Research Paper

Tutors' Development: A Case of Teaching about HIV and AIDS

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Contextualisation

After completing initial teacher training in Kenya, teachers keep abreast of changes in education through in-service programmes, which aim to provide continuous professional development. However, most of the in-service programmes are one-off seminars intended to instruct teachers in the changes in the curriculum. When HIV and AIDS pandemic preventive education was integrated into the curriculum of all learning institutions in Kenya, the Ministry of Education adopted a cascade model to train teachers to teach about HIV and AIDS. In a cascade model, cohorts of teachers are given short training courses and required to pass on their new knowledge and skills to further cohorts of teachers through formal courses (Peacock, 1993). However, recent studies have shown that teachers are finding it hard to communicate HIV and AIDS issues to the learners due to the sensitive nature of the subject and secrecy surrounding sexuality (Farah et al., 2009; Kiragu et al., 2006; McLaughlin et al., 2012; Mwebi, 2007; Njue et al., 2009). Hence this study explores teacher preparation to teach about HIV and AIDS in a primary teacher training college in Kenya.

Abstract: *In Kenya, HIV and AIDS education was integrated into the primary teacher education syllabus in 2004. However, recent studies have reported superficial teaching of HIV and AIDS. Several authors have attributed this to the link between sex education and HIV prevention. Educators are finding it hard to communicate information about HIV and AIDS due to attitudes, beliefs and cultural norms in Africa that consider discussions on sexuality as taboo. Hence the aim of the study was to explore how tutors' preparation can be improved so that they can teach about HIV and AIDS comprehensively. Ten tutors and 98 teacher trainees took part in the study. Data were collected through interviews, participant observation and document review. Data were analysed inductively with the aid of qualitative data analysis software HyperRESEARCH. The findings suggest that on-site collaborative in-service education that focuses on subject content as well as pedagogical content knowledge can result in a change in tutors' instructional practice. However, further research is needed on how such change in instructional practice can be sustained and institutionalised.*

Introduction

This study was motivated by concerns that despite numerous seminars and workshops convened to prepare educators to teach about HIV and AIDS, there is still selective teaching which is limited to basic scientific content knowledge (Boler *et al.*, 2003). Discussions about the psychosocial issues that seem to fuel new HIV infection are largely ignored in most learning institutions. Yet in the absence of a biomedical cure, prevention is the only viable option and education might potentially be the single most powerful weapon against HIV transmission (Kelly, 2000).

Research has shown that comprehensive HIV prevention education that includes teaching both biological facts, as well as sexuality and relationships can help reduce the rate of

infection by bringing about behavioural change among the 15-24-year-olds who are a high-risk group (Kirby, 2007; UNESCO, 2009). Hence the right age to start providing education to prevent HIV transmission is before 15 years of age. Moreover, research shows that there are cases of sexual debut before the age of 15 in Kenya (National AIDS Control Council, 2009). In Kenya, to prepare teacher trainees to teach about HIV and AIDS in primary schools, the topic was integrated into the Kenya primary teacher education syllabus as an emerging issue (Kenya Institute of Education, 2004). However, recent studies report that there is only superficial teaching about HIV and AIDS in the pre-service teacher preparation colleges, and some of the educators interviewed claimed they have not been trained (Farah *et al.*, 2009; Nzioka *et al.*, 2007). Some tutors were trained through the Primary School Action for Better Health (PSABH) cascade model adopted by the Ministry of Education to prepare in-service teachers to teach about HIV and AIDS (Gallant and Maticka-Tyndale, 2004; Maticka-Tyndale *et al.*, 2004). However, literature shows that cascade approaches are one-off events, with limited follow-up and little support for participants when they return to their workplaces, resulting in limited implementation of interventions (Christie *et al.*, 2004; Peacock, 1993). Selective teaching reported in the literature shows that the cascade model adopted by the Ministry of Education to prepare in-service educators to teach about HIV and AIDS was no exception in terms of these weaknesses (Farah *et al.*, 2009; Njue *et al.*, 2009; Nzioka *et al.*, 2007). Hence there is a need to explore alternative models of providing professional development programmes to prepare in-service educators to teach about HIV and AIDS. To this end, the overall question which guided this research was: How can educators' preparation be improved to enable them teach about HIV and AIDS comprehensively?

Literature shows that effective in-service education should focus on subject content as well as pedagogical content knowledge and provide opportunities within the programme for participants to practise in their own classrooms (Darling-Hammond and Richardson, 2009; Guskey, 1985, 2002; Shulman, 1986). Peacock (1993, p. 24) argues that 'a programme of serial in-service rather than long, one-off workshops is preferable, to allow teachers to try out ideas and bring back their experiences to enhance subsequent sessions'. According to Guskey (2002, p.382), 'Professional development activities frequently are designed to initiate change in teachers' attitudes, beliefs, and perceptions'. In essence, in-service workshops are a means of moving towards desired change in instructional practice and not an end in themselves. This echoes the view that professional development that focuses on content knowledge, gives teachers opportunities for hands-on activities, and is integrated into the daily life of the institution, 'is more likely to produce enhanced knowledge and skills' (Garet *et al.*, 2001, p. 935). Research findings show that optimal benefits are realised when participants are actively involved in the use of the innovation during in-service programmes that are conducted on multiple occasions (Dunst *et al.*, 2011). Therefore the study was envisaged as collaborative action research between the researcher and the tutors who teach about HIV and AIDS at the college. This resonates with the argument that, 'if innovations are to work, they need to be grounded and contextualised, and to make sense to those expected to carry them out' (Lewin and Stuart, 2003, p. 188). To this end, the research design was based on a skills-training model that includes theory, demonstration, practice, feedback and coaching (Rolheiser and Anderson, 2004). Moreover, carrying out the exploration at the institution not only adapted the innovations to suit local conditions and resources, but also aligned the intervention with the college programmes, curriculum and policy.

Research method and design

Purposive sampling was used to select the 10 tutors who were teaching about HIV and AIDS in order to sample for information rather than representativeness (Cunningham et al., 2008). The tutors were selected on the basis of their willingness to take part in the study and their enthusiasm to teach about HIV and AIDS. This resonates with the recommendation that 'where possible educators with "desirable characteristics" … that is, educators who are willing and able to discuss sexuality … topics in an open manner, should be selected to

teach about HIV and AIDS' (Midiema, 2006, p. 34). To assess the outcome of the classroom trials, stratified random sampling was used to select six teacher trainees, with an equal gender ratio, for post-lesson group interviews. A total of 13 intervention sessions were held at the college resulting in 78 teacher trainees participating in the group interviews. All participants gave written informed consent prior to participating in the study (BERA, 2011). Prior to the fieldwork, the research proposal was approved for adherence to ethical guidelines by the Kenya National Council for Science and Technology and a research permit was issued (National Council for Science and Technology, 2009). Participants were assured that confidentiality would be observed and that their real names and that of the institution would not be used in any report from the study. Hence all the names used in this paper are pseudonyms.

The study followed a spiral action research model, beginning with a reconnaissance phase in which participants' prior experience was recorded (Zuber-Skerritt, 2001). Starting by eliciting prior experience is particularly important as the understanding of participants' attitudes and beliefs is vital in providing relevant training and support about HIV and AIDS (Visser, 2006). This resonates with the observation that participants enter into continuous professional development with prior experiences which are 'useful resources' that can be drawn upon (Dadds, 2001, p. 32). Moreover, research show that educators' attitudes and beliefs result in selective teaching about HIV and AIDS in which messages are restricted to scientific content without direct references to sex or sexual relationships and psychosocial issues (Boler *et al.*, 2003; Nsubuga and Bonnet, 2009; Visser, 2006). Hence eliciting teachers' implicit knowledge and beliefs and then providing them with the opportunity to practise new innovations lead to re-conceptualisation of their roles as teachers, as well as the role of students, in knowledge construction (Koutselini, 2008). Being aware of the specific issues that inhibited the teaching about HIV and AIDS at the college was useful in identifying ways to address the challenges. The design of the intervention is illustrated in Figure 1, which is a mosaic of the action research process (Zuber-Skerritt, 2001) and the model of teacher change (Guskey, 1985, 2002).

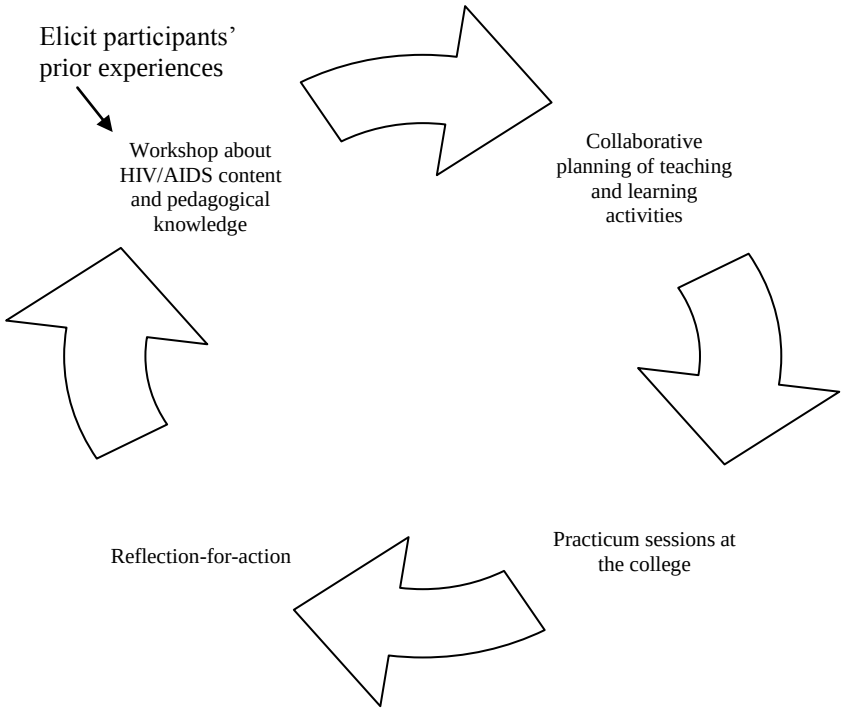

Figure 1. On-site in-service model

Preceding the initial workshop, interviews and participant observation were carried out to establish existing practice. In-depth interviews were held with each of the 10 tutors and four group interviews were held with teacher trainees in separate gender groups of five participants each. During the workshops, cooperative teaching and learning was chosen to illustrate how group work could be transformed into collaborative teaching and learning by introducing 'positive interdependence; face-to-face interaction; individual and group accountability; interpersonal skills; and group processing' to maximise learners' participation (Nagel, 2008). The workshop provided the opportunity to model cooperative learning in which the tutors were engaged in teaching and learning activities similar to those they were to use in the college classrooms (Brody and Nagel, 2004). The experiential learning provided tutors with an opportunity not only to update their content and pedagogical knowledge, but also to develop the skills in terms of infusing and integrating HIV and AIDS education into the curriculum.

Data were collected through interviews, participant observation and document reviews. Multiple methods of data collection were used to provide corroboration and triangulation (Cohen *et al.*, 2007; Hendricks, 2006). Audio recording and field notes were used to record data which were later transcribed verbatim. An inductive analysis approach was employed to generate categories, codes and themes or meanings from the data (Miles, 1994; Stringer, 2004). The analysis process was aided by the use of HyperRESEARCH software (Silver and Lewins, 2010) that enabled the link between codes and the raw data to be maintained for interpretations and verbatim quotation.

Findings

Reconnaissance findings showed that classroom interactions were limited to brief tutor-led question-and-answer sessions. A comment by a tutor on her experience about HIV and AIDS education explains why, prior to the intervention, lessons were mainly delivered through lectures.

> At times you feel like you want to open the class for a discussion, but fear if you are asked a question, you might give a wrong answer, yet you want to appear as an expert in your subject area. (Wawira, a tutor)

After the intervention, another tutor compared the differences in approach between the one-off workshop and the collaborative action taken during the study.

> You know when integration and infusion about HIV and AIDS came into the PTE (*Primary Teachers Education*) curriculum, very little was done to sensitise the teaching staff on how the integration and infusion was to be done. It was done more theoretical than practical. But now you see here we have kind of done it practically and seen how it works and also seen the challenges that go with it. (Kipngeno, a tutor)

The classroom practice sessions provided the opportunity to receive feedback from teacher trainees, who observed that the interactive methods were a contrast to the usual lecture lessons in which the tutor dictates or writes notes on the blackboard.

> It was the first time we actually got involved in group discussions and presentations. I would say that this lesson was more learner-centred compared to the other lessons where the teacher dictates or writes the points on the blackboard. I think I liked this lesson because we were very busy throughout the lesson. It looked like it was short, the time ended so fast. (Omar, a teacher trainee)

Comparing lessons observed at the college right from the reconnaissance to the practicum phase, there is evidence that tutors benefited as a result of the collaborative action with the researcher. After each lesson, tutors would reflect-on-action to identify 'what went well and what did not go well' (Alger, 2006, p. 297). This was then followed by a discussion on what could be done to improve subsequent lessons, in other words, the tutors were engaged in 'reflection-for-action' (Eraut, 1995, p. 16). Since tutors taught in more than one class at the college, the changes made in the lesson plans were implemented in the next class. This recursive process resulted in cumulative learning, which was reflected in classroom practice. A tutor's response to what went well in her lesson shows evidence of the progress she was making in class as a result of feedback and reflection sessions with the researcher.

> Today I used the same groups that were formed last time. So I saved time. I also organised the materials before the lesson so it was just distributing. Last time I did not use the group leaders, I was the one distributing the materials. Today I used the group leaders, they came for the materials so it was faster than what I did in the other lesson. I could say I was better prepared this time and the students also knew how the lesson would go. (Adhiambo, a tutor)

Another tutor described how he made changes to factor in positive interdependence and individual accountability during group work.

> The previous presentations were not very effective in the sense that sometimes it was only the presenter who was actually doing everything and the other members were just seated as if they did not participate in that issue during task time. This last lesson … I told them that I will choose any of the members to present. It looks like this made all of them participate in the discussion. All of them were prepared because the questions that followed the presentations were properly handled by the group members. (Moturi, a tutor)

Experiences that tutors brought back from classroom trials also included evidence of learning outcomes. Tutors' reports included learners' observable progress in such aspects as communications skills. The tutors' comments show how the interactive methods were progressively becoming part of the instructional routine.

> When learners come to class they know they are going to work in groups and they have a mind set that they are going to be very active, they are open-minded, I would say very brave now and I would say it is even improving their communication skills. The level of expression has improved each day, especially during group activities, which have become a forum for exchanging ideas. (Muliro, a tutor)

Towards the end of the intervention, it seems that the tutors were not only confident about teaching about HIV and AIDS in their own classrooms, but were in a position to share their knowledge with colleagues who did not take part in the study. A comment by a tutor during a discussion on the way forward illustrates how participating tutors had started working with their colleagues to improve the teaching about HIV and AIDS at the college.

> In my department, there are two other colleagues who did not take part in this project. I am very happy to report that one of the colleagues who did not take part in this study has actually embraced it. I guided her on how to do the first lesson, which covers the first four objectives about HIV and AIDS. She found it very easy and very interesting. And with proper guidance from the two of us who have gone through this study, I am very sure we will bring the other member on board soon. (Mireri, a tutor).

This shows that tutors had confidence that interactive methods that they had learned during the study were effective in teaching about HIV and AIDS. The success of the interventions was corroborated by comments from teacher trainees:

> The lessons were quite interesting and I really enjoyed the methods that were used. I could suggest that the same should be applied to many of the subjects that we are learning. We can use these methods later in primary schools to teach about HIV and AIDS. (Lel, a teacher trainee)

Teacher trainees claimed that they would be able to use similar methods to teach about HIV and AIDS in their classrooms in the future. A longitudinal study could be conducted that follows teacher trainees to find out how they are teaching about HIV and AIDS at primary schools.

Discussion

The findings show that it is feasible to prepare educators to teach about HIV and AIDS using the existing infrastructure of teacher training institutions in Kenya. The effectiveness of this on-site in-service model can be attributed to the fact that the participants had regular feedback on their teaching and support that enabled them to deal with challenges during the implementation phase (Knapp, 2003). The serial nature of the workshops provided cumulative opportunities for professional learning that is not possible in a one-off workshop in which innovations are introduced and modelled, after which participants are expected to implement the programme when they return to their various institutions (Darling-Hammond and Richardson, 2009; Knapp, 2003). In contrast, modelling of interactive methods, such as cooperative teaching and learning strategies, and providing opportunities for the tutors to practise in their own classrooms were important in the transformation of tutors' instructional practice (Snow-Renner and Lauer, 2005). It was the tutors' classroom experiences of teaching about HIV and AIDS that determined the themes addressed in the workshops and group discussions. In essence the workshops provided the forum in which tailor-made support was provided tutors by addressing issues brought back from classroom trials. The classroom trials and workshops provided the tutors with 'rigorous cumulative opportunities for professional learning over time' (Knapp, 2003, p. 120). It is the opportunity to practise and bring back the experiences for further learning that made the on-site model effective. Other researchers have shown that 'the key features of in-service training associated with positive learner benefits included active practitioner involvement in the learning opportunities which occurred on multiple occasions over time'(Dunst *et al.*, 2011, p. 182). Looking at tutors comments on the progress they were making, there is no doubt that change in instructional practice occurs in incremental steps.

The results of the practicum phase indicate that in order for participants to implement an innovation, professional development programmes should provide opportunities for practice in the classrooms so that participants can reflect on their experience and receive feedback about their teaching. To Guskey (2002), professional development activities are therefore meant to initiate change in teachers' attitudes, beliefs, and perceptions that takes place after experiencing success in their own classrooms. This echoes the argument that professional development that focuses on content knowledge, gives teachers opportunities for hands-on activities, and is integrated into the daily life of the institution, 'is more likely to produce enhanced knowledge and skills' (Garet *et al.*, 2001, p. 935). Similar findings were reported by Snow-Renner and Lauer (2005), who stated that experiential learning in which teachers take part in similar teaching and learning activities that they will use in the classroom brings about change in their instructional practice. The change in practice occurs when the teachers are given the opportunity to practise the innovations and are given 'feedback on their teaching' (Garet *et al.*, 2001, p. 920). Change in teachers' attitudes and beliefs occurs after they have seen evidence of improvements in student learning outcomes (Dunst *et al.*, 2011; Guskey,

2002). It is the successful classroom experiences that convince the participants that the innovation can work in their context. The findings suggest that effective teacher preparation to teach about HIV and AIDS should cover both subject content as well as pedagogical content knowledge, 'as opposed to exclusive emphasis on one or the other' (Craig *et al.*, 1998, p. 109). Enhancing subject content knowledge enables teachers to design appropriate learning activities that address learners' difficulties. On the other hand, focusing on pedagogical content knowledge enables teachers to understand how learners learn specific subjects so that teachers can select activities that learners can relate to their everyday experiences.

The advantage of on-site professional development is the opportunity it affords for collaborative planning among the participants. Literature shows that 'teachers who work together are more likely to have the opportunity to discuss concepts, skills, and problems that arise during their professional development experiences' (Garet *et al.*, 2001, p. 922). In this study, the tutors discussed and adapted the teaching and learning materials about HIV and AIDS that were provided to suit their instructional context. Literature shows that in effective professional development programmes, participants work together to develop instructional materials, explore how to teach the material, and share information in order to strengthen each other's subject and pedagogical knowledge (Dunst *et al.*, 2011; Jailpal and Figg, 2011). It can be argued that it was the opportunity to practise the innovations and receive feedback and support that yielded the desired changes in the observed tutors' instructional practice. The support provided was based on the needs identified by the tutors during the reflection phase. It is 'through collaborative reflection on certain aspects of the activity' that 'horizons of alternative actions are made transparent' to the presenter (Ottesen, 2007, p. 34). Reflection-for-action was key to the progressive improvement in tutors' instructional practice. Given that the tutors were colleagues who knew each other well, the interaction during workshops and group discussions enhanced reflection-for-action that in turn yielded more options for further classroom trials. Several authors argue that reflection needs to happen in interaction with other people who can offer support and extend each other's thinking by providing more options (Alger, 2006; Husu *et al.*, 2008; Schon and DeSanctis, 1986). In summary, the findings show that sustainable support is necessary during the implementation phase to provide a forum in which participants can address challenges and find alternative ways to adapt the innovation to suit their own context.

Implications and conclusion

The findings of the study indicate that in order for educators to change their instructional practice, they need in-service programmes that focus both on subject content, as well as pedagogical content knowledge. The fact that, during the workshops, both HIV and AIDS content knowledge and how to teach the subject were integrated in the hands-on activities enabled the tutors to adapt the teaching and learning activities to suit their own classrooms. Hence updating educators' content and pedagogical knowledge through experiential teaching and learning activities similar to the ones used in the classroom not only demonstrates how the subject should be taught, but also increases the chances of adapting the innovation to suit the local context. Having up-to-date information about HIV and AIDS increases educators' efficacy that enables them pass on the skills and knowledge to learners (Shulman, 1986).

Regular opportunities to carry out reflective dialogues with the researcher provided tutors with a forum for reflection-on-action. Tutors pointed out key incidents in different phases of the lessons to illustrate progress in the use of interactive methods to teach about HIV and AIDS. In essence, change in practice occurred progressively as tutors used the innovations in the classrooms and reflected on 'what went well and what did not go well' (Alger, 2006, p. 297). The changes made in the lessons plans for subsequent trials resulted in cumulative learning. Reflection sessions were pivotal to the process of change observed in the tutors'

practice. The purpose of reflection-for-action was to affect actions-in-progress by suggesting possible solutions to the identified obstacles (Eraut, 1995; Alger, 2006; Husu *et al.*, 2008). This resonates with the argument that 'if the use of new practices is to be sustained and changes are to endure, the individuals involved need to receive regular feedback on the effects of their efforts' (Guskey, 2002, p.387). Involving the tutors in the whole process, from identification of the intervention actions and planning through to the implementation phase, enabled the tutors to come up with their own solutions. 'The argument goes that by thinking carefully about what is taking place in a given situation, teachers are better able to identify the options available' (Husu *et al.*, 2008, p. 38). There is need to rethink the current integration and infusion of HIV and AIDS education in all the subjects taught at the primary teacher training college because in a resource-limited context, like Kenya, it is not practical to provide intensive training for tutors who are only allocated a theme like HIV. An alternative model is to integrate and infuse HIV and AIDS into one carrier subject that would allow for intensive training of the tutors.

The success of the study indicates that innovations can be adapted by participants to improve their own situation if they are provided with sustained support throughout the process. In other words, change in instructional practice is a process that occurs in incremental phases and not an event that can be achieved during a one-off workshop (Darling-Hammond and Richardson, 2009; Guskey and Sparks, 2000). Therefore sustained change in the teaching about HIV and AIDS at teacher training colleges is likely to take place if the coordinators, both in the Ministry and in the colleges, were to provide continuous professional development, resources and support for tutors. Moreover, due to the dynamic nature of HIV and AIDS, adapting an ongoing policy for professional development of tutors would ensure that they receive up-to-date information from research as well as having the opportunity to collaborate and reflect during the workshops. Focusing on colleges as units of change is likely to result in improving instruction in the institutions as a whole, but can also lead to change in primary schools if teacher trainees are adequately prepared. By using participatory teaching and learning resources provided for colleges, teacher trainees could compile a portfolio of HIV and AIDS activities to use in primary schools.

The limitation of this study is its lack of representativeness, since the study was conducted in only one college out of the 21 public primary teacher training colleges in Kenya. A similar study could be carried out on a larger scale, involving more colleges and tutors in order to generate data that can be applied to the preparation of both in-service and pre-service teachers.

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