

**Integration of Special Needs Education in Primary Teacher Education Curriculum
and teacher trainees' skills for instructional efficacy in Kenya**

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Abstract

Though teachers should be responsible for all the children in their classes, whom they should provide with appropriate educational experiences, previous research studies have consistently revealed that most general education teachers lack the capacity to handle learners with Special Educational Needs (SEN), despite the integration of Special Needs Education (SNE) in the Primary Teacher Education (PTE) curriculum. This paper reports the findings of a study that examined integration of SNE in the PTE curriculum and instructional efficacy among teacher trainees in Rift Valley, Kenya. The specific objective was to establish the relationship between integration of SNE in the current revised and rationalized PTE curriculum and the skills acquired by the teacher trainees for instructional efficacy. A descriptive survey of teacher trainers and trainees using questionnaires, interviews and document analysis revealed that though the PTE curriculum was considered adequate in providing the trainees with skills to identify learners with SEN and to manage and cope with them in the general classroom, it did not provide them with the specific skills of adapting and using adapted learning resources, preparing supplementary activities, and preparing Individual Education Plans (IEPs) for SEN. Pearson correlation coefficient revealed a significant relationship of .439 ($p=.022<.05$) between integration of SNE in the PTE curriculum and acquisition of skills among the teacher trainees. It was concluded that integration of SNE in the current revised and rationalized PTE curriculum was inadequate to provide skills for SNE to the teacher trainees, yet there is a significant relationship between curriculum integration and acquisition of skills. It is recommended that the integration of SNE in the PTE curriculum should be enhanced to ensure acquisition of specific skills by the teacher trainees on how to cater for children with SEN in the general classroom. This is hoped would contribute to promoting inclusive education in Kenya in response to the fundamental principle of education for all.

Key words: Curriculum integration, skills, instructional efficacy, special needs education, inclusive education.

1.1 Introduction

It is widely acknowledged that the teacher is an essential component in the implementation of any curriculum. Though teachers should be responsible for all the children in their classes including those with special needs whom they should provide with appropriate educational experiences, an experience written by a student teacher cited by Weinstein and Mignano (2007, p. 384-385) is indicative of common occurrences in the general education classroom thus:

There is a boy in my classroom who goes to a resource room every day for reading and math. When he is in the classroom, he sits in a back corner, basically doing nothing. My cooperating teacher gives him some worksheets to do, but doesn't even really monitor to see if he does them. He never includes him in any of the class activities. Sometimes the boy wanders around the room, looking at what the other kids are doing, and I get the feeling he'd like to do the lesson too, but my teacher doesn't make any attempt to involve him. When I asked about the boy, my teacher told me he can't do anything for the child, that his learning disabilities are just too great. He said he doesn't have the necessary expertise to help him – that he's not a special educator. So he just lets him sit. It makes me want to cry.

It is not unusual therefore for regular classroom teachers to feel that they lack the professional preparation necessary to help children with special needs. Yet legislation has encouraged a trend in recent years toward including more students with disabilities in general education classes as proclaimed by the Salamanca Statement on Principles, Policy and Practice in Special Needs Education (SNE) thus:

Those with Special Educational Needs (SEN) must have access to regular schools which should accommodate them with child-centred pedagogy capable of meeting these needs, regular schools with inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system (UNESCO, 1994, p. viii-ix).

The exclusion of these children from school or the learning process is blamed on inadequate preparation of regular teachers for working in diverse classrooms, and in particular failure to equip them with the confidence, knowledge and skills to effectively support learners with disabilities (Lewis & Bagree, 2013). Villa, Thousand, and Chapple (1996, p. 42), are emphatic that:

The historically separate general and special education teacher preparation programs have not provided teacher trainees with intensive training and experience to develop the necessary skills and dispositions...they actually need to accommodate widely varying student needs.

Such teachers lack instructional efficacy and attention therefore needs to be paid to preparing teachers who are capable of including children with disabilities in the education process and the role of the teacher education curriculum is imperative hence the integration of SNE in the PTE curriculum in Kenya.

1.2 Statement of the Problem

Inclusive education entails the ability of the regular classroom teacher to identify learners with SEN and to put in place various intervention measures to facilitate their learning. However, it has been noted that there is a global shortage of teachers who are sufficiently trained and motivated to include children with disabilities in regular schools (Lewis & Bagree, 2013). Moreover, previous research studies have consistently revealed that most practicing teachers lack the capacity to handle learners with SEN despite the integration of SNE in the Primary Teacher Education (PTE) curriculum. The teachers often lack confidence in their ability to adapt their skills to teaching

learners with special needs in the regular classroom. Instructional efficacy among the teachers is determined by the skills on SNE acquired through the PTE curriculum yet it is not evident from previous studies whether there is a relationship between the aspects of SNE integrated in the PTE curriculum and the inability of the general education teachers to cater for learners with SEN.

It is based on this premise that this study sought to establish the relationship between the integration of SNE in the current revised and rationalized PTE curriculum and the skills acquired by the teacher trainees for instructional efficacy. The study was guided by the hypothesis that, “There is no significant relationship between the integration of SNE in the PTE curriculum and the skills acquired by the teacher trainees for instructional efficacy”.

2.0 Literature review

2.1 Introduction

For inclusive schools to educate all children together, it requires the development of ways of teaching that respond to individual differences that will benefit all children, because the way teachers teach is of critical importance to inclusion (UNESCO, 2009). This has implications for pre-service and in-service general teacher education which should equip teacher trainees with the confidence and skills to effectively support learners with disabilities. In this respect Operti (2010) observes that, teacher education curricula (pre-service and in-service), must be reviewed to prepare teachers for an inclusive education and cites UNESCO (2008, p. 16), that member states should “Train teachers by equipping them with the appropriate skills and materials to teach diverse student populations and meet the diverse learning needs of all different categories of learners “. Indeed they need to be sufficiently confident and skilled to meet the specific learning needs of students with disabilities (Lewis & Bagree, 2013).

2.2 Student Teachers’ Skills in SNE

Teaching according to Leyden (1985), is a skilled activity that requires an essential blend of training, ability and experience. She further points out that if at any one point in time teachers find themselves faced with situations and with professional challenges for which they may not necessarily be trained or equipped to deal with, they may feel that their own personal skills, acquired through previous training and experience, are not adequate to meet the challenge. The teacher education curriculum should therefore furnish its trainees with adequate skills to meet the needs of the diverse learners in their classrooms.

Teaching skills that a general education teacher should possess include preparing relevant and appropriate teaching and learning materials using locally available materials, taking into account individual learner differences such as learning styles, gender, age, psychosocial needs and behaviour, creating a positive learning environment in the classroom conducive for learning, managing large mixed-ability classes effectively, and using a range of behaviour management strategies among others (MOE, 2009). It includes competence at adapting and modifying curriculum and instruction to meet the needs of all of their students, including those students who have disabilities that affect their learning. Hence the role of teacher education is to equip teacher trainees with basic skills for identifying children with special learning needs (Lewis & Bagree, 2013; ROK, 1988, 1994; UNESCO, 1994), specific strategies for teaching children with disabilities, skills in collaborative or team teaching (LePage et al. 2010; Lewis & Bagree), skills in making curricular and instructional accommodations and modification (Laarhoven et al. 2007; Stanovich & Jordan, 2002), which Laarhoven et al. note is more useful to the teachers than just the knowledge of diagnostic criteria and characteristics of specific disabilities. Skills on how to use teaching/learning resources (Kurumei, 2012) and how to evaluate learners with SEN in the regular classroom

(Giangreco & Doyle, 2000) are also imperative. Moreover, teachers' work has been noted to be enhanced by pedagogical strategies that show them how it is possible for classroom teachers to support the learning of all students (Florian et al., 2010). Such teachers would be able to gear instruction to the differences between learners hence create an inviting classroom in which students see themselves as valuable, worthwhile, and important people irrespective of their exceptionalities (Pudlas, 2004).

However, research studies have consistently revealed that too few programmes teach the skills teachers actually need to accommodate widely varying student needs (Lyon, Vaassen, & Toomey as cited by Thousand & Villa, 1995; Parsad, Lewis & Farris, 2001 as cited by Lin, et al. 2008) and as a result, teacher graduates felt less well prepared to identify and address special learning needs (Darling-Hammond, 2002). This inadequate preparation according to Thousand and Villa (1995, p. 42.) is blamed on,

...the current division of teacher preparation programs into separate, distinct and categorical programs-general education verses special education and its various sub-categories of learning disabilities, emotional and behavioural disorders...causes educators-in-preparation to neither expect nor have the know-how to create heterogeneous learning experiences for students of differing abilities.

This concurs with findings from Kenya, that most practicing teachers do not exhibit skills of identification and intervention (Kipruto, Misigo & Simiyu, 2006; Mbasu, 2001; Njuguna, 2012), yet these skills are very essential especially in an inclusive setting. This is despite the integration of SNE in the PTE curriculum which should provide adequate training in inclusive teaching methods (Lewis & Bagree, 2013) resulting in instructional efficacy among teacher trainees. In contrast a programme offered by Leonard Cheshire Disability has provided teachers with confidence and skills in teaching children with disabilities which is attributed to the balance between theory and practice and exposure to children with specific needs (ibid).

KISE (2003, p. 56) sums up the role of teacher education in acquainting teacher trainees with skills for handling learners in an inclusive setting in the following statement:

The training of teachers therefore needs to be modified to equip them with skills necessary for the implementation of inclusive philosophy and provide quality teaching that would meet the needs of each individual learner and also meet the national goals of education.

It is therefore important to find out the extent to which these aspects have been integrated in the PTE curriculum and the relationship with the acquisition of skills among the teacher trainees for instructional efficacy.

3 Research Design and Methodology

Descriptive survey research design was adopted in which 27 teacher trainers and a sample of 306 teacher trainees in Primary Teacher Colleges in Rift valley zone participated in the study. The trainees' sample was obtained through stratified and simple random sampling. Both quantitative and qualitative data was collected using questionnaires, interviews and document analysis. Frequencies and percentages were cross tabulated and means were calculated using the SPSS computer programme version 21 and presented using contingency tables and bar graphs. Pearson correlation coefficient (r) was used to determine the relationship between integration of SNE in the PTE curriculum and the acquisition of skills for instructional efficacy among the trainees with the level of significance set at alpha (α) = .05. Coefficient of determination (r^2) was used to quantify the strength of the linear relationship (Cohen, Manion, & Morrison, 2005; Myers & Well, 2003).

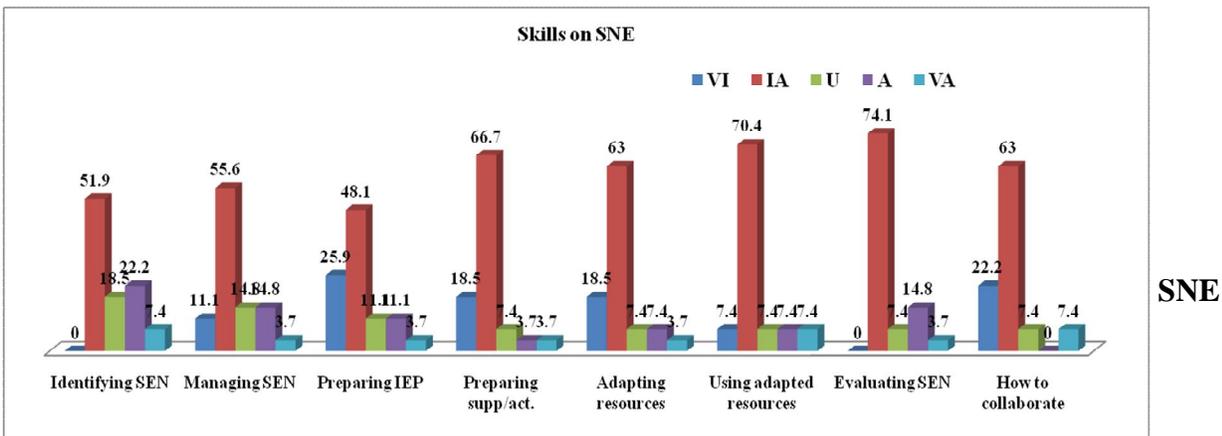
4.0 Results and Discussion

4.1 Introduction

Every teacher should possess teaching skills necessary for them to handle diverse learners (Operti, 2010; UNESCO, 1994) so that they can create an effective learning environment in an inclusive setting. For this reason the role of teacher education in equipping teacher trainees with these skills has received a lot of attention (MOE, 2009; RoK, 1988; UNESCO, 1994). The teacher trainees and trainers were therefore asked to rate the adequacy of PTE curriculum in providing trainees with skills on various aspects of SNE.

4.2 Adequacy of Integration of skills on SNE in the PTE curriculum

The responses of the teacher trainers and trainees on the adequacy of the PTE curriculum in providing trainees with skills for instructional efficacy for inclusive education are presented in the Figure and the Table respectively.



Teacher Trainees' Rating on the Adequacy of the PTE Curriculum in providing them with Skills on SNE

Statement	Subject Options	Extent of adequacy				
		VI	IA	U	A	VA
Identifying pupils with various SEN	Science	10(6.0)	48(28.9)	16(9.6)	63(38.0)	29(17.5)
	Humanities	5(3.6)	20(14.3)	11(7.9)	70(50.0)	34(24.3)
	Total	15(4.9)	68(22.2)	27(8.8)	133(43.5)	63(20.6)
Managing and coping with pupils with SEN in the general classroom	Science	14(8.4)	58(34.9)	23(13.9)	58(34.9)	13(7.8)
	Humanities	11(7.9)	29(20.7)	10(7.1)	71(50.7)	19(13.6)
	Total	25(8.2)	87(28.4)	33(10.8)	129(42.2)	32(10.5)
Preparing individual education plans (IEP) for pupils with SEN	Science	24(14.5)	67(40.4)	27(16.3)	38(22.9)	10(6.0)
	Humanities	18(12.9)	53(37.9)	13(9.3)	44(31.4)	12(8.6)
	Total	42(13.7)	120(39.1)	40(13.1)	82(26.8)	22(7.2)
Preparing supplementary activities for pupils with SEN	Science	33(19.9)	65(39.2)	22(13.3)	38(23.0)	8(4.8)
	Humanities	22(15.7)	44(31.4)	21(15.0)	42(30.0)	11(7.9)
	Total	55(18.0)	109(35.3)	43(14.1)	80(26.1)	19(6.2)
Adapting learning resources for pupils with SEN	Science	28(16.9)	73(44.0)	18(10.8)	34(20.5)	13(7.8)
	Humanities	20(14.3)	44(31.4)	16(11.4)	39(27.9)	21(15.0)
	Total	48(15.7)	117(38.1)	34(11.1)	73(23.9)	34(11.1)
Using adapted learning resources with pupils with SEN	Science	40(24.1)	62(37.3)	22(13.3)	31(18.7)	11(6.6)
	Humanities	20(14.3)	46(32.9)	19(13.6)	38(27.1)	17(12.1)
	Total	60(19.6)	108(35.1)	41(13.4)	69(22.5)	28(9.2)
Evaluating learners with SEN	Science	29(17.5)	56(33.7)	26(15.7)	45(27.1)	10(6.0)
	Humanities	18(12.9)	42(30.0)	12(8.6)	48(34.3)	20(14.3)
	Total	47(15.4)	98(32.0)	38(12.4)	93(30.4)	30(9.8)
How to collaborate or team-teach with special education teachers	Science	32(19.3)	54(32.5)	33(19.9)	39(23.5)	8(4.8)
	Humanities	23(16.4)	41(29.3)	17(12.1)	37(26.4)	22(15.7)
	Total	55(18.0)	95(31.0)	50(16.3)	76(24.8)	30(9.8)

With regard to the teacher trainers, most of them considered the PTE curriculum inadequate in providing the teacher trainees with skills in all the identified aspects of SNE as presented in the Figure. Preparing supplementary activities for pupils with SEN was rated inadequate by 85.2% trainers, so was how to collaborate or team-teach with special education teachers. Regarding adapting learning resources for pupils with SEN, 81.5% trainers considered it inadequate whereas 77.8% indicated that the skill of using adapted learning resources with pupils with SEN was inadequately provided through the PTE curriculum. Evaluating learners with SEN and preparing Individual Education Plans (IEPs) for pupils with SEN was rated inadequate by 74.1% trainers. A

majority of 66.7% and 51.9% trainers regarded the PTE curriculum inadequate in providing teacher trainees with skills of managing and coping with pupils with SEN in the general classroom, and identifying pupils with various SEN respectively.

The responses of the teacher trainees as shown in the Table, indicate that the PTE curriculum adequately prepared the teacher trainees in only the skills of identifying pupils with various SEN as indicated by 196 (64.1) teacher trainees, and managing and coping with pupils with SEN in the general classroom affirmed by 161 (52.6). However, a majority of the teacher trainees considered the PTE curriculum inadequate in providing them with skills of using adapted learning resources with pupils with SEN 168 (54.9), adapting learning resources for pupils with SEN 165 (53.9), preparing supplementary activities for pupils with SEN 164 (53.6), preparing Individual Education Plans (IEPs) for pupils with SEN 162 (52.9), how to collaborate or team-teach with special education teachers 150 (49.0), and evaluating learners with SEN 145 (47.4).

It is apparent from the findings that though the teacher trainees considered the PTE curriculum adequate in providing them with skills to identify learners with SEN and to manage and cope with them in the general classroom, the trainers held a contrary opinion in line with previous findings that most practicing teachers do not exhibit skills of identification and interception (Mbasu, 2001; Njuguna, 2012). The teacher trainees' response may be attributed to the coverage of the two aspects of SNE in the PTE curriculum as revealed in the syllabus and textbook analysis. Elaborate content was noted on the characteristics of the different categories of learners with SEN and intervention measures in the classroom. However, the curriculum did not prepare the trainees to perform specific activities that would enable such learners to benefit from the general classroom such as Individual Education Plans (IEPs) and supplementary activities. Early identification is intended to help the teachers plan their instructional activities effectively and develop IEPs if required (Distance Education Programme- Sarva Shiksha Abhiyan (DEP-SSA), 2008); an essential working document for teachers to plan, deliver then evaluate a teaching intervention with a pupil with a learning difficulty hence every teacher should be able to construct and implement (Garner, 2009). It is a way to ensure that all children have access to the general education curriculum and determining and ensuring their progress (LePage et al. 2010). The PTE curriculum therefore did not provide teacher trainees with skills on how to prepare IEPs and supplementary activities as intervention measures for children with SEN.

Skills of adapting and using adapted learning resources for learners with SEN were rated inadequate implying that the teacher trainees were not adequately furnished with these skills through the PTE curriculum. The teachers therefore would not be able to either adapt or use adapted learning resources for SEN in line with previous findings (KISE, 2010; Sitienei, 2007). Yet learning for such learners requires appropriate adaptation of educational resources and the learning environment to cater for individual differences in learning (MOE, 2009; ROK, 2012a; UNESCO, 1994, 2009). This could be blamed on lack of exposure to the preparation and use of resources for SNE because such resources were either inadequate or lacking in the PTCs as indicated by both the teacher trainers and trainees in the open response items and the interview in line with previous findings.

Adapting and using adapted resources with children with SEN was also not adequately addressed in the PTE curriculum as revealed by the analysis of the Education syllabus and textbooks. The trainees further pointed out that learning on aspects of SNE was just theoretical yet the acquisition of skills is through practical activities. In fact one teacher trainee, in the open response items, stated that he had never seen resources for SNE. This explains why the teacher trainees considered the acquisition of knowledge on SNE adequate but rated the skills inadequate. This explains why regular teachers have been noted in previous studies to often lack confidence in their ability to adapt

their skills to teaching learners with SEN (Kipruto, Misigo & Simiyu, 2006; Kisanji, 1999; KISE, 2010; Mbasu, 2001; RoK, 2009).

The inadequacy of the PTE curriculum in providing teacher trainees with skills of evaluating learners with SEN implies that the teacher trainees would not be able to evaluate learners with SEN yet any instruction would be incomplete without some form of evaluation (Giangreco & Doyle, 2000). This finding concurs with previous findings (ROK, 2012b) that learners with SEN have not been accepted in the regular classroom due to the rigorous examinations which are not adapted to meet their learning needs. This has been noted as a major hindrance to the success of inclusive education (ibid).

Collaborating with special education teachers was considered inadequate in line with the findings of Scruggs, Mastropieri, and McDuffie (2007) in which teachers reported very little training on co-teaching yet it is recognised as an important aspect of inclusive education in which the regular and the special teacher complement their skills in the classroom (LePage et al, 2011; Ripley, 1997; Ronoh, 2005; Spring, 2002). Team teaching benefits both the teachers and the learners (Scruggs, Mastropieri, & McDuffie, 2007). This however is noted as an aspect that has not been looked into adequately even in research (LePage et al, 2011). Inadequate coverage of co-teaching skills was affirmed in the document analysis in which the skill though outlined in the syllabus as one of the methods of teaching, was just mentioned and misconceived in the textbooks as a method where teachers share topics or parts of a lesson (Kisirikoi, Wachira, & Malusu, 2008; Thungu, Wandera, Gachie, & Alumande, 2008) and no mention is made on how it could be used when handling learners with SEN.

It is important to note that a comparison of the subject options as shown in the Table revealed that the percentage of teacher trainees who considered skills in aspects of SNE in the PTE curriculum adequate was higher in the Humanities than in the Science and vice versa in all aspects that were considered inadequate. For example, whereas 196 (64.1) teacher trainees considered the skill of identifying pupils with SEN adequate, a higher proportion of 104(74.3) were in the Humanities while 92(55.5) were in the Science subjects. Out of a total of 168 (54.9) teacher trainees who considered the PTE curriculum inadequate in providing them with skills of using adapted learning resources with pupils with SEN, 102(61.4) were in the Science and 66(47.2) in the Humanities subject options. Comparatively therefore, more trainees specialising in the Science group of subjects considered the PTE curriculum inadequate in providing skills on SNE than those in the Humanities. This may be attributed to the fact that handling learners with SEN is more challenging especially in the teaching of Mathematics and the Sciences which are more practical in nature and require access to adaptive devices (NCERT, 2006) which apparently are noted to be lacking/inadequate in the Primary Teacher Education Colleges.

4.3 Relationship between the integration of SNE in the PTE curriculum and the adequacy of the skills acquired by the teacher trainees for instructional efficacy

The results for the Pearson Correlation Coefficient show a moderately significant coefficient of .439 on the relationship between the integration of SNE in the PTE curriculum and trainees' acquisition of skills. The coefficient is significant at $\alpha=.05$ because $p=.022<.05$, hence the null hypothesis that there is no significant relationship between integration of SNE in the PTE curriculum and the adequacy of skills acquired by the teacher trainees for instructional efficacy is rejected. This indicates a moderate positive relationship between the two variables and co-variation among them (Cohen & Manion, 1989; Cohen, Manion, & Morrison, 2005). Integration of SNE in the PTE curriculum is related to trainees' acquisition of skills which would consequently promote

instructional efficacy among the trainees. This implies that when there is an increase (adequacy) in the integration of SNE in the PTE curriculum, development of instructional skills among the teacher trainees increases.

The computed Coefficient of determination (r^2) (Myers & Well, 2003) gave .0193 which expressed as a percentage indicates that 19.3% of the variance in skills acquired by the teacher trainees is accounted for or explained by the variation in integration of SNE in the PTE curriculum. This is a low percentage implying that integration of SNE in the PTE curriculum is not adequate in line with the responses of the teacher trainers and trainees and the findings from the analysis of the PTE Education syllabus and textbooks.

This concurs with previous findings that general education teachers did not possess the necessary skills to meet the needs of children with SEN in the general classroom (Dingle, et al., 2004; Kipruto, et al., 2006; Mbasu, 2001). It is for this reason that the general education teachers have been noted to often lack confidence in their ability to adapt their skills to teach children with SEN (Kisanji, 1999; KISE, 2010). They are said to lack the technical know-how on how to handle such learners (Kipruto, et al.). Yet it requires special skills/adaptation of teaching skills to handle effectively children under inclusive education (Giangreco & Doyle, 2000; Kurumei, 2012).

It is important to note that the inter-relationship between knowledge and skills was .691 being significant at $\alpha = .01$. This implies that as the acquisition of knowledge on SNE increases, the acquisition of skills also increases. This agrees with Schunk (1996) that becoming knowledgeable in a particular subject increases self-efficacy in performing activities related to the subject in question. Such is the practice in the Leonard Cheshire Disability Centre where as cited by Lewis and Bagree (2013), there is a balance between providing teachers with theoretical practices of inclusive education and practical skills leading to instructional efficacy. Such teachers feel well prepared to handle diverse learners in an inclusive classroom (Courtney, 2000). If such an approach was applied in the general teacher education programme, the instructional efficacy would be increased among the teacher trainees, which would subsequently contribute to the success of inclusive education hence attainment of education for all.

5.1 Conclusion

Despite the incorporation of aspects of SNE in the PTE curriculum, the curriculum was not adequate in providing the teacher trainees with instructional efficacy for inclusive classrooms. Acquisition of skills in SNE by the teacher trainees for instructional efficacy is inadequately provided in the PTE curriculum yet there is a significant relationship between the extent to which SNE is integrated in the PTE curriculum and acquisition of skills. Most inadequate were the important skills of adapting and using adapted learning resources for learners with SEN, preparing supplementary activities for pupils with SEN, and preparing Individual Education Plans (IEPs) for SEN. Other SNE skills such as collaboration with special education teachers and evaluation of learners with SEN did not receive adequate attention in the PTE curriculum. It is only the skill of identifying pupils with various SEN that the teacher trainees considered adequate, which however was negated by the teacher trainers who considered all aspects of the PTE curriculum on skill acquisition inadequate.

5.2 Recommendations

The PTE curriculum should be enhanced to ensure practical development of skills by teacher trainees on how to handle learners with SEN instead of mere acquisition of knowledge. Teaching/learning resources for SNE should be provided in the PTCs for the trainees to get hands on experience during training. This should be commensurate with improvement of teacher

educators' capacities through both local exposure through in-service and pre-service training and networking with other countries which have successfully integrated SNE in teacher education instead of allocating responsibility for inclusion to a small number of isolated experts which perpetuates segregation. This is hoped would contribute to promoting inclusive education in Kenya in response to the fundamental principle of education for all.

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