

Integration of Special Needs Education in Primary Teacher Education Curriculum and Acquisition of knowledge by Teacher Trainees in Kenya

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Abstract

This paper discusses the findings of a research study on the relationship between integration of SNE in the PTE curriculum and instructional efficacy in terms of knowledge among the teacher trainees in Kenya. Quantitative and qualitative data was collected from 27 Education teacher trainers and a sample of 306 trainees using questionnaires, interviews and document analysis. The findings revealed that knowledge on categories of learners with SEN, their characteristics and how different impairments affect learning, were adequately provided through the PTE curriculum, however aspects of knowledge that related to skills (learning to do) such as intervention measures for pupils with SEN in the general classroom, procedures for identifying and assessing pupils with SEN, and resource materials and facilities for pupils with SEN, were inadequate. Pearson correlation coefficient of .417 indicated a moderate positive relationship between the two variables which is significant at alpha (α) = .05 ($p = .031 < .05$). It was concluded that the teacher trainees did not acquire adequate knowledge on SNE through the PTE curriculum commensurate to the expectations of an inclusive teacher yet it is evident that the adequacy of knowledge is significantly related to the extent to which SNE is integrated in the PTE curriculum. Consequently, it is recommended that the Kenya Institute of Curriculum Development should ensure integration and complete fusion of aspects of SNE in the PTE curriculum during curriculum design to enhance acquisition of knowledge for instructional efficacy among teacher trainees. This would contribute to successful implementation of inclusive education in Kenya.

Key words: Inclusive education, curriculum integration, knowledge, special educational needs, instructional efficacy.

1 Introduction

1.1 Background

Teaching in today's primary classroom is becoming more challenging than ever before, part of the challenge stemming from the fact that a majority of children with Special Educational Needs (SEN) are found in general education classrooms with their nondisabled peers (Weinstein & Mignano, 2007; Stanovich & Jordan, 2002; the National Development Plan, 2002-2008; and Sessional Paper No. 1, 2005). However, there is inadequate capacity among general education teachers to handle learners with special needs (Mbasu, 2001). This has been blamed on the separate teacher education programmes for general and special education. This, according to Florian, et al. (2010), is based on the premise that different kinds of teachers are needed for different types of schools serving different kinds of learners. This is further portrayed in Sarason's (1990, cited in Thousand & Villa, 1995, p. 53) lamentation that:

School personnel are graduates of our colleges and universities. It is there that they learn that there are at least two types of human beings and if you choose to work with one of them, you render yourself legally and conceptually incompetent to work with others.

How general teachers can serve all the children with SEN who may be in their classrooms (Weinstein & Mignano, 2007) is therefore an issue of concern.

This affirms the importance of Special Needs Education (SNE) programme for meeting the learning needs of children with SEN and the significance of the role of teacher education curriculum in preparing teachers for implementation of SNE in the general classroom. Careful attention to teacher preparation is therefore imperative to ensure that all children have access to quality education today. This brings to view the relevance and adequacy

of the teacher education curriculum in furnishing the teachers with the competencies necessary for SNE. The perceived threat on development of children with SEN in the regular classrooms vis-à-vis successful implementation of inclusive education as well as the perceived teachers' deficiencies in tackling children with SEN calls for the need to find out the adequacy of the PTE curriculum in preparing teachers in SNE.

1.2 Statement of the Problem

Integration of Special Needs Education (SNE) in the general teacher education curriculum has been recognized as a strategy in preparing teachers for the implementation of inclusive education as noted in the recommendations of various national education commissions, working parties and committees as outlined in national policy documents and international policy frameworks ratified and domesticated by Kenya. In this regard, the content of the current revised and rationalized PTE curriculum which had been noted to be deficient in education for learners with special needs (Koech Report, 1999), has had the SNE component strengthened in the Education subject previously referred to as Professional studies (KIE, 2004). This is based on the hope that such curriculum integration would provide teacher trainees with instructional efficacy in terms of knowledge, skills and positive attitudes to meet the needs of the majority (over 90%) of learners with SEN who are either at home or in the regular classroom with little or no specialized instruction (ROK, 2005, 2012).

However, research has consistently revealed that the general education teachers lack the technical know-how on how to handle these learners. This has often been blamed on inadequate training yet it is not evident from previous studies whether there is a relationship between the aspects of SNE integrated in the PTE curriculum and instructional efficacy. Hence the current study sought to establish the relationship between the integration of SNE in the current revised and rationalized PTE curriculum and acquisition of knowledge among teacher trainees for instructional efficacy in Kenya.

2 Literature review

2.2 Introduction

Curriculum aims at attaining the goals and objectives of education (Abiero, 2009), hence is regarded as an instrument of education. The national teacher training curriculum in Kenya is aimed at preparing teachers to enable them identify learners with various educational needs and teach them accordingly. However, teacher education programmes are often offered in separate institutions offering different distinct curricular due to separation between general and special education, a practice that is evident in Kenya. However, in the move towards inclusive education where all learners are expected to learn together, both general and special teacher education programmes should prepare the teacher trainees to meet the needs of diverse learners in the general classroom. The integration of SNE should therefore enable the teacher trainees to acquire the competencies that would enable them to meet the needs of all learners in their classrooms. The Editorial Focus on Teacher Education in *Enabling Education* (2006, p. 3) points out that:

Every child needs a teacher...who promotes and practices inclusion in education. Children need teachers who know how to make their classes inclusive and how to address the diverse needs of all learners together - even in large under-resourced (general) classrooms.

Such necessity increases expectations on general classroom teachers who need to be educated in line with these expectations. Considering the fact that there has been much dialogue about the particular competencies needed by inclusive teachers as noted by scholars cited by Forlin and Chambers, (2011), teacher education for inclusion should supply teachers with the knowledge relating to learning differences and competencies for developing inclusive classroom activities such as competency-based learning, peer teaching and learning (Operti, 2010), which are often mentioned as important facilitators for inclusive education (Courtney, 2000; Carroll et al., as cited in European Agency for Development in Special Needs Education (EADSNE), 2010; Lancaster & Bain, 2010; Shade & Stewart, 2001 as cited by Forlin & Chambers, 2011; van Leeuwen et al., 2008). The teacher trainees therefore need new forms of knowledge about identity and difference (Swart & Oswald, 2008) in order to be more supportive of students with special educational needs which can be achieved through integration of SNE in the PTE curriculum.

2.3 Integration of SNE in the PTE Curriculum and Teacher trainees' Knowledge

Teacher education programmes that prepare teachers to work in inclusive settings need to expose all its teacher candidates to elements of special education (Abosi, 1999; Dingle, Falvey, Givner, & Haager, 2004). It should provide them with essential knowledge which should be conceptually organized, in a way that would enable

beginning teachers to develop deep understandings of teaching and learning (LePage et al., 2010). Such knowledge refers to not only content knowledge but professional knowledge, knowledge of cross-cutting and emerging issues as well as the practical understanding that one needs to perform his or her duties as a teacher (Ministry of Education (MOE), 2009). Among the areas of knowledge required of a teacher according to the MOE are mastery of subject content, approaches to teaching and learning and related methodologies, and the importance of inclusive education and how to support and assist learners with special needs. Hence teachers' knowledge is about the curriculum area and the learners and learning processes (Norwich & Lewis, 2007).

Areas of knowledge on SNE issues is therefore imperative for a teacher trainee in the general teacher education curriculum which should supply them with the knowledge and competencies for developing inclusive classroom activities (Operti, 2010) and to be knowledgeable about a child's disability in order to promote his/her personal and social adjustment (Sitienei, 2007). To instruct special needs students effectively LePage et al. (2010) points out what teachers need to understand ranging from the nature of various disabilities, how to work with other professionals and parents within these processes, as well as how to contribute to and implement Individualized Education Plans (IEPs) for students in their classrooms. In some countries such as Vietnam, United States and Australia, activities and strategies that have been used successfully include integrating knowledge about the benefits of inclusive education into initial training programs (Nguyet & Ha, 2010). Ethiopia's special education needs strategy, introduced in 2006, is designed to encourage inclusive schooling by training teachers to identify learning difficulties and to establish support systems (UNESCO, 2008).

In Kenya, recommendations on the need for regular teacher training programmes to acquaint their graduates on basic knowledge of how to manage children with SEN enrolled in regular schools (ROK, 1964, 1994) have since led to integration of SNE in the PTE curriculum (KIE, 1994, 2004). However, research studies carried out in various parts of Kenya have revealed that most of the teachers in the regular primary schools lack the technical know-how on how to deal with children with SEN (Gakuhi, 2013; Kurumei 2012; Omurwa, 2011; Sitienei, 2007). This concurs with the findings of Courtney (2000) that student teachers who were exposed to special education content in one course regarded it as insufficient and felt less prepared. Forlin and Chambers (2011) revealed that pre-service teachers at the outset of the study were more concerned about their lack of knowledge while Mason, O'Connell, Thormann, and Behrmann (2003) indicated that many regular teachers do not have sufficient knowledge and training to teach students with disabilities in the general education curriculum.

In the post training responses, Forlin and Chambers (2011) in their study found a strong link between the pre-service teachers' perceived levels of confidence and knowledge and their concerns about inclusion so that the greater their knowledge base, the more positive they were towards inclusion and the less concerned they were about it. Citing research studies which have shown that pre-service teachers during their initial teacher education (ITE) value most both a dedicated unit of study on diversity, together with a greater emphasis on modifying curricula that is infused across all disciplines, Forlin and Chambers consider units of study that improve knowledge and confidence in pre-service teachers while addressing any competency requirements, as essential.

What has emerged from research is that improving knowledge and confidence of teacher trainees increases instructional efficacy among them. However, it is not evident from the studies in Kenya whether the inability of the teachers to handle children with SEN in the general classroom was due to inadequate acquisition of knowledge on SNE during training.

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. Questionnaires, interviews and document analysis were used in collecting both quantitative and qualitative data. Data analysis involved cross tabulation in order to obtain frequencies and percentages, and calculation of means using the SPSS computer programme version 21. The findings are presented using contingency tables and bar graphs. Relationship between integration of SNE in the PTE curriculum and the acquisition of knowledge for instructional efficacy among the trainees was determined using Pearson correlation coefficient (r). Alpha (α) was set at .05 level of significance and Coefficient of determination (r^2) was used to quantify the strength of the linear relationship (Cohen, Manion, & Morrison, 2005; Myers & Well, 2003).

4 Results and Discussion

4.1 Introduction

Essential knowledge for beginning teachers should be conceptually organized in a way that would enable such teachers to develop understandings of teaching and learning (LePage et al, 2010). Knowledge of aspects of SNE, which would enable the teacher trainee to understand the importance of inclusive education and how to support and assist learners with special needs (Lewis & Bagree, 2013; MOE, 2009) in the regular classroom, is imperative.

4.2 Description of Integration of SNE in the PTE Curriculum and Teacher Trainees' Acquisition of Knowledge for Instructional Efficacy

The descriptive analysis of the responses of the teacher trainees and trainers on the adequacy of PTE curriculum in acquainting them with knowledge on specific aspects of SNE, are presented in the Table and Figure respectively. The findings for the trainees are categorised based on the subject options because the literature review and cross tabulation of the data revealed that there was variation in responses between teacher trainees in the Science and Humanities subject options.

From the results in Table 1, it is evident that most of the teacher trainees considered the PTE curriculum adequate in providing them with knowledge in various competence areas. Knowledge on how different impairments affect learning was adequately provided through the PTE curriculum according to a majority of 201 (65.7) teacher trainees who indicated adequate and very adequate. The results indicate that a majority of 197(64.4) teacher trainees were in agreement that the PTE curriculum provided them with knowledge on the categories of pupils with SEN. 128(41.8) of them indicated adequate while 69(22.5) indicated very adequate. The student teachers were affirmative on the adequacy of the PTE curriculum in providing them with knowledge on indicators of possible impairments in a pupil with a majority of 186 (60.8) indicating adequate and very adequate. With regard to procedures for identifying and assessing pupils with SEN, it is evident from the findings in the Table that a majority of the teacher trainees 128(41.8) indicated adequate and 47(15.4) very adequate giving a total of 175(57.2). Asked on whether the PTE curriculum adequately provided them with knowledge on intervention measures for pupils with SEN in the general classroom, 172 (56.2) of the teacher trainees indicated adequate and very adequate.

The findings above reveal variation in the level of adequacy. It shows that knowledge on how different impairments affect learning and categories of pupils with SEN were the most adequately provided through the PTE curriculum while knowledge on procedures for identifying and assessing pupils with SEN and intervention measures for pupils with SEN in the general classroom were the least provided. This positive result seems contrary to the findings from the document analysis and the teacher trainers' responses and previous studies (ROK, 1999; ROK, 2005) that the PTE curriculum was inadequate in content coverage on aspects of SNE. This may be attributed to the fact that the teacher trainees' response is based on the knowledge they were exposed to as per provisions in the syllabus and course textbook coverage without anticipation on what knowledge a general classroom teacher should possess on SNE. Nevertheless, the coverage of the topics in the PTE curriculum which were highly rated adequate was quite elaborate as revealed by the analysis of the syllabus and the textbooks in use in the Primary Teacher Colleges (PTCs). The PTE curriculum had much content on characteristics of various categories of pupils and how different impairments affect learning (KIE, 2004). However, measures on how to handle such learners in the general classroom was not well clarified in the content in the textbooks. Intervention measures were majorly mentioned without clear explanation on how it could be done hence lack of adequate provision of instructional efficacy to teacher trainees. This is in agreement with previous findings that most practicing teachers do not exhibit skills of identification and intervention in SNE (Karumei, 2012; Kipruto et al., 2006; Mbasu, 2001; Njuguna, 2012; Sitienei, 2007) due to their lack of technical know-how on how to handle learners with SEN in the general classroom. The curriculum therefore emphasised on learning to 'know' at the expense of learning to 'do' (Claxton, 1992).

Despite the positive response on most of the competence areas, knowledge on resource materials and facilities for pupils with SEN was considered inadequate by a large proportion of 206 (67.3) teacher trainees. The fact that the student teachers considered this aspect of knowledge inadequate is reiterated in their responses to the open-ended items and is consistent with the results from the analysis of the syllabus and textbooks used in the PTCs which revealed inadequacy of content on learning resources for learners with special needs. Moreover, when asked why they felt that the PTE curriculum did not prepare them adequately to handle learners with SEN

in the general classroom, the most cited reason was lack of or inadequate resources. This is in line with previous research that PTCs lack adequate resources (Bunyi et al., 2013; Mwangi, 2013; Rop et al., 2013) and may explain why general classroom teachers often feel inadequate in handling learners with SEN. Yet teaching/learning resources is one of the key components in the realization of quality teacher training (Kilel, 2012).

It is important to note that the results in the Table also show that there was consistent variation in the responses of the teacher trainees in the Science and Humanities subject options regarding the adequacy of the PTE curriculum in providing them with knowledge on SNE. More teacher trainees in the Humanities subject option consistently considered the PTE curriculum adequate than those in the Science option. In all the competence areas in which the teacher trainees considered the PTE curriculum adequate, the majority were in the Humanities whereas in aspects that were considered inadequate the majority were in the Science option. For example, on knowledge on how different impairments affect learning, which was considered adequate and very adequate by 201 (65.7) teacher trainees, a majority of 107(76.4) were in the Humanities while 94 (56.7) were in the Science subject option. Whereas a total of 206 (67.3) teacher trainees considered the PTE curriculum inadequate in providing them with knowledge on resource materials and facilities for pupils with SEN, those in the Science option were 118 (71.1) being higher than the 88 (62.9) in the Humanities. This is consistent with literature that handling learners with SEN is more challenging in the teaching of Mathematics and the Sciences which are more practical in nature and require access to adaptive devices (NCERT, 2006) which have been found to be lacking in PTCs.

A somewhat different picture emerges with regard to the responses of the teacher trainers on the same aspects of knowledge on SNE. Compared with the responses of the teacher trainees, most of the aspects of knowledge on SNE in the PTE curriculum were considered inadequate by the teacher trainers as shown in the Figure 1. The only aspects the teacher trainers considered adequate as shown in the Figure are how different impairments affect learning (51.9%) and indicators of a possible impairment in a pupil (48.1%) though the percentages are low. Apparently, these aspects are among the highest ranked as adequate by the teacher trainees and had a substantial content coverage in the syllabus and textbooks as revealed through the document analysis. This concurs with previous findings cited by Darling-Hammond (2002) that teacher candidates showed increased understanding of the content requested but they could not discuss how they would apply their understanding to instructional practices; what Claxton (1992) referred to as learning to 'know' rather than learning to 'do'.

It is noteworthy that knowledge on resource materials and facilities for pupils with SEN which was rated inadequate by the teacher trainees is the highest rated inadequate by 88.7% of the teacher trainers. The teacher trainers and trainees were therefore in agreement on the inadequacy of resource materials for SNE. This response is consistent with the findings from the document analysis. This implies that the trainees did not get an opportunity during training to handle and practice how to use such materials as an intervention measure in handling learners with special needs. This was pointed out in the open response items where most respondents cited lack of or inadequate resources and lack of exposure to such resources in line with previous findings on inadequacy of resources in PTCs (Bunyi et al., 2013; Mwangi, 2013). This explains why the general classroom teachers have often been noted to lack the know-how on how to handle learners with SEN in inclusive classrooms (KISE, 2010; Mbasu, 2001; Sitienei, 2007).

Knowledge on procedures for identifying and assessing pupils with SEN and intervention measures for pupils with SEN in the general classroom which were rated the least adequate by the teacher trainees were considered inadequate and very inadequate by a majority of 66.6% and 66.7% teacher trainers respectively. 55.6% teacher trainers also rated inadequate knowledge on the categories of pupils with SEN in line with previous findings (Karumei, 2012; Kipruto et al., 2006; Mbasu, 2001; Sitienei, 2007) but contrary to the teacher trainees' responses. This may be attributed to the teacher trainers' wider view of the curriculum as compared with the trainees who are noted to be mostly dependent on the trainers' notes (Bunyi et al., 2013; Mwangi, 2013). The trainers as revealed in the demographic information were also knowledgeable on the expectations of a teacher who can handle learners with SEN in the general classroom due to their involvement in the Kenya Institute of Special Education (KISE) programme; either teaching during the face to face sessions or assessing KISE students during teaching practice. The demographic information also revealed that some of the teacher trainers also had experiential contact with learners with SEN who were integrated in their own classrooms.

The results therefore suggest that though aspects of SNE were not adequate in the PTE curriculum, some aspects on knowledge on SNE provided for in the curriculum as reflected in the syllabus and textbooks were covered by the teacher trainers hence rated adequate by the trainees. Those rated inadequate or rated adequate by a slight majority, could partly be attributed to inadequate coverage of the content by the trainers as

pointed out in the open ended items by the teacher trainees. This is explicated by the concerns raised by several teacher trainees with regard to coverage of content on SNE during the course that; ‘Some lecturers overlook it (SNE)/do not teach it/put no emphasis on the content on SNE/most lecturers brush over the issues (SNE) with little care’.

However, many other aspects as pointed out in the document analysis were either missing or were not comprehensive enough to provide adequate guidance to the teacher trainers nor the trainees hence the inadequate rating by the teacher trainers. It is apparent therefore that the PTE curriculum was not adequate in providing teacher trainees with knowledge on competence areas required for instructional efficacy in an inclusive setting.

4.3 Relationship between Integration of SNE in the PTE Curriculum and the adequacy of Knowledge acquired by the Teacher Trainees for Instructional Efficacy

The resulting output of the Pearson Correlation Coefficient on the relationship between the extent of adequacy of integration of SNE in the PTE curriculum and trainees’ acquisition of knowledge was .417. This implies a moderate positive relationship between the two variables. The coefficient is significant at $\alpha = .05$ because the p value is .031 which is less than the set alpha ($p < .05$) therefore, the null hypothesis that; “There is no significant relationship between integration of SNE in the PTE curriculum and the adequacy of knowledge acquired by the teacher trainees for instructional efficacy” is rejected. The computed Coefficient of Determination (r^2), to quantify the strength of the linear relationship gave .174 which, expressed as a percentage, indicates that 17.4% of the variance in knowledge acquired by the teacher trainees is explained by the variations in integration of SNE in the PTE curriculum.

The positive relationship therefore affirms that adequate integration of SNE has a positive relationship with trainees’ acquisition of adequate knowledge (Courtney, 2000; Forlin & Chambers, 2011; Lewis & Bagree, 2013; Nguyet & Ha, 2010). It implies that as the adequacy of coverage of SNE in the PTE curriculum increases, knowledge on aspects of SNE among the teacher trainees would also increase because correlation coefficient is an indication of co-variation (Cohen & Manion, 1989). This result is in line with the findings of Courtney (2000) in which 70% of students who were exposed to four core Special Education (SE) courses generally felt more prepared than their counterparts exposed to only one SE course which 61% of them regarded as insufficient. Similarly, Forlin and Chambers (2011) in their focus on concerns about inclusive education, found that pre-service teachers at the outset of the study were more concerned about their lack of knowledge whereas in the post training responses, the study found a strong link between their perceived levels of confidence and knowledge and their concerns about inclusion so that the greater their knowledge base, the less concerned they were about inclusion. Therefore, because integration of SNE in the PTE curriculum was noted to be inadequate, it implies that the teacher trainees were not adequately provided with knowledge on SNE which would contribute to instructional efficacy. Consequently, if integration of SNE in the PTE curriculum is adequate, knowledge for instructional efficacy would be enhanced hence inclusive education in Kenya would be promoted.

5 Conclusion and Recommendation

5.1 Conclusion

The teacher trainees did not acquire adequate knowledge on SNE commensurate to the expectations of an inclusive teacher yet it is evident that the adequacy of knowledge is related to the extent to which SNE is integrated in the PTE curriculum. Though knowledge on categories of learners with SEN, their characteristics and how different impairments affect learning were adequately provided through the PTE curriculum, aspects of knowledge that related to skills (learning to do) such as intervention measures for pupils with SEN in the general classroom, procedures for identifying and assessing pupils with SEN, and resource materials and facilities for pupils with SEN, were inadequate.

5.2 Recommendation

The Kenya Institute of Curriculum Development (KICD) should ensure integration and complete fusion of aspects of SNE and general education in the PTE curriculum during curriculum design to enhance acquisition of knowledge for instructional efficacy among teacher trainees.

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Table 1 Teacher Trainees’ Rating on the Adequacy of the PTE Curriculum in providing them with Knowledge on SNE

| | Subject Options | Extent of adequacy | | | | |
|--|-----------------|--------------------|------------------|-----------------|------------------|-----------------|
| | | VI | IA | U | A | VA |
| Categories of pupils with SEN | Science | 23(13.9) | 42(25.3) | 12(7.2) | 62(37.3) | 27(16.3) |
| | Humanities | 3(2.1) | 18(12.9) | 11(7.9) | 66(47.1) | 42(30.0) |
| | Total | 26(8.5) | 60(19.6) | 23(7.5) | 128(41.8) | 69(22.5) |
| Procedures for identifying and assessing pupils with SEN | Science | 10(6.0) | 63(38.1) | 14(8.4) | 61(36.7) | 18(10.8) |
| | Humanities | 9(6.4) | 27(19.3) | 8(5.7) | 67(47.9) | 29(20.7) |
| | Total | 19(6.2) | 90(29.4) | 22(7.2) | 128(41.8) | 47(15.4) |
| Indicators of possible impairment in a pupil | Science | 14(8.4) | 43(25.9) | 19(11.4) | 72(43.4) | 18(10.8) |
| | Humanities | 6(4.3) | 21(15.0) | 17(12.1) | 62(44.3) | 34(24.3) |
| | Total | 20(6.5) | 64(20.9) | 36(11.8) | 134(43.8) | 52(17.0) |
| How different impairments affect learning | Science | 14(8.4) | 41(24.7) | 17(10.2) | 66(39.8) | 28(16.9) |
| | Humanities | 11(7.9) | 14(10.0) | 8(5.7) | 63(45.0) | 44(31.4) |
| | Total | 25(8.2) | 55(18.0) | 25(8.2) | 129(42.2) | 72(23.5) |
| Intervention measures in the general classroom | Science | 29(17.5) | 43(25.9) | 14(8.4) | 61(36.7) | 19(11.4) |
| | Humanities | 19(13.6) | 20(14.3) | 9(6.4) | 60(42.9) | 32(22.9) |
| | Total | 48(15.7) | 63(20.6) | 23(7.5) | 121(39.5) | 51(16.7) |
| Resource materials and facilities for pupils with SEN | Science | 46(27.7) | 72(43.4) | 13(7.8) | 23(13.9) | 12(7.2) |
| | Humanities | 34(24.3) | 54(38.6) | 10(7.1) | 29(20.7) | 13(9.3) |
| | Total | 80(26.1) | 126(41.2) | 23(7.5) | 52(17.0) | 25(8.2) |

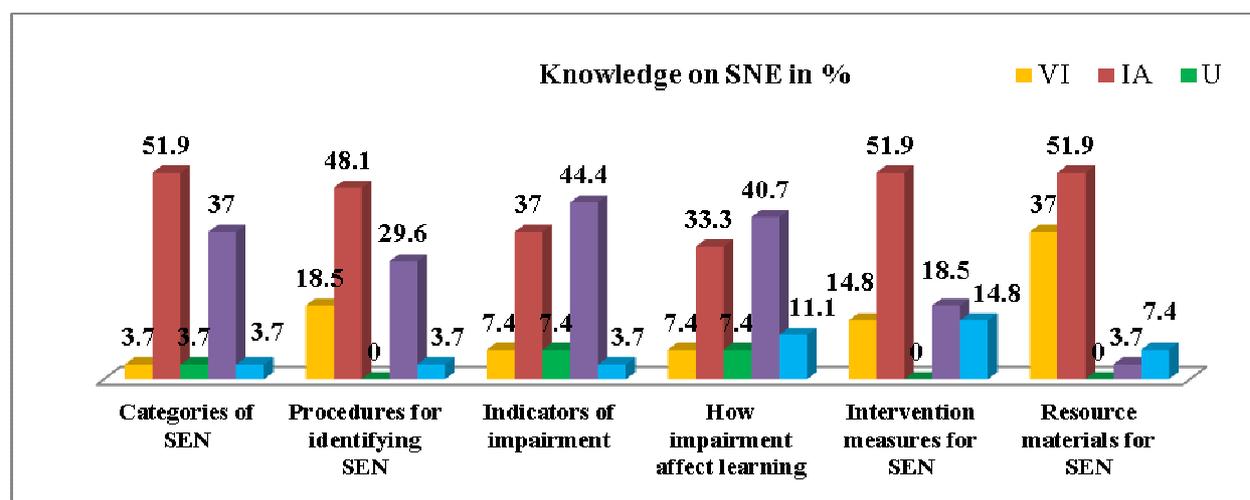


Figure 1 Teacher Trainers’ Rating on the Adequacy of the PTE Curriculum in providing Trainees with Knowledge on SNE