EXTENT OF ADAPTATION OF TEACHING AND LEARNING STRATEGIES IN INCLUSIVE PUBLIC CENTERS IN KISUMU COUNTY, KENYA

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Abstract:

Inclusive teaching and learning strategies strive to meet the needs of all learners, regardless of difficult or need and support their engagement with the subject material. One of the important principles of inclusive education is about teaching for diversity; this means that the teacher has to be flexible and adaptive, recognize that different learners have different ways and styles of learning, interpreting and understanding information. An inclusive school must offer possibilities and opportunities for a range of working methods and individual treatment to ensure that no child is excluded from companionship and participation in the teaching and learning process otherwise their learning would be jeopardized. A survey in Kisumu indicated that there were 662 public ECD centers with 17 known to be having children with diverse needs in their regular schools, however little was known on the extent to which these diverse individual needs were being met during the teaching and learning process. The purpose of this study therefore was to establish the extent to which teaching and learning strategies were adapted in inclusive ECD centers in Kisumu County. A descriptive survey design was used. The target population was 17 head teachers and 37 regular teachers. Saturated and purposive samplings were used to select 15 head teachers and the 34 regular teachers. Data was collected using questionnaires, observation and interview schedules. Quantitative data was analyzed using descriptive statistics; frequency counts, percentage and mean. Qualitative data was transcribed and analyzed through thematic analysis. The findings revealed that the teaching-learning strategies were adapted to a large extent with

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a mean of M=4.44. The extent to which certain inclusive teaching and learning strategies were used had a mean of 3.93 implying that the strategies used in these schools were inclusive to large extent. This study implies that learners in inclusive schools were able to participate effectively in the learning process as their needs were adequately met. The study recommends that teachers embrace all-inclusive strategies in order to maintain interactive sessions in classes.

Keywords: inclusive education, teaching strategies, learners with special needs

1. Background of the Study

Teaching and learning strategies in inclusive schools must be flexible and diverse. An inclusive school must offer possibilities and opportunities for a range of working methods and individual treatment to ensure that no child is excluded from companionship and participation in the school (UNESCO, 2010). Both the Implementations guidelines for the SNE policy (2018) and the CBC recommend the adaptation of teaching and learning strategies to cater for diversity in the classroom.

According to the competency-based curriculum, 2017, an inclusive environment ensures that the needs of all learners are met and respected, recognizing the different abilities, needs, capabilities and differences each learner has in the school environment. It ensures that the environment, curriculum content and instructional approaches are appropriate for all learners. It provides flexibility for all teachers to adapt the curriculum to suit individual needs and does not demand that all learners learn the same content in the same way, the same number of hours and the same time. Its ultimate aim is to guarantee basic education for learners according to abilities and needs. In the same way, inclusive education involves "*a process embodying changes and modifications and adaptations in content, approaches, structures and strategies in education with a common vision that serves to include all students based on individual needs*"(Kenya Institute of Curriculum Development, 2017). Therefore, in an inclusive center, it expected that teaching and learning strategies be adapted and modified to suit individual needs and differences in the class, failure to which learning for these children with special needs will be jeopardized and most will feel segregated and left out in the learning process.

A study in Hong Kong by Zhu, Li, & Hsieh (2019) established that the center demonstrated a variety of inclusive practices including peer support, nutrition and health, environment and curriculum accommodation, positive attitudes, use of varied teaching methods, team work and collaboration of professional, teachers and parents. They observed the lack of professional training of teachers in the area of special needs. This was a case study done in one kindergarten in Hong Kong focusing on learners with intellectual disabilities while this study was done using a larger population focusing on learners with low vision, hard of hearing and with physical disabilities.

A case study of teaching and learning strategies was conducted by Motitswe (2012) in South Africa and established that teaching and learning strategies used were flexible, there was use of differentiated methods in teaching and cooperative learning was used. She established that the needs of learners with special needs were well catered for during the teaching and learning process hence learners participated maximally and actively in the lessons. This study went ahead to establish the extent of adaptation of the teaching strategies used in inclusive centers using a larger population.

Research carried out by Omondi (2016) in Kenya and found that the teachers were not well equipped and prepared to handle learners with diverse needs in the classrooms since they lacked sufficient knowledge and skills. These resulted in their inability to adapt teaching and learning resources in their classes to suit different needs of learners. The researcher concluded that inclusion requires adapted teaching and learning materials and strategies for participation of all in learning.

The Office of Standards in Education (OFSTED) report (2010) encourages the differentiation of the classroom teaching and learning strategies to suit individual needs rather than taking learners who cannot benefit from a particular method of teaching out of the class to another section. The policy guidelines on inclusion state that an education system which caters effectively for a wide range of needs and abilities and thereby allows the majority of all children to learn and associate together holds the best way forward (UNESCO, 2009).

Teaching approaches should be investigated in detail to see how they can accommodate a diverse range of learning styles, that is, how different children learn best and what strategies can support their learning, hence it requires the recognition that they have specific problems and confronting these as their individual needs (Clough and Corbett, 2011).

For the teacher to assist the learner with special needs in education effectively, he/she must use a variety of teaching approaches. These should be appropriate to the learners' ability and learning process. Noting that in regular schools the teaching methods used were tailored for children assumed to have no special needs; it had not been established if the methods were suitable and to what extent the teachers were able to vary them according to the diverse needs of all the learners. Therefore, this study sought to establish the extent of adaptation of the teaching and learning strategies used in inclusive classrooms in early childhood centers in Kisumu County.

2. Statement of the Problem

According to a baseline survey carried out in Kisumu, there were 662 public ECD centers with 17 known to be implementing inclusive education under the Leonard Cheshire Disability Foundation. In the 17 ECD centers, there were 94 learners with special needs with different needs, difficulties and differences; hence it was not known to what extent their teaching and learning needs were being met. Therefore, there was need to carry out

a study to establish the extent of use of teaching and learning strategies in public ECD centers in Kisumu County.

2.1 Purpose of the Study

The purpose of this study was to establish the extent of adaptation of the teaching and learning strategies used in inclusive early childhood centers in Kisumu County.

2.2 Objectives of the Study

Objectives of the study were to:

- Establish the extent to which adaptation of the teaching and learning strategies are used in inclusive early childhood centers in Kisumu County.

3. Research Methodology

This research was conducted through a descriptive survey design in 17 early childhood centers that were implementing inclusive education in Kisumu County. This was because Kisumu had the highest number of centers implementing inclusive education. The study population comprised of 17 Head teachers and 37 regular teachers. Purposive and saturated sampling techniques were used to select 15 head teachers and the 31 regular teachers while purposive was used since the researcher only focused on the schools that were implementing inclusive education under the LCD foundation. The methods of data collection comprised the use of questionnaire, interview schedules and observation. Face and content validity were used to ascertain validity while test-retest was used to ascertain reliability through 10% of the population. Quantitative data was analyzed and presented in frequencies, percentages and means. Qualitative data was transcribed, analyzed and reported in emergent themes and sub-themes.

4. Results and Discussions

The study sought to evaluate the extent of adaptation of the teaching and learning strategies used in inclusive centers in Kisumu County. Respondents were asked to share their views on these and the following were the results:

Table 1: Response rate

Respondents	Sample size F (%)	Responded f (%)	Failed to respond f (%)
Teachers	37 (100.0)	34 (91.9)	3 (8.1)
Total	37 (100.0)	34 (91.9)	3 (8.1)

From the results in Table 1, 37 questionnaires were issued to teachers out of which 34(91.9%) were adequately filled and returned.

The teachers' responses were measure on a five point rating scales where: very large - 5, large - 4, small - 3, very small - 2 and smallest - 1. and not at all - 1, smaller extent - 2, small extent - 3, large extent - 4 and largest extent - 5. The results were presented in table using frequencies, percentages and means; tables 2 and 3 show the study findings for this objective.

Table 2: Teachers' responses on the extent to which
teaching-learning strategies were adapted in inclusive ECD classes

Statement	Very large f (%)	Large f (%)	Small f (%)	Very Small f (%)	Smallest f (%)	Mean
My teaching sessions are interactive	27 (79.4)	6 (17.6)	1 (2.9)	0 (0.0)	0 (0.0)	4.76
I allow learners to work together in different groups	24 (70.6)	10 (29.4)	0 (0.0)	0 (0.0)	0 (0.0)	4.71
Learners with special educational needs receive extra support from me	12 (35.6)	16 (47.1)	4 (11.8)	0 (0.0)	2 (5.9)	4.06
The language I use in class is age appropriate and to the level of all learners	27 (79.4)	6 (17.6)	1 (2.9)	0 (0.0)	0 (0.0)	4.76
Teaching methods are adapted according to different needs of the learner	19 (55.9)	8 (23.5)	5 (14.7)	2 (5.9)	0 (0.0)	4.29
I give tasks according to the level of performance and individual need of the learner	13 (38.2)	17 (50.0)	4 (11.8)	0 (0.0)	0 (0.0)	4.26
I do a lot of writing on the chalk board for the sake of learners with hearing impairment	14 (41.2)	18 (52.9)	0 (0.0)	0 (0.0)	2 (5.9)	4.24
Average Mean						**4.44**

Key: M = Mean, Very large (4.5 – 5.00), Large (3.5 – 4.4), Small (2.5 – 3.4), Very small (1.5 – 2.4), Smallest (1.00 - 1.4)

From the table, with an average M=4.44, it was clear that the teaching-learning strategies in inclusive centers were adapted to a large extent. From the responses, many teachers strongly greed that their lessons were interactive and the language used in class was appropriate and to the level of all learners (M=4.76) while others agreed to a large extent that learners with special needs received support from them. The responses indicated that teaching-learning strategies were adapted in that the teachers' lessons were interactive, teachers allowed learners to work together in different groups, learners with SENs were given extra time, teachers used a language that was age appropriate and to the level of the learner, the teaching methods were adapted to meet the different needs of the learner, teachers gave tasks according to the level of performance and individual

need of the learner and teachers did much writing on the chalk board for the sake of learners with hearing impairment.

The researcher, apart from finding out if the teaching-learning strategies were adapted, also wanted to find out the extent to which certain teaching and learning strategies were used in inclusive classes. Their responses were rated on a five point type rating scale where very large - 5, large extent - 4, small extent - 3, very small extent - 2, smallest extent - 1. The study findings were presented in form of tables using frequencies and their percentages as well as means. Table 3 shows the results.

Table 3: Teachers' responses on the extent to which
certain teaching-learning strategies are used in inclusive ECD classes

Statement	Very large f (%)	Large extent f (%)	Small extent f (%)	Very small extent f (%)	smallest extent f (%)	Mean
Co teaching (when two educators work together to plan, organize, instruct and make assessments on the same group of students sharing the same classroom	4 (11.8)	3 (8.8)	5 (14.7)	9 (26.5)	13 (38.2)	2.29
Collaborative planning and teaching (teacher receives information from other school professionals, parents and plan lessons that cater for individual needs)	4 (11.8)	18 (52.9)	6 (17.6)	3 (8.8)	3 (8.8)	3.50
Pull out model (teachers pull pupils out of their general education classes and work with them in small individualized groups)	6 (17.6)	4 (11.8)	9 (26.5)	6 (17.6)	9 (26.5)	2.68
Individualized education program (teacher uses a written education plan designed to meet a child's learning needs)	13 (38.2)	18 (52.9)	0 (0.0)	1 (2.9)	2 (5.9)	4.15
Universal design for learning (teaching and learning that accommodates individual differences)	6 (17.6)	22 (64.7)	5 (14.7)	0 (0.0)	1 (2.9)	4.51
Mediated learning (Teacher intervenes where a learner has difficulty in understanding)	11 (32.4)	19 (55.6)	0 (0.0)	0 (0.0)	4 (11.8)	4.21
Learning by doing (teacher provides learners with activities that require manipulation and exploration)	10 (29.4)	19 (55.9)	0 (0.0)	1 (2.9)	4 (11.8)	4.24

Group work (teacher allows learners to work in different groups like when modeling, drawing etc.)	2 (5.9)	26 (76.5)	0 (0.0)	1 (2.9)	5 (14.7)	4.26
Mean average						**3.93**

Key: M = Mean, Very large (4.5 – 5.00), Large (3.5 – 4.4), Small (2.5 – 3.4), Very small (1.5 – 2.4), Smallest (1.00 - 1.4)

From Table 3, the study findings revealed that universal design for learning was the most embraced teaching and learning strategy(M=4.51) while co- teaching was not much embraced by the teachers (used to a smaller extent)(M=2.29)

With a mean of 3.93: these findings indicated that learning strategies are adapted to a large extent.

To add to these quantitative findings, findings from the interviews were also presented as shown by the quotes below.

"One of our goals in this school is to ensure that our teachers attend to the needs of all the learners. And because we have inclusive education; we try to emphasize the use of adapted teaching methods so as to cater for the differences and needs of each learner in the classrooms." Head teacher 8

"We acknowledge that learners learn differently especially those with special needs, therefore we ensure that teaching and learning methods cater for the needs of all learners. As a school, we keep files for each learner where we know their strengths and weakness and therefore ensure that they receive extra support from the teacher in the areas that challenge them I have faith in my teachers since we organize workshops to equip on how to handle these learners and diversify their teaching styles for their sake them." Head Teacher 4

According to the findings from both head teachers, most inclusive schools in Kisumu County were trying to adapt their teaching and learning methods in order to cater for diversity in their classes. These findings agree with those from the teachers that teaching and learning strategies were adapted.

4.1 Extent of adaptation of teaching and learning strategies

From the qualitative findings, head teacher 8 indicated that being in an inclusive school, they try to accommodate all learners by adapting the teaching and learning methods in order to ensure that their learner participated fully in the learning process. Head teacher 4 indicated that they keep progress document for these learners in order to provide extra support for them in their areas of difficulty. He also indicated that teachers are trained to diversify teaching methods and therefore these means they are able to vary them according to the need of each learner.

Results from the observation schedule indicated that teachers adequately varied their teaching methods (to a large extent) and Extra time was provided for completion of tasks for learners with special needs though not adequately. However, mediated learning was practiced and therefore all learners could benefit from the lesson adequately. It was also observed that peer tutoring was embraced to an adequate extent where learners were observed during some lessons helping one another with the guidance of the teacher.

For instance, in school 10, learners seemed attentive during the teaching and learning process, the teacher was seen using group work and mediated learning most of the time. The teacher was repeating concepts for the sake of learners of learners who were hard of hearing, auditory distractions were reduced for effective learning of those who were hard of hearing, step by step instructions were given to learners and extra time was given for completion of tasks specifically for learners with special needs.

In school 15, learners were seen organized in groups with plenty of materials in a mathematics class, teacher also intervened where individual learners were finding it difficult to move in a task, more of oral than written instructions were given to learners with low vision, peer tutoring was embraced, a lot of materials to enhance learning were provided. From these study findings, majority of the teachers were using methods that met the needs of all learners so that they be comfortable and learn well, therefore, the researcher concludes that the teaching and learning strategies were adapted adequately.

These study findings agree with the findings of by Motitswe (2012) in South Africa who did a case study of teaching and learning strategies and established that teaching and learning strategies used were flexible, there was use of differentiated methods in teaching and cooperative learning was used. She established that the needs of learners with special needs were well catered for during the teaching and learning process hence learners participated maximally and actively in the lessons.

However, these study findings differed with those by Bendová, Čecháčková & Šádková (2014) in Czech which indicated teachers were unprepared in relation to the needs of learners and knowledge, and there was overstaffing and poor methods of teaching in inclusive classrooms. In the current research, it was established that teaching and learning strategies were well adapted to cater for learners' needs in class and therefore they were able to participate effectively it the learning process without struggle or being left out.

This study also agree with a study in Hong Kong by Zhu, Li,& Hsieh (2019) established that the center demonstrated a variety of inclusive practices including peer support, nutrition and health, environment and curriculum accommodation, positive attitudes, use of varied teaching methods, team work and collaboration of professional, teachers and parents. They observed the lack of professional training of teachers in the area of special needs. This was a case study done in one kindergarten in Hong Kong focusing on learners with intellectual disabilities.

Ambrose *et. al*, (2010) argues that inclusive teaching and learning strategies strive to meet the needs of all learners, regardless of background or identity and support their engagement with subject material which helps them to take control of their learning as

they draw relevant connection to their lives and responds to their unique concerns. And therefore, as stated by (UNESCO, 2009), an inclusive school must offer possibilities and opportunities for a range of working methods and individual treatment to ensure that no child is excluded from companionship and participation in the school.

5. Conclusion

The teaching-learning strategies were adapted to a large extent. This was supported by most teachers' responses average mean of 3.93 and 4.44

5.1 Recommendation
From the third objective of the study, the researcher recommends that teachers embrace all inclusive strategies and differentiate their methods in order to maintain interactive inclusive sessions in classes.

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