore reveal their feelings towards the students with HI. Such feelings were determined using a Likert scale in this study.

### **3.1 Feelings of students with hearing ability toward HI students at KTTC**

Physical barriers need not be a hindrance to development of inclusive education in Kenya. The fact that KTTC trained such students at one stage or another was possible provided that adequate preparations to take care of the students were made possible. This paper considers attitudes of various groups of people towards students with HI at KTTC. In order to determine this, students with hearing ability were asked to indicate their feelings their colleagues with HI as shown in Table 1. The results strongly agreed (Mean- 2.67 in Likert Scale) that HI students could train together, share learning resources and strongly disagreed (Mean 1.4) that such students could lower the quality of training and be unnecessary bother to other students. This is a strong view (82.3%) of the students with vision ability supporting inclusive education. They had positive attitudes towards the trainees with HI and an indication that attitude alone was not an issue for KTTC stopping admitting students with HI for training as teachers. Unlike Donaldson [19] and Howarth [20], Bishop [21], Esposito and Peach [22] argued and supported the idea that students with hearing ability could facilitate the process of educating those with HI in regular settings by interacting positively with them was thus ascertained by this study as reflected in Table 1. With their positive mean score feelings lying between 2.5 and 3, the students with hearing ability show that they were not harsh and would learn together with those with HI challenges. Similarly, 82.35% (mean score of 1.3 and 1.4) of the students disagreed with the statements that HI student could bring problems, should remain institutions for the deaf and would also be unnecessary bother to other students at KTTC

### **3.2 Teacher's Feelings towards HI Students at KTTC**

The learning environment from the teachers was also investigated. Teachers are the key drivers in curriculum content to students in general and those with HI in particular. They play a great role in creating an environment to enhance their learning. They could do this well when they show and harbor the caring feelings for the students. To show the extent to which the teachers at the KTTC were prepared to receive and teach students with HI challenges. The resulting findings are presented in Table 2. The table revealed that teachers were ready to assist learners with HI

### **3.3 HODs' Feelings towards Student's with HI Challenges**

Heads of department in any educational institution in Kenya not only do administrative duties but also interact with students as they teach, in this consideration, it was necessary to find out what lecturers at KTTC felt about students with HI challenges by either agreeing or disagreeing with specific attributable statements. The various attributes that would reflect their feelings towards HI students were summarized and presented in Table 3. The table showed that the HODs were also positive about HI learners sharing resources, learning together with other students. They also disagreed that HI students could be a problem to other learners.

From Tables 1-3, it is illustrated that the feelings of the KTTC learning environment is conducive for the introduction of inclusive education. . This is because the basis for inclusive education and support environment from the students, lecturers and the principal are strong. However, they needed sensitization as recognized by Mamlin [10], Chow and Kasari [11], and Karagiannis [12]. This shows that the challenge to applying inclusive education practice at KTTC was not necessarily from students, lecturers and principal, but other sources. It was therefore necessary to examine other possible sources of the constraints especially among the teachers as constraints to inclusive education.

### **3.4 Staff Professional Qualification in Special Needs Education**

Education administrators including HODs, teachers and indeed those for students with HI challenges needed specific skills in order to handle special education needs (SNE) issues effectively. In the previous sub-sections, students and HODs felt that students with HI challenges could inclusively be trained at KTTC and fit in its operations. However, these feelings needed to be further examined with regard to their academic qualification and SNE. Specifically questions relating to levels of academic and SNE qualifications were investigated. The results were as summarized and presented in Table 4. Academically the lecturers and the administrators were highly qualified with the highest being a master's degree while the lowest was a Diploma. However, none had any qualification in SNE. This a crucial skill for anybody handling HI students. If it lacks as it was established, could frustrate them. This implied that a total communication could not be effectively applied. As Clough [2] argues, such professional inadequacy would inhibit the HI learner's interaction with those with those able to hear but lacking SNE skills. Such a gap would imply constraints to effective implementation of inclusive education at KTTC. The respondents were requested to give their comments on the implementation of inclusive education at the College and their key issues were established and presented in Table 5.

Table 5 shows a useful paradigm shift to embracing inclusive education in Kenya and KTTC in particular. Valuable cues from this table show some inadequate knowledge from lecturers, college administrators and the students with regard inclusive education activities at KTTC. The students with the

hearing ability, lecturers, Principal and the ex-HI students felt that sign language was important and necessary tool not only for teaching the HI students but also for an interactive environment in inclusive Education practices at KTTC. As such language will be introduced; they felt that the college needed to engage interpreters and teacher aids instead of lecturers without sign language. However, the vision of the ex-HI students and that of the ex-HI students differed. The respondents other than the HI students did not see the need for specialized equipment, visual teaching aids instead of lecturing and granting bursaries to HI students to assist them in paying their fees. Yet as Hegart [3], Lipsky and Gartner [6] argued, this is crucial for paradigm shift and in inclusive education at KTTC which could train HI technical teachers to be mentors to other challenged students. As this inclusive education paradigm gets comprehended, there is need to initiate legislation for inclusive education especially in colleges.

#### IV. TABLES AND FIGURES

##### 5.1 Tables

**Table 1: Hearing Students' Feelings towards training together with students with HI**

Students with HI	A- 3 (f)	N- 2 (f)	D- 1 (f)	Total	Mean Score
	$\sum (f)$				
Can train together with hearing students	70	2	13	85	2.67
Can use the same teaching and learning resources as hearing students	70	0	15	85	2.65
I could readily assist them if I had such colleagues in my class	70	0	15	85	2.65
I can easily socialize with them	60	10	15	85	2.53
Could lower quality of training at KTTC	15	0	70	85	1.35
Could bring serious problems	15	0	70	85	1.35
Are problematic and should remain in institutions for deaf persons	15	0	70	85	1.35
Would be unnecessary bother to me in class	15	5	65	85	1.4

**Table 2: Teachers' Feelings towards inclusion of students with HI for training at KTTC**

Students with HI	A - 3 (f)	N- 2 (f)	D- 1 (f)	Total	Mean Score
	$\sum (f)$				
Can train together with hearing students	9	0	3	12	2.5
Can use the same teaching and learning resources as hearing students	9	0	3	12	2.5
I could readily assist them in class by using adjustments in my teaching methods	8	1	3	12	2.4
Could lower quality of training if admitted	4	0	8	12	1.67
Could cause serious problems and ought to remain in institutions for deaf	4	0	8	12	1.67
Would give me unnecessary burden which I am unable to carry	3	1	8	12	1.58

**Table 3: HODs' Feelings towards students with HI**

Students with HI	A- 3 (f)	N- 2 (f)	D- 1 (f)	Total $\sum (f)$	Mean Score
Can train together with the hearing students	7	0	4	11	2.27
Can use the same teaching and learning resources as hearing students	7	0	4	11	2.27
My department would readily assist them to train at KTTC	7	1	3	11	2.36
Would lower Quality of training at KTTC	3	0	8	11	1.55
Would bring serious problem and should remain in institutions for the deaf persons	3	1	7	11	1.64
Would give my department unnecessary burden which I am not ready to shoulder	4	1	6	11	1.82

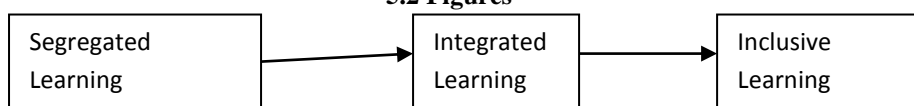
Table 4: Teachers and HODs' professional qualification level in SNE training

Professional Qualification	Teachers (N=12) (f)	Percent (%)	HODs (N=11) (f)	Percent (%)
Diploma	2	16.7	0	0
Higher Diploma	2	16.7	2	18.2
Bachelor of Education (B. Ed)	3	25	4	36.4
Master of Education (M. Ed)	5	41.6	5	45.4
Trained in SNE	0	0	0	0

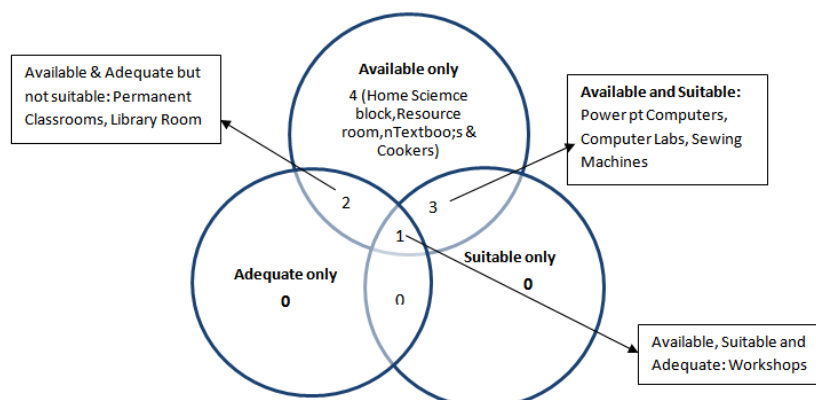
Table 5: Respondents' Comments Regarding Implementation of Inclusive Education at KTTC

Students with HI	Students N= 85 (f)	Lecturers N = 12 (f)	HODs N = 11 (f)	Admin Principal N = 1	Ex -HI Students N = 2
1 Train Teachers in basic sign language, then implement	85	12	11	1	2
2 Have some teachers trained in HI skills	80	10	9	1	2
3 Sensitization for attitude change	60	5	5	1	2
4 Improve on the infrastructure	70	10	10	1	2
5 Have a language lab and a special resource room	0	0	2	1	2
6 Employ interpreters or teacher aid for the college	80	11	10	1	2
7 Teachers to use more visual teaching aids instead of lectures	60	4	5	0	2
8 It can work very well but with adjustments	70	8	6	1	2
9 It is possible because the college is supported by the government	20	4	7	1	0
10 Specialized equipment should be bought	50	5	7	0	2
11 Grant bursary to students with HI because KTTC is very expensive	0	0	0	0	2

5.2 Figures



**Figure 1: Inclusive Education Evolution Stages in Kenya**  
 Source: Works by Malikin (1969), Clough (1998) and Hegarty (2002).



**Figure 2: Available, Suitable and Adequate Resources at KTTC for Training Students with Hearing Impairment**

V. CONCLUSION

From the results of this study, it was concluded that the teacher's, heads of department's attitude and that of the students with hearing ability was not a constraint to the inclusion of students with HI for training in Keya Technical Training college. This formed base for helping students with HI to train in an inclusive education at KTTC. However, results further revealed that some constraints existed including lack of trained teachers in SNE skills to handle students with HI; lack of adequate teaching and learning resources required for training; insufficient and unsuitable learning resources lack of total communication. Based on these results, it can also be concluded that KTTC was not prepared for Inclusive Education leading to the college stopping admitting students with HI as technical teachers. Arguably, the inclusion of learners with HI in regular classes could provide them with the opportunity to access educational and social facilities not available in segregated settings under which learning environment students with HI would not adequately learn and pursue further studies. In order to optimally utilize KTTC as a facility for Inclusive Education in and opportunities to assist students with HI to learn together with others inclusively, there was need to effectively. the revealed constraints needed to be addressed. It is therefore recommended that

- i) KTTC acquire adequate and modern teaching learning resources beyond provision of workshop, which are available, suitable.
- ii) In order to accommodate and sustainably develop learners with diversified disabilities at KTTC, the college administration need to provide suitable facilities to cater total communication for the HI students.
- iii) The Teachers Service Commission (TSC) of Kenya, in collaboration with the Director Quality Insurance in the Ministry of Education should initiate effective services to cater for students with diversified inclusive education needs at KTTC.
- iv) Cushioned by the positive feelings favouring the inclusive education in the training of the HI students at KTTC, the college administration should prepare not only special learning facilities for students with HI but also in understanding them and others with similar challenges.
- v) There is need to establish the experiences faced by the three former students with HI who trained at KTTC for eventual address.

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