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EXPLORING THE ASSOCIATION BETWEEN EFFECTIVE IMPLEMENTATION OF INCLUSIVE EDUCATION AND THE PREPAREDNESS OF TEACHERS AND HEAD TEACHERS IN MURANG'A COUNTY, KENYA

Dr. Catherine Nyaguthii Mwarari

Lecturer, Institute of Youth Studies, Tangaza University College, Kenya
P.O. Box 7436 – 01000, Thika, Kenya

Abstract

The preparedness of primary school educators, namely head teachers and teachers towards instruction and supervision of inclusive education is widely assumed to be a critical issue in effective implementation of inclusive education in schools. This study sought to establish the level of preparedness of primary school head teachers and teachers in implementing of inclusive education in Murang'a County, Kenya and to also find out if there is an association between preparedness of head teachers and teachers and effective implementation of inclusive education. A cross sectional survey design was used involving 66 head teachers and 462 teachers from four sub counties in Murang'a county. Data was collected using questionnaires and an observation guide. The study findings established that educator preparedness towards implementation of inclusive education in Murang'a County was inadequate and that there exists a significant positive association between preparedness and level of implementation of inclusive education.

Key Words: *Inclusive Education, preparedness, implementation*

Introduction

Inclusive Education(IE) has been championed as an avenue that guarantees that learners with special needs access relevant quality education. Research indicates that teacher preparedness is a prerequisite to effective operationalization of inclusive educational practices in schools (Ajuwon, et al., 2012; Buford & Casey, 2012; Orphanos & Orr, 2013;) as well as head teachers (Ainscow & Sandill, 2010; Gous, Eloff & Moen, 2013; Oswald

& Engelbretch, 2013). Inclusive education preparedness, is conceptualized as equipping educators with positive attitudes, skills and knowledge in dealing with learners with learners with special needs (Ashan, Sharma & Deppeler, 2012; Gathumbi, et al., 2015). UNESCO (1994) highlights the importance of inclusive education in the Salamanca world conference which underscored the need for governments to institute teacher training programmes that incorporate provision of skills and competencies in inclusive education. Peebles and Mendaglio (2014) aptly note the regular classroom teacher is increasingly expected to “understand a multitude of exceptionalities, manage a diverse classroom, implement differentiated instructional strategies, and make appropriate accommodations for individual needs” (p. 246).

Lack of preparedness of teachers has been cited as an impediment to effective inclusive practices (Agbenyega & Duke, 2011; Orphanos & Orr; 2013; Peter & Nderitu, 2014). Comprehensive practical training on inclusive practices is rightly viewed as critical in teacher preparation for inclusive practices (Buford & Casey, 2012; Fayez, Dababneh, & Jumiaan, 2011). Noteworthy, is the fact that educators’ knowledge and competence in providing inclusive education is likely to impact on their attitudes towards the practice (Zagona, Kurth & Mac Farland, 2017; Ajuwon et al., 2012). This is reiterated by Forlin and Chambers (2011) investigation of pre-service teachers’ perceptions of their preparedness for IE. Utilizing the pre-post design, the study found that training in IE increased the teachers’ competence to work in inclusive settings. Investigation on teacher preparedness of pre-service teachers in the Solomon Islands reported an increase in the post-test’s mean scores on attitudes and self-efficacy and a decrease in the participants concern about being effective in inclusive classrooms (Sharma, Simi & Forlin, 2015).

Preparation for IE practices details that, the teacher is well grounded in knowledge on characteristics of learners with disabilities as well as appropriate teaching strategies for learners with disabilities (Allday, Neilsen- Gatti & Hudson, 2013; Carvalhais & Da Silva, 2010; Srivastava, de Boer, & Pijl, 2015). Studies on teacher’ attitudes of towards IE have revealed mixed findings with some holding positive attitudes (Peter & Nderitu, 2014; Odongo, 2012; Sharma, Simi & Forlin, 2015) and others negative attitudes (Chhabra, Srivastava & Srivastava, 2010; Mwangi and Orodho, 2014; Mukhopadhyay, 2012).

In Kenya, the education of Special Needs Education (SNE) learners has largely been provided in special schools (Ministry of Education, 2018). However, with the increased global move towards IE, Kenya has also enacted legislations and educational policies to facilitate inclusion of SNE learners in regular primary school classrooms (Republic of Kenya, 2008; 2010; & 2012). However, despite an elaborate legal framework, a significant number of SNE learners are still out of school and majority of those in schools are enrolled in special schools and integrated units (Ministry of Education. 2016). Studies carried out in Kenya in the area of IE reveal myriad constraints that threaten to compromise the implementation of effective IE, among them inadequate support from head teachers and regular classroom teachers (Buhere, Ndiku & Kindiki, 2014; Mutuku, 2013, UNESCO, 2007. Would this apparent lack of support of teacher preparedness predispose the negative attitude towards IE?

There is paucity of data regarding concurs with this view and adds head teachers and teachers’ preparedness vis-à-vis IE practices in Kenya since of interest to researchers studying inclusive education in Kenya has been related to attitudes toward inclusive education and challenges towards effective implementation of the same (Buhere & Ochieng, 2013; Mwakachola, 2010; Mundi, 2009; Chomba, 2008). Indeed, Mukhopadhyay, Molosiwa and Moswela (2009) have decried a lack of data on teacher preparedness for inclusive practices in developing countries that would enable establishment of effective teacher education models for inclusive classes.

Assessment of Kenya’s the Primary Teacher Education (PTE) curriculum revealed that the curriculum is yet to adequately respond to calls of reforming teacher education to align it with IE practices. Notably, IE is not a content in the curriculum and the topic on learners with SNE serves only as a basic introduction (Kenya Institute of Education, 2008). This resonates Rieser (2013) study on teacher preparedness in IE which noted a lacuna between pre-service teacher training and IE practices.

The providers of education for pre-service teachers around the world are still largely operating from a teacher-centred pedagogy and have little recent and relevant experience. They do not teach inclusive education principles. When children with disabilities are covered it is in discrete courses based upon the old deficit medical model approach. Student teachers and their educators have little practical experience in inclusive settings (p.136).

Further, an in-service diploma course for head teachers portrayed a lack of in depth coverage of inclusive education issues. Firstly, inclusive education was only a topic under the unit on mainstreaming issues covered in only two pages. This evidently negatively impacted on scope and depth of content. Secondly, only a definition of inclusive learning was provided and a mention of some categories of special needs. Key areas such as concepts in inclusive education, philosophy of inclusive education, characteristic of different categories of learners with special needs, teaching strategies for SNE learners and most importantly for head teachers, strategies for creating and maintaining inclusive schools were all not covered.

It is against this backdrop that the present study from which this paper is taken investigated the level of preparedness of public primary teachers and headteachers in Murang'a county, Kenya and also determine if there is an association between preparedness and effective implementation of inclusive education.

Methodology

The design employed in this investigation was the cross-sectional survey. The population of the study comprised of headteachers and teachers from in primary schools in Murang'a County one of the rural counties in Kenya. Multistage sampling technique comprising of stratified sampling and simple random sampling were were employed to select the participants. Simple random sampling was employed to select four educational zones (50% of the target population) while stratified random sampling was employed in selection of head teachers and teachers. This sampling procedure allowed for sub groups (in this case gender of headteachers and teachers in both lower primary and upper primary). The sample yielded by this procedure was 66 headteachers (14 female and 52 male) and 462 teachers from the 66 primary schools. A questionnaire was used to assess the respondent's preparedness to implement and supervise IE, additionally an observation guide was used to correct data on the extent to which IE practices were implemented. Analysis of data was conducted by use of inferential and descriptive statistics with the aid of the computer software SPSS version 20. The findings were provided in figures, tables and narrations

Results and Discussion

The study sought to establish if SNE learners were enrolled in public primary schools in Murang'a county. A summary of findings is indicated on Table 1.

Table 1: Enrolment of SNE Learners

Special Need	Present		Absent	
	N	%	N	%
Visual impairment	22	33.3	44	66.7
Hearing Impairment	7	10.6	59	89.4
Physical Impairment	32	48.5	34	51.5
Deafblind	1	1.5	65	98.5
Communication Disabled	28	42.4	38	57.6
Autistic	8	12.1	58	87.9
Mentally Disabled	47	71.2	19	28.8
Gifted and Talented	17	25.8	49	74.2
Learning Disabled	55	83.3	11	16.7
Those living in difficult Circumstances	54	81.8	12	18.2

Table 1 indicates that learning disabilities were the majority (83.3%) while Deafblind (1.5%) and hearing impairments (7%) were the least. The findings indicated that SNE learners were enrolled in public primary schools and this is corroborated by other studies conducted in Kenya which found out that SNE learners were enrolled in regular primary schools (Buhere, Ndiku & Kindiki, 2014; KIE, 2011; Mbogi, 2010; Mwangi & Orodho, 2014; Odongo, 2012; Ogolla, 2011). Being in school is one thing and participating in learning is another consequently, the researcher determined the availability of instructional resources appropriate for SNE learners. The findings are shown on Table 2.

Table 2: Availability of Modified Facilities and Equipment

Resource	Adequately Equipped		Poorly Equipped		No Resource	
	N	%	N	%	N	%
Modified Classrooms	16	24.2	31	47.0	19	28.8
Disability friendly playground	14	21.2	37	56.1	15	22.7
Modified Furniture	18	27.3	35	53.0	13	19.7
Modified Equipment	15	22.7	36	54.5	15	22.7
Adapted Curriculum support materials	22	33.3	28	42.4	16	24.2
Adapted Reference Books	20	30.3	26	39.4	20	30.3
Disability friendly school environment	22	33.3	23	34.8	21	31.8
Assistive Devices	18	27.3	21	31.8	27	40.9
SNE Teachers	17	25.8	23	34.8	26	39.4
Support Services (G&C department, medical services peripatetic services etc)	22	33.3	24	36.4	20	30.3

Table 2 shows that there is an acute shortage of resources necessary for effective operationalization of IE with 41% of schools lacking assistive devices; 39.4% having no SNE teachers; 30.3% lacking adapted reference books and 28.8% lacking modified classrooms. These findings imply that though SNE learners were included in regular primary schools, they were hardly participating in learning due to the acute shortage of resources that support IE. These findings concur with other studies (Charema, 2010; Gous, Eloff & Moen, 2013; Mukhopadhyay, Molosiwa & Moswela, 2009; Nyende, 2012).

Preparedness of headteachers and teachers to implement IE

For effective implementation of any curriculum innovation, key implementers need to be well prepared to enable them execute their roles effectively. This investigated the preparedness of headteachers and teachers for implementing inclusive education. Preparedness was conceptualised as: a) participation in SNE training; b) attendance of in-service course on inclusive education; c) level of knowledge on inclusive education possession of knowledge on concepts used in inclusive education; c) skills necessary to support learning in inclusive settings; d) opinion of one's preparedness.

The respondents were required to indicate if they had been trained in SNE and at what level. The responses are shown on Figure 1.

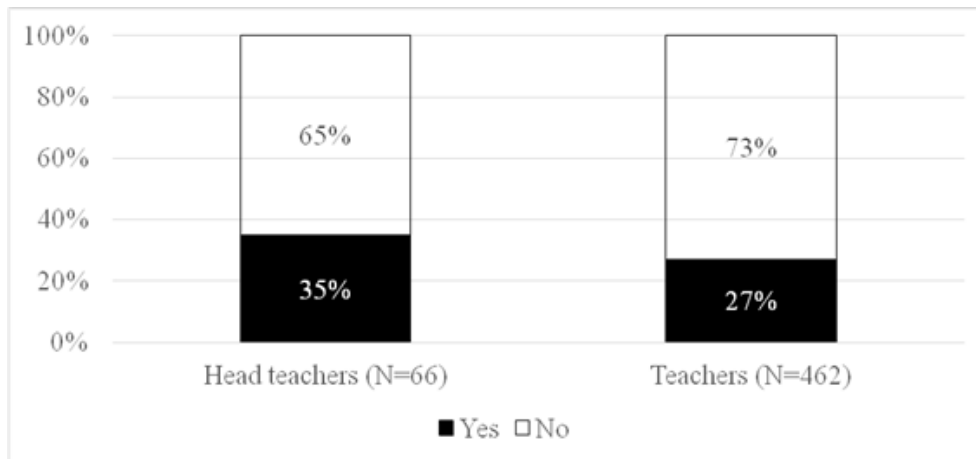


Figure 1: Training in SNE

Findings as shown in Figure 1 indicate that only 27% of teachers and 35% of head teachers had training in SNE. Rogers’s theory of diffusion of innovation (Rogers, 2003), the theory underpinning this research, states that for any innovation (such as IE) to be adopted, implemented and institutionalised, key implementers must be exposed to the innovation to understand how it works. Thus, when most of headteachers and teachers were not trained in IE practices, they evidently were ill prepared to include SNE learners in regular schools. The present study confirms previous studies conducted in Kenya (Bii & Taylor, 2013; Mutuku, 2013; Mwangi & Orodho, 2014; Ogolla, 2011) that indicate that majority of the respondents lacked training in SNE which implies that they have no understanding of inclusive practices. From the foregoing, in-service training on inclusive education becomes a necessity. Consequently, the study sought to determine if the respondents had participated in any in-service training and responses on attendance in in-service training are indicated in Figure 2.

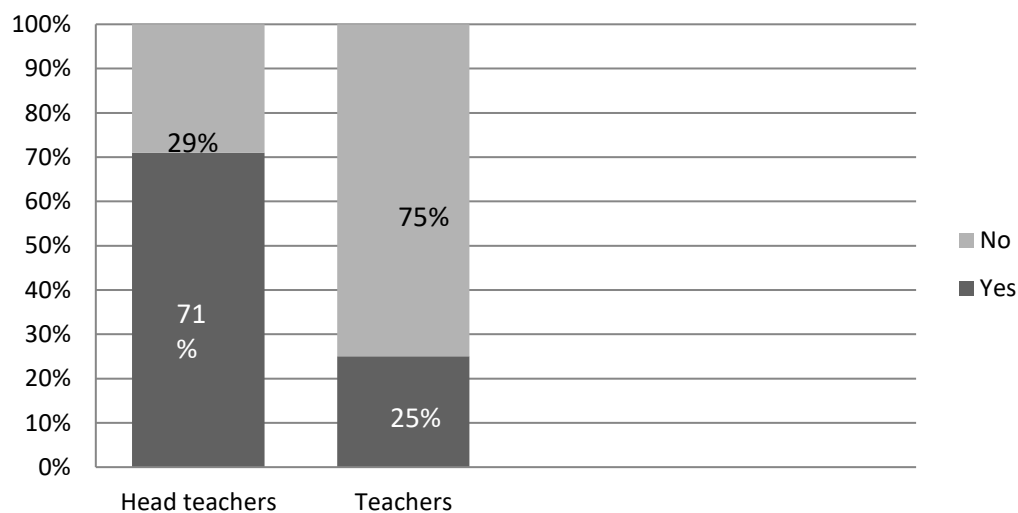


Figure 2: In-service training

The results in Fig. 2 indicate that majority of the head teachers (71%) had participated in in-service training when compared to a paltry (25 %) of teachers who indicated having attained in-service training. This difference may be attributed to the fact that it is compulsory for serving head teachers to attend the distance learning diploma offered by Kenya Education Management Institute (Kenya Education Staff Institute, 2011). Absence of teacher training in IC practices for majority of teachers is reiterated by other studies (Bii & Taylor, 2013; KIE, 2011; Mwangi and Orodho’s, 2014; Peter & Nderitu, 2014). Teachers are the key implementers of

curriculum and if they are not exposed to any training in inclusive education, it obviously impacts negatively not only in their ability to include SNE but also with their acquisition of positive attitudes towards SNE learners. The study further endeavoured to find out teachers and head teachers' level of knowledge of inclusive education.

Teachers and Headteachers' Level of Knowledge of IE

Knowledge of different categories of SNE learners is a significant predictor of effective implementation of inclusive education (Sharma, Simi & Forlin, 2015; Yan & Sin, 2014). The degree to which teachers and head teachers comprehended key issues in IE was sought namely: the different classes of special needs, key concepts in IE and skills for inclusive education. Teachers and head teachers were asked to indicate the categories of special needs they had knowledge about. The findings are presented on Table 3.

Table 3: Participants' Responses on Knowledge of Categories of Special Needs

Category	Head teachers	Teachers
Visual Impairments	24 (36.3 %)	109(23.6%)
Hearing Impairments	19 (28.8%)	83(18.0%)
Physical Impairments	26(39.4%)	79(17.1%)
Mental Handicaps	20(30.3%)	67(14.5%)
Specific Learning Disabilities	19(28.8%)	95(20.6%)
Autism	0 (0%)	31(6.7%)
Communication Disorders	5(7.6%)	0(0%)
Gifted & Talented	8(12.1%)	37(8.0%)
Emotional Behavioural Disorders	8 (12.1%)	19(4.1%)
Children living under Difficult circumstances	8(12.1%)	29(6.3%)
All categories	0(0%)	4(0.9%)

Table 3 indicates that majority of teachers and head teachers have limited knowledge about categories of special needs. The highest number of responses were on physical impairments with only slightly more than 1/3 (39.4 %) of head teachers. No head teachers had any knowledge on Autism or all categories of special needs. Teachers were no better with visual impairments being their best known category with only a mere 23.6 % reporting knowledge about this category. No teacher had any knowledge on communication disorders and only a paltry (4%) of teachers had knowledge on all categories of special needs. The implications of these findings is that teachers and head teachers were unprepared to implement inclusive education since knowledge of characteristics of different various categories of SNE learners was indeed the initial step towards preparedness. Deficiency of knowledge on categories pertaining to special needs is a consistent finding in other studies (Khan, 2011; Njoka et al., 2011; Srivastava, de Boer, & Pijl, 2015). This evidently negatively impacts on their preparedness of key implementers and is an impediment to the success of IE implementation.

To further establish the knowledge level on inclusive education of the respondents the study investigated their comprehension of concepts and skills for inclusive education. The means of items were computed to establish the average score of each knowledge item. The results for teachers are shown on Fig. 3.

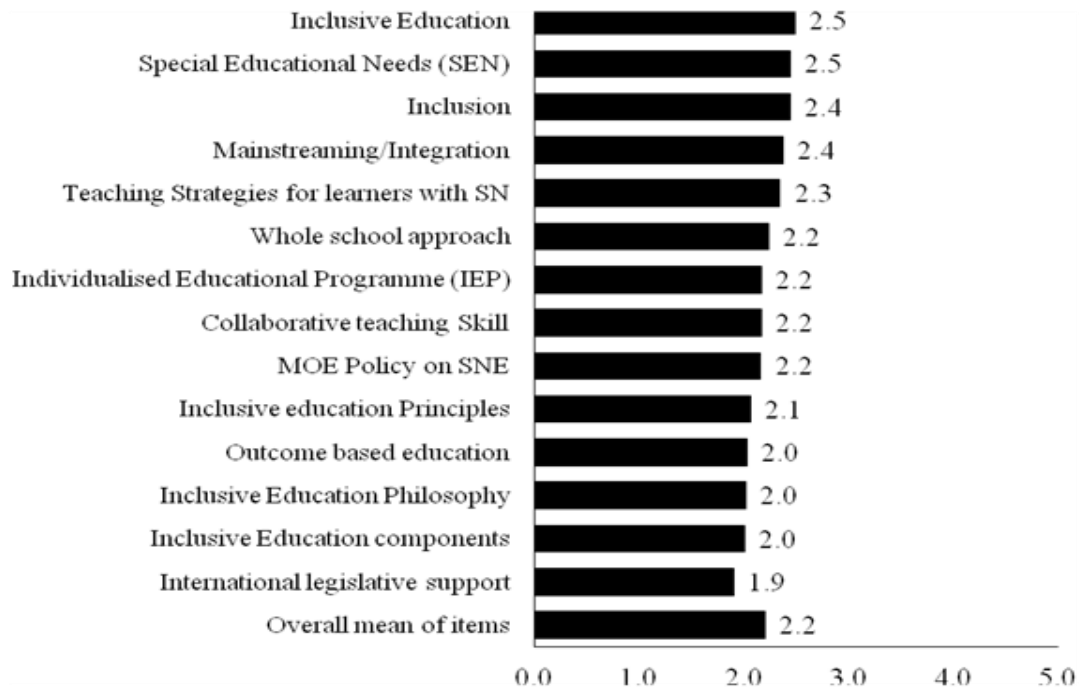


Figure 3: Item Means for Teachers’ Level of Knowledge on Concepts and Skills for IE Implementation

The overall mean of all items on knowledge of concepts on and skills for inclusive education by teachers was 2.2 against a possible high of 5.0 as shown on Figure 3. All items except the concept of SEN and Inclusive Education were on average poorly comprehended by teachers since their mean was each at 2.5. The two concepts are the most basic and are used in everyday conversation in the education sector. These findings revealed a marked lack of knowledge on inclusive education issues. This is expected when majority of teachers indicated that they lacked training in inclusive practices. On the part of head teachers, they comparably portrayed a fair level of knowledge of concepts and skills related to IE than teachers as shown in Figure 4.

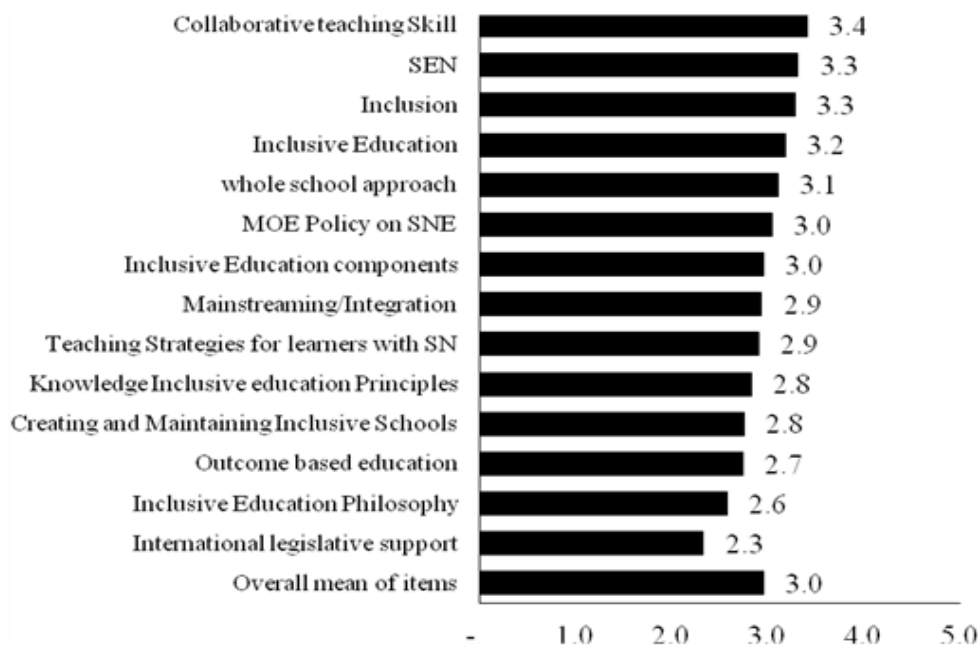


Figure 4: Item Means for Head Teachers’ Level of Knowledge of Concepts in and Skills for IE Implementation

The aggregate mean of head teachers' responses on all items was at 3.0 as shown in Figure 4 indicating a fair comprehension of IE issues. This was attributed to their participation in the KEMI diploma earlier alluded to. The findings largely indicate that headteachers and teachers have limited knowledge on concepts in IE and skills to implement the same. This implies that teachers and headteachers who are the key implementers of IE were inadequately equipped to successfully implement it. Deficiencies in knowledge on concepts and skills in IE is a finding that is corroborated by other studies (Hay, Smit & Paulsen, 2001; Mukhopadhyay, Molosiwa & Moswela, 2009; Peebles & Mendaglio, 2014). Additionally, participants were asked to indicate their feelings on their level of preparedness to implement IE. A summary of their responses were presented on Table 4.

Table 4: Opinion on Overall Preparedness to Implement IE

Opinion	Head teachers		Teachers	
	N	%	N	%
Yes	17	25.8	97	21.0
No	45	68.2	284	61.5
Not sure	4	6.1	81	17.5
Total	66	100.0	462	100.0

Table 4 shows that majority of head teachers (68.2 %) and teachers (61.5 %) were of the opinion that they were not prepared to implement inclusive education. These findings are expected considering that participants portrayed a low level of knowledge about inclusive education issues. The present study's results are consistent with the findings of Buford and Casey (2012); Fayez, Dababneh and Jumiaan (2011); Mukhopadhyay, Molosiwa and Moswela (2009) who observed that majority of teachers felt unprepared to implement inclusive education and attributed this lack of preparedness to an inclusive education training that was largely theoretical. Teacher training in Kenya is also to an extent theoretical considering that the student teacher only interacts with pupils during the teaching practice which lasts for 2 months and one week in the total training time of two years (Republic of Kenya, 2004). Thus, the training may somewhat equip the student teacher with a narrow knowledge base of inclusive education issues but provide no understanding of practical skills needed to include learners with special needs. Further, the study endeavoured to identify areas that participants opined they needed further support. The results are shown on Table 5.

Table5: Participants' responses on areas for further support

Area for further training	Teachers	Head teachers
	N	
Skills to cater for SNE learners	42	
Counselling learners with SEN	2	
Teaching strategies for SNE learners	42	10
International legislative support for IE	7	4
Training on Braille and sign language	10	2
How to identify SNE learners	9	
Assessment of SNE learners	3	3
Integrating learners with SEN	2	
Principles of IE	8	7
Collaborative teaching	10	2
MOE policy on SNE	6	5
Components of IE	6	
Outcome based education	2	2
Whole school approach	5	4
Training on how to develop an IEP	10	
Collaborative teaching	5	

How to cater for learners with autism	7	3
How to teach/cater for learners with EBD	4	1
How to cater for learners with SLD	23	6
How to cater for learners with HI	11	2
How to cater for learners with G&T	2	2
How to cater for PH	3	1
How to cater for MH	8	4
How to cater for VI	5	1
How to cater for children living under difficult circumstances (orphans, HIV.....)	3	9
Everything about inclusive education/all areas in IE	61	5
How to develop materials for learners with SEN	2	
Creating and maintaining inclusive schools		4

Among the teachers who indicated that they needed further support, the majority (61) stated that they needed training on “everything” about inclusive education as shown in the findings on Table 5. Training on teaching strategies for learners with special needs was another priority area for teachers as reported by 42 of them. Means of catering for specific categories of special needs was also pointed at with specific learning disabilities being the highest area of concern with 23 responses. This was anticipated since majority of teachers reported that learners with specific learning disabilities are the majority in regular classes as shown in Section 3. From the findings, head teachers gave the impression that they were satisfied with their current status. The area with the highest response was on instructional approaches for SNE learners with 10 head teachers indicating interest.

Considering that positive attitudes towards IE is an indicator of preparedness, the study sought to establish the attitudes of both teachers and head teachers towards IE using the Attitude Towards Inclusive Education Scale (ATIES) (Wilczenski, 1992). The items in the scale are as follows:

Item no.	Item statement
1	Students who/whose:
2	Academic is 2 or more years below the other students in the grade should be in regular classes
3	Are physically aggressive toward their peers should be in regular classes
4	Cannot move without the help from others should be in regular classes
5	Are shy and withdrawn should be in regular classes
6	Academic achievement is 1 year below other students in the grade should be in regular classes.
7	Speech is difficult to understand should be in regular classes
8	Cannot read standard print and need to use Braille should be in regular classes
9	Are verbally aggressive toward their peers should be in regular classes
10	Have difficulty expressing their thoughts verbally should be in regular classes
11	Need training in self-help skills and activities of daily living should be in regular classes
12	Use sign language or communication boards should be in regular classes
13	Cannot control their behaviour and disrupt activities should be in regular classes
14	Need an individualized functional academic program in everyday reading and math skills should be in regular classes
15	Cannot hear conversational speech should be in regular classes
16	Do not follow school rules for conduct should be in regular classes
16	Are frequently absent from school should be in regular classes

The results for teachers’ attitudes are shown on Figure 5.

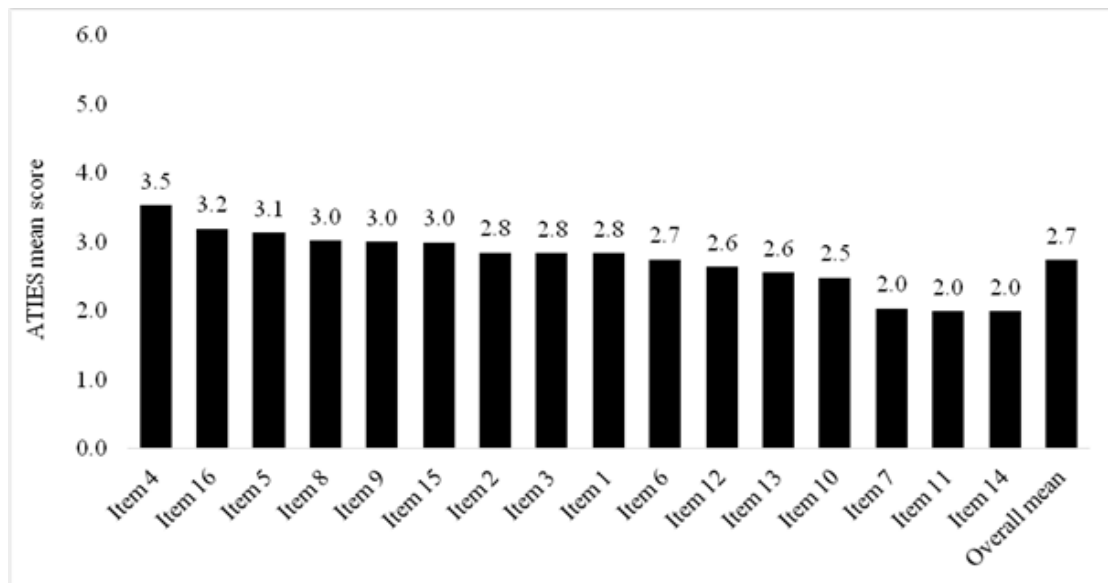


Figure 5: Item Means of Teachers’ Attitudes towards Inclusive Education

The aggregate mean score was 2.7 as shown in Figure 5 against a possible high of 6. Teachers were only slightly accommodative to learners who have emotional and behavioural difficulties (items 4, 8 16 and 15), those with mild learning difficulties (items 5 and 9) but they were not prepared to include learners with: sensory difficulties (items 14, 11 and 7), mental handicaps (item 10), physical disabilities (item 3), severe learning difficulties (items 13, 10 & 6) and those with severe behaviour problems (items 12 & 2). This point as earlier mentioned a lack of preparedness for inclusive practices. s regards head teachers’ attitudes towards IE, their responses are shown on Figure 6.

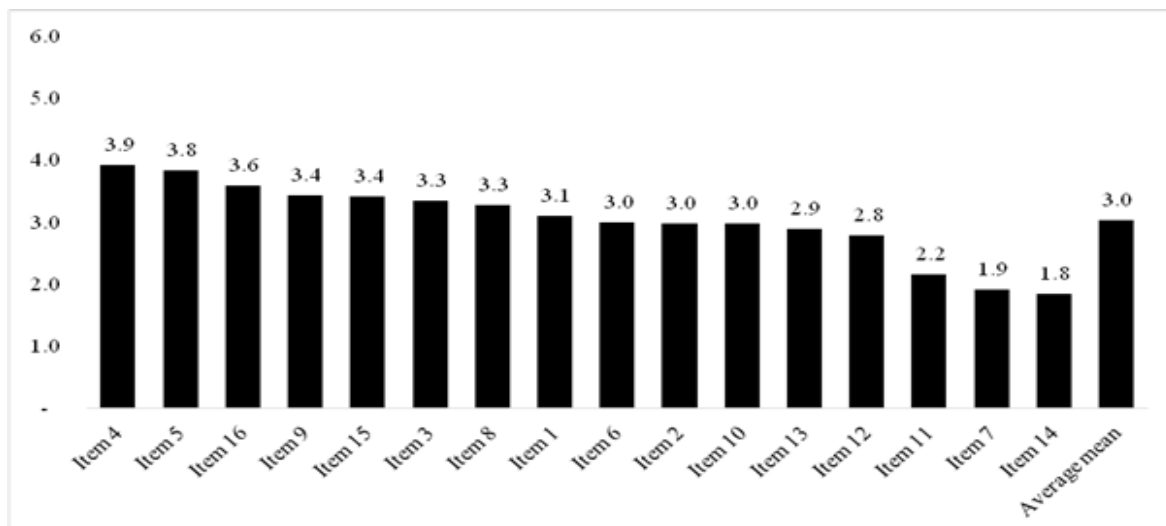


Figure 6: Item means of Head teachers attitudes towards inclusive

Figure 6 shows that the overall mean of head teachers’ responses was 3.0. Compared to teachers, head teachers had more favourable attitudes towards inclusion of SNE learners in regular primary school classes since their responses to 3 items had a mean of over 3.5 unlike teachers who had only one item on this level. Further, the findings show that head teachers were accommodative to learners who have emotional and behavioural difficulties (items 4, 5 and 16). They were also slightly accommodative to those with: mild learning difficulties

(items 1, 5 and 9) mental handicaps (item 10), physical disabilities (item 3), severe learning difficulties (items 13,10and 6). However, they were also not prepared to include learners with sensory difficulties (items 14, 11 and 7), those with severe learning difficulties (item 13) and those with severe behavioural problems (items 12). Similar to teachers, this indicates a lack of preparedness. The present study’s findings indicate that the attitudes of headteachers and teachers towards inclusion SNE learners were negative. The findings on negative attitudes towards inclusion of SNE learners in regular classes are attested by (Chhabra, Srivastava & Srivastava, 2010, Kristensen, Omagor-Loican & Onen, 2003; Mwangi & Orodho, 2014; Mukhopadhyay, 2012). The implication of these findings is that headteachers and teachers were not prepared for inclusive practices considering that favourable attitudes towards accommodating SNE learners as an indicator of preparedness (Buford & Casey, 2012; Peebles & Mendaglio, 2014). Of note is that, research shows that there are mixed findings as regards attitudes of teachers towards IE. While the aforementioned researchers found out that the attitudes of teachers were negative, other researchers observed that teachers held positive attitudes towards IE (Ali, Mustapha & Jelas, 2006, Peter & Nderitu, 2014, Odongo, 2012). This variance is attributed to a number of factors which include type and severity of disability, practical concerns such as time factor and teacher’s self-efficacy (Val et al., 2015).

The study examined the association between implementation of IE and teachers’ and head teachers’ preparedness. A correlation test using Pearson’s r was carried out. It is worthy noting that the variable ‘Implementation of IE is an aggregate of implementation scores for observations on indicators of inclusive education: number of SNE categories enrolled and availability of adapted teaching-learning resources.

Similarly, overall implementers’ attitude score is a composite of both head teachers’ and teachers’ attitude scores while overall implementers’ knowledge score is a composite of both head teachers’ and teachers’ knowledge scores. Headteachers’ and teachers’ preparedness are composites of teachers’ and head teachers’ knowledge scores, attitude scores and training score, pulling factors score and perception of readiness score. The overall preparedness score was an average of teachers’ preparedness and head teachers’ preparedness. The total scores for each variable were then converted to 5 point scale in order to measure the level of implementation of each variable.

Table 6 shows the descriptive statistics and the correlation matrix of the variables.

Table 6: Pearson’s Correlation Matrix for Overall Implementation of IE Score and Preparedness

Pearson’s correlation matrix for Overall implementation of IE score, preparedness

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Overall level of implementation of IE	1.44	.40	1									
2. Overall participants’ preparedness	2.47	.48	.227**	1								
3. Overall participants’ knowledge	2.58	.67	.163**	.899**	1							
4. Overall participants’ attitude	2.35	.46	.234**	.770**	.412**	1						
5. Level of head teachers’ preparedness	2.71	.57	.102*	.590**	.534**	.449**	1					
6. Level of teachers’ preparedness	2.22	.77	.215**	.808**	.723**	.626**	0.02	1				
7. Head teachers’ attitude	2.46	.58	.149**	.472**	.288**	.562**	.784**	.01	1			
8. Head teachers’ knowledge	2.96	.77	.021	.514**	.571**	.237**	.882**	-.008	.400**	1		
9. Teachers’ knowledge	2.21	1.10	.184**	.738**	.822**	.338**	0.04	.886**	.07	0.001	1	
10. Teachers’ attitude	2.24	.77	.169**	.570**	.278**	.779**	-0.1	.745**	-.08	0.001	.351**	1

N=462; * p<.05; ** p<.01.

Table 6 indicates that the overall level of implementation of IE in Murang'a County was approximated low ($M=1.44$, $SD=.40$; out of the 5 optimal points). This means therefore that the level of inclusive education implementation in the County is at 28.8%. Head teachers' knowledge level had the highest score rating ($M=2.96$, $SD=.77$) meaning that the level of head teachers' knowledge about inclusive education in the county was at 59.2%.

Deliberating to the findings of the correlation in Table 5 implementation of IE had a significant positive association with overall implementers' preparedness ($r=.247$, $p<.01$) at 95% confidence. Similarly, there was a significant positive correlation between the overall implementation score and teachers' preparedness ($r=.215$, $p<.01$) and head teachers' preparedness ($r=.102$, $p<.05$). It is also clear that there is no correlation between the overall implementation score and head teachers' knowledge score ($r=.021$, $p>.05$). Additionally, the findings indicated that implementation of IE has a significant positive association with overall implementers' attitude score ($r=.234$, $p<.01$) and overall implementers' knowledge score ($r=.163$, $p<.01$) at 95% confidence.

As can be seen in the correlation table, there is inter-item correlation. It should be noted that this does not mean there is heteroscedasticity in the data but it so because several variables in the table are aggregates of other variables. The results of the study indicate that there was a positive correlation between teachers' and head teachers' preparedness and implementation of IE. These findings occur with other studies (Buford & Casey, 2012; Forlin & Chambers, 2011; Kuyini & Desai, 2007; Mukhopadhyay, Molosiwa & Moswela, 2009; Orphanos & Orr, 2013; Peebles & Mendaglio, 2014). The findings also corroborate Rogers' theory of diffusion of innovation that intimates that for effective diffusion of an innovation, potential implementers need to have both knowledge and favourable attitudes towards the innovation. The findings of this current study thus emphasize on the necessity of ensuring that both factors (knowledge and attitudes) are considered when formulating programmes for preparing headteachers and teachers for IE practices.

Interestingly, the study revealed that no correlation between the implementation of IE and headteachers' knowledge score ($r=.02$, $p>.05$). This implies that there are head teachers who have implemented inclusive education but they have no much knowledge about concepts of IE. This seems to suggest that supervision of implementation of IE, head teacher's favourable attitudes are the most critical. Hoppey and McLeskey (2010) alluded to this in their study of a successful inclusive school in rural Florida, USA. The researcher found out that the headteacher perceived his/her role as simply providing support for teachers so that teachers could do their best work. Evidently, this portends a considerable positive attitude towards inclusion. Secondly, where headteachers demonstration of negative attitudes towards IE displayed by their little effort in pushing the inclusive agenda forward, effective inclusion does not take place (Buhere et al., 2014).

Conclusion and Recommendations

In conclusion, findings indicated that headteachers and teachers in Murang'a County were ill prepared towards implementation of IE. The study found out that majority of headteachers and teachers had limited knowledge on IE in reference to knowledge on categories of special needs, concepts and skills used in IE in addition to the legal framework that anchors IE practices. Nonetheless in comparison, head teachers exhibited a fair comprehension of knowledge of inclusive education than teachers. Results also indicated that majority of teachers had not received any training on SNE and an analysis of the primary teacher curriculum and the in-service diploma for headteachers lacked depth in scope and content on inclusive education hence the low level of knowledge of participants. Majority of respondents held negative towards including SNE learners in regular primary school classes. Further, majority of teachers felt inadequately prepared to implement IE while majority of head teachers indicated they were prepared. It is recommended that there is a dire need to formulate a comprehensive in-service teacher training programme on inclusive education that should emphasize more on the practical aspect of inclusive practices and strategies to foster favourable attitudes towards SNE learners. Additionally, it is essential to review the current PTE curriculum and improve the unit "Children with special

needs” by building up on its scope and depth to enable trainee teachers to be well grounded in inclusive practices. This will evidently lead to effectual implementation of IE ultimately allowing the SNE learner accrue the proven benefits of IE.

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