Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.13, No.15, 2022


# Assessing the Relevance of Instructional Resources in the Inclusive Education Project Schools to Learners with Special Needs

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**Abstract**
Instructional resources in education play a very important role in facilitating learning. However, they should not only be of a wide variety and relevant, but they should also be accessible in appropriate formats so as to cater for the unique and diverse needs of learners in class. According to Gardner's multiple intelligence theory (1993), learners possess different kinds of minds and they, therefore, learn, remember, perform and understand in different ways. While some learners are visual, others are auditory, tactile, Kinesthetic among other intelligences. This paper presents findings of a study carried out in Nairobi City and Homabay counties in Kenya to assess the relevance of instructional resources to learners with special needs in inclusive project schools sponsored by Sight Savers and Leonard Cheshire Disability (LCD) in Kenya. The study sample comprised of 8 primary schools from urban and rural areas, involving learners in standards four to eight. A total of 160 learners in inclusive public primary schools, 8 head teachers, 80 teachers, 2 sponsors and 2 coordinators participated in the study. Data were collected using questionnaires, interviews schedules, focus group discussions and observation schedules. Quantitative data were analyzed using descriptive statistics, which was computed in frequencies and percentages and presented in frequency tables and graphs. Qualitative data were analysed through verbatim narration and thematic approach according to the objectives of the study. The study findings revealed that the most commonly used instructional resources were mainly for regular learners. Some of these resources were adapted at classroom level with pockets of specialised resources. It was further reported that the resources were characterised with inadequacy, uneven distribution while some of the limited specialised resources were non-functional due to lack of maintenance. In addition, some teachers had difficulties handling some of the available specialised resources.
**Keywords:** Assessment**,** relevance, instructional resources, inclusive project schools and learners with special needs.
**DOI:** 10.7176/JEP/13-15-03
**Publication date:**May 31st 2022

**Acknowledgement**
I deeply acknowledge and appreciate my supervisors Dr. Nelly Otube and Dr. Margaret Murugami for their diligence and patience in supervising me during this study. I thank the Kenya Institute of Curriculum Development (KICD), for the financial support towards this study. Many thanks to all the primary schools, the headteachers, teachers, pupils and the programme sponsors who participated in this study.

## 1. Introduction

It has been established that instructional materials are essential tools in learning every subject in the school curriculum. This is because they allow learners to interact with words, symbols and ideas in ways that develop their abilities in reading, listening, solving, viewing, thinking, speaking, writing, using media and technology. According to Sale (2016), instructional materials are pivotal for all teachers at all levels of education so as to enhance effective instructional delivery and promote learners' academic achievement. At the same time, Peterson & Hittie (2003) and Buli-Holmberg and Jeyaprathaban (2016) noted that instructional materials should be adapted to hook various interests of students and respond to different individual modalities, learning styles, and intelligences. Learners with special needs and teachers who are expected to instruct them require absolutely specialized materials, resources, equipment and personal support that specifically address individualized learning. Resources range from special equipment, technology, materials, teaching manuals, teacher made resources to those as straightforward as wheelchairs, prosthetics, ramps and accessible toilets needed specifically for learning (UNESCO, 2009).

According to Kenya Institute of Special Education and Uganda Institute of Special Education, technology plays an important role to learners with special needs and disabilities (KISE & UNISE 2002). Technology for children with special needs and disabilities can be used for assistive and instructional purposes. Assistive technology enhances the functioning of children with special needs and disability in different ways depending on

 

the nature of the disability. For the child who is visually impaired, Braille readers and typewriters assist, while for the child who is visually impaired, hearing aids. For the child who cannot speak, communication boards for pointing to and composing messages are helpful. A book titled *Inclusion in Action (3rd ed)* points out that assistive technology can be as sophisticated as a device that translates print into oral language or as simple as a headband and a pointer that allow students who have cerebral palsy to point to text or communication boards (Foreman 2011). The book indicates that such devices have dramatically improved individual children's ability to receive and transmit information effectively. While on the other hand, instructional technology involves the use of computer and related tools to deliver content and instruction in an appropriate manner to children with special needs and disability. In some cases, allowing these children to learn at their own rate, makes it possible for teachers to obtain immediate feedback and reinforcement.

A study carried out on the management of special education resources revealed that special education resources were not adequate in schools (Rehfeldt, Clark and Lee, 2012). The study further notes that resources were not only unevenly distributed, the few available ones were not efficiently used while others were often diverted to regular learners.

Studies conducted in Kenya show that there is lack of instructional resources in schools (Mwangi, 2013; Mulinge 2016; Wang'ang'a, 2014; Jan Mohamed 2012; Namwaki, 2013; M'rithi 2014; and Olewe Nyunya (2018). The *Education and Training Sector Policy for Learners and Trainees with Disabilities* notes that regular schools are designed to accommodate regular learners who use the regular curriculum, subsequently most of the learning resources are not adapted, thus posing a challenge to learners with disabilities in accessing appropriate and specialised teaching and learning resources (MOE, 2018a).The *Kenya National Special Needs Education Survey* noted that teaching learning materials in many schools were not adequate hence affecting learners learning as they were only depended on the teacher. The few schools which had resources, they were found to be inadequate (MOEST & VSO, 2016). In concurrence with the study findings, the National curriculum policy (MOE 2018b) observes that though the Government of Kenya devotes 5.1 percent of its Gross Domestic Product (GDP) on education, inadequacy of resources remains one of the main challenges to grapple with and recognizes the need to work in partnership with other stakeholders to provide the support needed.

Lack of appropriate instructional materials in the teaching and learning process leads to poor or reduced learning effort, frustration (for both the teacher and the students) and, consequently, a waste of time with no achievement (Sale 2016). This paper presents findings of a study on the relevance of instructional resources in inclusive model schools for learners with special needs.

## 2. Objective of the study

The study sought to assess how the available instructional resources, met the needs of learners with special needs.

## 3. Methodology

The study used mixed methods to collect quantitative and qualitative data. Quantitative data were collected from teachers using questionnaires while qualitative data were collected from head teachers, sponsors, coordinators, and learners using, interview schedules focus group discussions and an observation schedule. The study targeted 8 inclusive public primary project schools, focusing on learners in standard 4 to 8 in Nairobi city and Homabay counties. A total of 160 learners in inclusive public primary schools, 8 head teachers, 80 teachers, 2 sponsors and 2 coordinators one each from the selected inclusive education programmes were sampled. Quantitative data from questionnaires were analyzed using descriptive statistics, which were computed in frequencies and percentages and presented in frequency tables and graphs. Excel and Statistical package for Social Sciences was used to analyze quantitative data. As recommended by Johnson & Christensen (2014), all qualitative research data audio recorded were transcribed and typed into word processing files. Then, all qualitative data from open ended questions in questionnaires, interview schedules and focus group discussions were consolidated as per the themes and analyzed through thematic approach and verbatim narration. The ENVIVO qualitative software was used to analyze qualitative. This paper presents the findings, interpretations and discussions of the study.

## 4. Results and discussions

The study sought to assess how the available instructional resources met the needs of learners with special needs. This was determined through teachers' questionnaires, headteachers and sponsor's interview schedules, focus group discussions with regular and learners with special needs as well as observation schedule. Respondents were asked to indicate the resources used to teach learners with disabilities, availability of instructional resources for learners with disabilities and what can be done to make instructional resources more relevant to learners with disabilities.

### 4.1 Instructional resources used to teach learners with disabilities

To answer the question on instructional resources that they were using to teach learners with disabilities, teachers

were given 5 options to choose from. The options included; regular, adapted, teacher made, from another country or any other. The results are summarized in Table 1.

**Table 1: Instructional resources used to teach learners with disabilities**

| S/No | Instructional Resources | Frequency | Percentage |
|---|---|---|---|
| 1 | Regular | 37 | 63.8 |
| 2 | Adapted | 37 | 63.8 |
| 3 | Teacher-Made | 44 | 75.9 |
| 4 | Specialized | 22 | 37.9 |
| 5 | Did not indicate | 10 | 17.2 |

As shown in Table 1, whereas 44 (76%) of the teachers were using teacher-made instructional resources, 37 (64%) of them were using regular resources and 37 (64%) using adapted resources. Use of specialized instructional resources was only reported by 22 (38%) teachers while 10 (17%) of the teachers did not indicate the instructional resources used.

The study findings from head teachers and sponsors revealed that the instructional resources used were mainly regular resources, some of which were adapted at classroom level together with few specialised resources from the sponsors and other stakeholders. Regular and learners with special needs focus group discussions also indicated that most of the resources used were for regular learners with limited specialised resources and teacher-made aids. The findings were consistent among all the targeted respondents. This corresponds with the *Education and Training Sector Policy for Learners with Disabilities,* which points out that regular schools are designed for regular learners who use a regular curriculum, implying that that most of the learning resources are neither adapted nor specialised posing a challenge to learners with disabilities (MOE, 2018a). This means that the learners with disabilities in these schools have limited choices and therefore end up using regular resources with some adaptations at the teacher's discretion at school level, thus raising concerns on the effectiveness of learning.

### 4.2 Availability of relevant instructional resources for learners with disabilities

The respondents were asked to comment on the availability of relevant instructional resources for learners with disabilities. Teachers' responses are indicated in Table 2.

Table 2: Availability of relevant instructional resources for learners with disabilities

| S/No | Availability of resources | Frequency | Percentage |
|---|---|---|---|
| 1. | Hard to find or unavailable inclusive resources | 36 | 62.1 |
| 2. | Recreational resources are available and easy to use by learners with disabilities/trainers | 23 | 39.7 |
| 3. | Poor funding in schools makes it hard to budget for instructional resources | 29 | 50 |
| 4. | Handling of the available inclusive resources by most trainers is difficult | 29 | 50 |

Table 2 indicates that 23 (40 %) of the teachers reported that recreational resources were available and were easy to use by both learners and teachers. At the same time, 36 (62%) of the teachers reported that resources were hard to find or were unavailable. While poor funding in schools to budget for instructional resources was reported by 29 (50%) teachers, 29 (50%) teachers indicated that handling some of the available resources was difficult for them. This finding corresponds with the *Education and Training Sector Policy for Learners with Disabilities,* which acknowledges that although the government gives top-up capitation for teaching and learning materials and other assistive devices, it was quite inadequate. The policy further pointed out that capacities for technology adoption was low in schools (MOE, 2018a).

To demonstrate the unavailability of relevant resources for learners with disabilities one teacher pointed out:

"*Once the instructional resources have been donated by donors or sponsors, the school management cannot make any complaints on their suitability for fear of not being given next time".*

Another teacher also noted:

*"When they give us so much of one resource, we can't ask them to replace with another because that is what they have".*

These comments by teachers clearly indicate that whereas donors or sponsors provide resources, these resources are sometimes not suitable, as they are not based on individual learner needs. During interviews, majority of the head teachers indicated that despite support by the government and other stakeholders, the instructional resources were inadequate, as they were not proportional to the number of learners with disabilities. This finding confirms the findings of the study, which found out that teaching learning materials in many schools were not adequate (MOEST & VSO, 2016). More than a quarter of the head teachers indicated that the donors had really tried to supplement instructional resources, especially the specialised ones. To show that most of the resources came from donors, one head teacher remarked:

"*Donors and well-wishers are trying to supplement the supply of instructional resources; they cannot keep doing it alone. Sight Savers used to give good support but since their departure, no one has directly replaced them to*

 

*continue providing the instructional resources".*

These study findings concur with those of a study on individualized education program (IEP), which focused on the management of special education resources in Ibadan found out that special education resources were not only inadequate in schools but were also not evenly distributed and not used efficiently (Rehfeldt, Clark and Lee, 2012). They also noted that special schools or centres managed by private individuals or religious bodies provided better services than those established by the government. A number of similar studies carried out in Kenya also found that there is lack of instructional resources in schools (Mwangi, 2013; Mulinge, 2016; Wang'ang'a, 2014; Janmohamed, 2012; Namwaki, 2013; M'rithi, 2014); and KICD, 2018).

An interview with sponsors revealed that schools had visual, tactile and audio instructional resources, which included specialized resources and equipment. These included braille papers, brailed books, materials for development of teaching aids, slates with stylus, pens, abacus, drawing mat, boards for pre-braille, large print books. Other resource also included braille machines, computers, optical devices, closed circuit television (CCTV), orbit twenty reader, magnifying photocopier and resource rooms based on the category of disability targeted. The findings further indicated that the resources were not adequate, which prompted teachers to develop some resources from locally available materials to avoid long waiting for sponsors or the Government to provide. Sponsor's findings were supported by head teachers who pointed out that they had made efforts to provide specialized resources and equipment. On the other hand, teachers felt that some of the resources provided by donors were not relevant and were not evenly distributed.

Focus group discussions (FGDs) with regular learners revealed that the instructional resources required adaptation to suit learners with various disabilities. The learners also pointed out that adequate resources were required and personnel to maintain some of the specialised resources. Some subjects did not have relevant instructional resources especially Braille instructional resources, with only few copies being available in some subjects. This forces learners who were visually impaired to use regular resources with the support from regular learners, thus making their learning very slow and difficult. To show the seriousness of the matter, one of the regular learners said:

*"We keep on reading for them because they can't read from the books we have. They should have their own books so that they can read on their own, any time they want to read".*

Findings from FGDs for learners with special needs confirmed that the instructional resources were not fully available and those in schools were not suitable for the various disabilities. They require adaptation to suit the various disabilities, which takes long to happen. These findings are supported by previous study findings by Peterson & Hittie (2003) and Buli-Holmberg and Jeyaprathaban (2016) who pointed out that instructional materials should be adapted to cater for various interests of students and respond to different individual modalities, learning styles, and intelligences. To demonstrate the extent of the desperate situation of learning resources, one learner lamented:

*"Instructional resources are not appropriate for learners with disabilities they need adaptation to make them useful."*

In addition, the learners indicated that a high proportion of the instructional resources require some time for the learners to adapt to their usage. However, due to the difficulty in having trained or qualified teachers with SNE backgrounds, the learning process takes too long, making learners living with disability lag behind the rest of the class. They also indicated that maintenance of some resources was an issue since few instructors or resource persons in the school could readily repair or make any amendments to them.

To triangulate the findings on instructional resources used to ensure learners with disabilities learn well like others, an observation schedule was used to check the resources available in the schools selected for the study. The results of the observations are summarized in Figure 1.

 

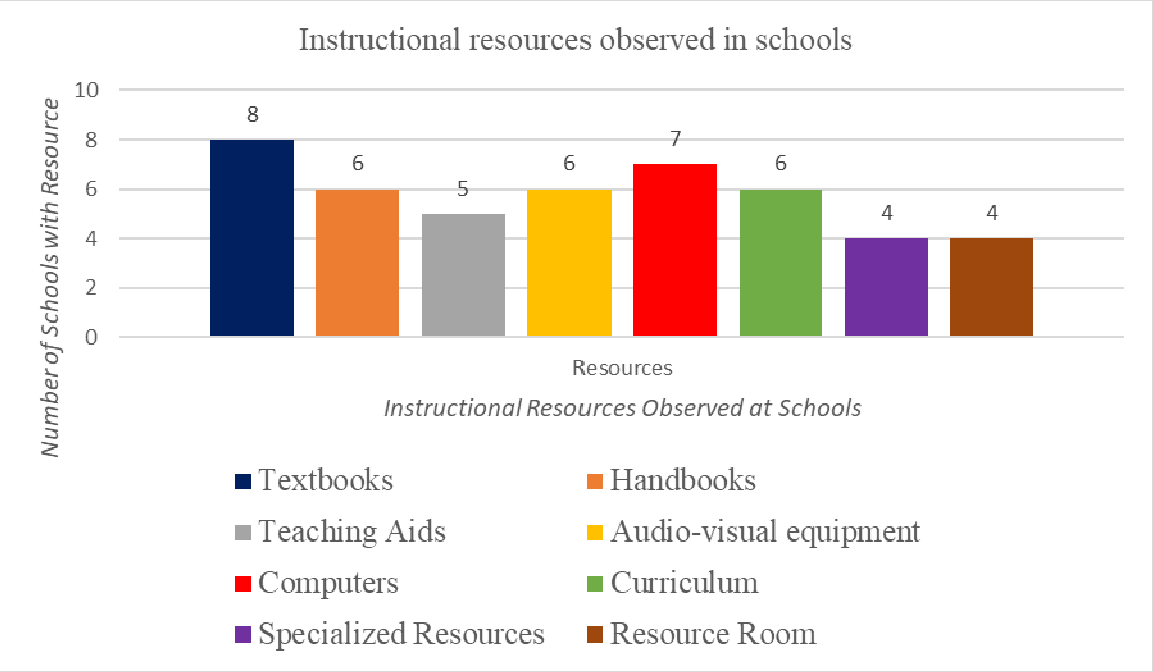


**Figure 1: Instructional resources observed in schools**

The findings confirmed that nearly all schools had textbooks and computers, 6 (75%) schools had handbooks, audio-visual equipment and curriculum 5 (63%) had teaching aids, while specialised resources and resource rooms were observed in a half 4 (50%) of the schools. However, although majority of the schools had textbooks and other resources, most of the resources were for the regular learners, which were also outdated, inadequate and unevenly distributed across schools. Evidently, resources for learners with disability were either inadequate or not available at all. It was confirmed that some of the specialised resources were non-functional due to lack of maintenance and lack of appropriate software's. Furthermore, the study found that resource rooms were not only poorly equipped, but the use of some resources was limited by the challenge of power supply.

**4.5.3 What can be done to make instructional resources more relevant to learners with disabilities**

Respondents were asked to suggest what could be done to make instructional resources more relevant to learners with disabilities. Teachers' responses are shown in Figure 2.

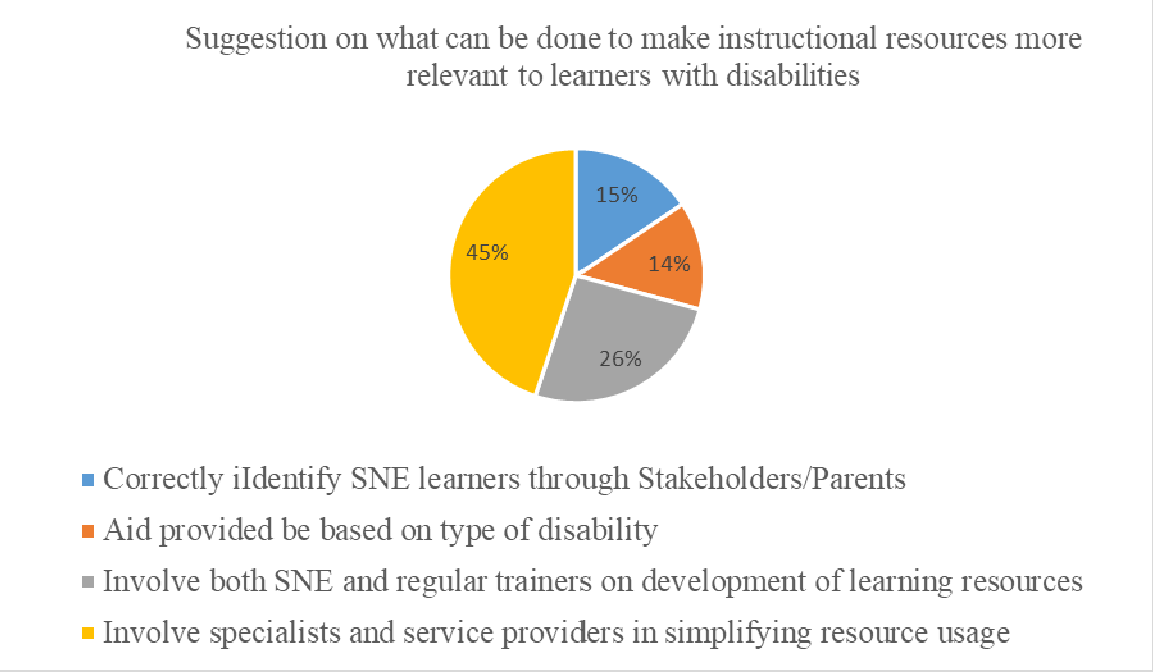


**Figure 2: Teacher suggestions on what can be done to make instructional resources more relevant to learners with disabilities**

As shown in Figure 2, 26 (45%) teachers suggested that involving specialists and service providers in

 

simplifying the resources by clearly indicating how they could be used before sending them to schools would make instructional resources more relevant to learners with disabilities. Whereas training of both regular and SNE teachers was suggested by 15 (26%), 9 (16%) of the teachers proposed correct identification of learners through stakeholders including parents for appropriate resource allocation. At the same time, 8 (14%) teachers suggested that instructional resources could be made more relevant to learners with disabilities through the provision of aid to schools based on the type of disability.

Head teachers suggested that resources should be proportionate to the number of learners with disabilities, which could only be achieved through increased government capitation and support from other stakeholders. On the other hand, sponsors suggested that schools should work closely with Curriculum Support Officers to assess, identify and develop a caseload inventory of placement of every child with a disability. This will enable the Government and other service providers to provide materials on need basis as per the assessment of individual children. They also pointed out that teachers should be encouraged to use locally available resources to develop unique materials on need basis.

During focus group discussions, regular learners suggested that adaptation, adequate supply and good maintenance were key in making resources relevant to learners with disabilities. On the other hand, learners with disabilities suggested that the timely adaptation of resources was necessary. In addition, they recommended that besides training of teachers on the use of special resources, technical personnel should be deployed to schools to maintain available specialized resources.

## Conclusion

The study concluded that the instructional resources available in the inclusive project schools were mainly for regular learners with limited specialised resources. This was mainly because regular schools are designed for regular learners who use a regular curriculum, which means that most of the learning resources were neither adapted nor specialised posing a challenge to learners with disabilities. In addition, these resources were inadequate and unevenly distributed while some of the specialized resources were not functioning due to lack of maintenance. This implies that learners with disabilities lack resources targeting them as those available were not in accessible formats. This calls for development and provision of relevant, accessible and adequate resources together with assistive devices for learners with disabilities by the concerned authority. The development of resources for learners with disabilities should run parallel with the regular ones for timely distribution. The study recommends for increase of capitation for learners with disability to enable schools to purchase the resources needed which are quite expensive and ensure it reaches the target learner.

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