

Integrating HIV&AIDS education in pre-service Mathematics Education for social justice

Linda van Laren
vanlarenl@ukzn.ac.za

Since 1999, many South African education policy documents have mandated integration of HIV & AIDS education in learning areas/disciplines. Policy document research has shown that although South African politicians and managers have produced volumes of eloquent and compelling legislation regarding provision for HIV & AIDS education, little of this is translated into action. The impact of HIV & AIDS permeates the social, economic and political arenas in South Africa. Integration of HIV & AIDS education across disciplines can serve as a strategy to further the ideals of social justice. This paper focuses on how integration in the teaching and learning of Mathematics Education provides opportunities to take action for social justice. The inquiry explores the following question: How can the myth that there is 'nothing we can do' about HIV & AIDS, which is linked to social justice issues, be addressed through integration of HIV & AIDS education in Mathematics pre-service teacher education? Drawing on self-study, the work of a Mathematics teacher educator who worked with pre-service teachers to integrate HIV & AIDS education at a higher education institution is described. By considering integration of HIV & AIDS education in Mathematics Education and taking action it is possible to develop strategies which directly relate to social justice.

Keywords: integration; mathematics; pre-service teachers; self-study; social justice

Introduction

Statistics published by AVERT (2010) estimated that by 2009 more than 5.5 million South Africans were living with HIV & AIDS, with approximately 250,000 South Africans dying in 2008 due to AIDS. These deaths have contributed to creating between 1.5 and 3 million AIDS orphans (people aged under 18 years who have lost one or both parents to AIDS) in South Africa. Large numbers of learners who are affected by HIV & AIDS often suffer physically, emotionally and economically.

Learners will undoubtedly show signs of distress and a decline in motivation, morale and performance, and will probably be 'grappling with survival, death and fear' (Malcolm, 2002: 73), which may lead to social concerns in the school situation. Not only do learners in South African classrooms bear additional burdens, they also face issues of stigma and discrimination. The prejudice against people who have contracted HIV may be because of the perceived manner of contracting the virus, or because of the fear of the virus being passed on, or a variety of other reasons. The discrimination that results may be seen as resulting from some action or judgement, and may be used as grounds for unequal or different treatment during social interactions.

There are many definitions of the concept 'social justice', where issues of equality or equal opportunities are emphasised. There is, however, disagreement and vagueness about what

social justice means in the educational context. Griffiths (1998) considers the notion of 'social justice' to be far wider than 'equality' and 'equal opportunity', but notes that in the literature there is only limited agreement about what constitutes justice.

Griffiths takes the view that 'social justice is a verb', and provides suggestions for what an educational researcher for social justice should *do* (2003:55). Integrating HIV & AIDS education in pre-service teacher Mathematics Education would not be classified as directly focusing on social justice, but it would qualify as doing something that is likely to achieve some improvement in social justice. If pre-service teachers were to acquire new types of knowledge, skills, attitudes and values by becoming HIV aware, HIV competent and HIV safe, they would become more knowledgeable in assisting the large numbers of learners in their charge, who are suffering as a result of HIV & AIDS. As mentioned above, this suffering is related to the social, psychological and physical realms, as well as owing to being targets of discrimination.

Almost three-quarters of the people living with HIV & AIDS in the world are inhabitants of sub-Saharan Africa. Recently 'breakthrough' research announced by Prof. Salim Abdool-Karim and his team at the Centre for AIDS Programme Research in South Africa (CAPRISA) of the University of KwaZulu-Natal (Machirori, 2010) showed that a microbicide gel containing the tenofovir antiretroviral (ARV) was 39% effective in reducing a woman's risk of becoming sexually infected with HIV. At present, this promising result means that the use of the microbicide gel (when the product becomes available) will result in a less than 50/50 chance of being sexually infected by HIV — and holds hope for further research to improve efficacy of the method.

HIV & AIDS still appear to be rampant in South Africa, and this leads to much 'myth making' around the incidence, treatment and prevention of the disease. Just three of the many myths that have been spread among South Africans include the following: 'There is nothing we can do' about the increasing rates of new HIV infections, 'AIDS is an African problem', and 'who cares about HIV and AIDS anyway?' (Irwin, Millen & Fallows, 2003).

Perhaps it is people who have not yet experienced the loss of close family, friends, students or learners who feel apathetic towards 'making a difference' and doing something about the social injustices that have resulted from the HIV & AIDS pandemic. Perhaps some teacher educators or teachers may believe, as Griffiths points out, that they don't feel as an individual that they can fight every fight (2003:47). They find the HIV & AIDS context in which South Africans teach and lecture too overwhelming to become motivated to take action. However, no teacher should ignore the possibility that by 2015 orphans will constitute over 10% of our population (Malcolm, 2002). Orphans are known to be vulnerable as they become easy prey to sexual violence. The increasing number of child-headed families means the teachers of young learners may be the only contact that these orphans have with adults. Educators therefore have a vital role to play in all issues that relate to HIV & AIDS.

In addition to what is expected of school educators, higher education institution lecturers and particularly teacher educators have to make every effort to at least maintain the relatively lower rates of infection among the student population. According to the 2008-2009 *HIV Prevalence and related factors — Higher Education Sector Study* in South Africa (Higher Education HIV and AIDS Programme, 2010), the mean HIV prevalence for students at higher education institutions is considerably lower (3.4%) than the prevalence among the general adult South African population (15.5% – 18.4%) (Department of Health, 2009). Through concerted efforts to address both 'medical' and 'social' issues related to HIV & AIDS, lecturers are in

a good position to take action to influence social justice concerns at higher education institutions.

Locating the study

This paper explores how I, a Mathematics teacher educator who considers it necessary to ‘do something’ for social justice in a higher education institution, took action by integrating HIV & AIDS education in Mathematics Education. Instead of using a ‘medical’ model, where the biological aspects of HIV are related to transmission of the disease, a ‘social’ model was considered as an alternative and appropriate for integration of HIV & AIDS education in Mathematics. This social model includes broader topics that are related to classroom interactions, including gender, poverty, stigma and discrimination. These topics are necessary to supplement the information provided in classrooms concerning biological aspects related to HIV, sexuality and relationships.

Primary school educators are required to teach Mathematics for approximately one-third of their teaching time with learners. Using a high-status (De Freitas, 2006), compulsory subject such as Mathematics for the integration of HIV & AIDS education makes it possible to explore ‘social’ issues related to HIV & AIDS.

Two theoretical and conceptual frameworks were chosen to answer my research question: How can I address the social justice issues that are related to HIV & AIDS in pre-service Mathematics teacher education? Through integrating HIV & AIDS education into a discipline, I wanted to dispel the myth of ‘There is nothing we can do’ about HIV & AIDS. The first theoretical framework makes use of the ‘experience and action’ approach through self-study. Through reframing, restructuring, revitalising and renewing (Gouillart & Kelly, 1995) my past experiences as a Mathematics teacher educator, I pursued an organic transformation by studying how I could commence integration of HIV & AIDS education into a discipline. The second framework is associated with the view that addressing HIV & AIDS education is the responsibility of all educators, both at school and at higher education institutions.

Self-study

As a Mathematics teacher educator, I consider a theory of social justice to be found in ‘doing’ through action research and, more specifically, self-study by using my own experience and action for reflection. In other words, my ‘action’ as a Mathematics teacher educator responsible for preparing teachers in the context of HIV & AIDS is embedded in my ‘experience and action’ (Griffiths, 2003:47). Using this view of how the theory of social justice relates to practice, I explored how I could gain tacit knowledge about how to improve my teaching as a Mathematics teacher educator. I considered how I could contribute to the knowledge base of teaching across Mathematics by using personal inquiry that is supported and critiqued by colleagues (Samaras, 2010). My reflexive practice was facilitated by studying my own practice in a reflective and systematically documented manner. This reflexive practice relates to how I am continually learning and changing the way in which I integrate HIV&AIDS education in Mathematics. An important aspect of reflexive practice then is the “dynamic interaction between reflection and action with an intention to learn and to change” (Antonacopoulou, 2004:47).

Self-study is seen as operating as both a phenomenon and a method. On the one hand, self-study as a phenomenon is an orientation to reflexivity in the context of curriculum integration of HIV & AIDS education and Mathematics in this study. On the other hand, self-

study is a method of documentation for social action (Pithouse, Mitchell & Weber, 2009).

As is the situation with finding a definition of social justice, there is a lack of agreement on a definition for self-study research practice. Sometimes self-study is called auto-ethnography or auto-phenomenology or a variety of other names. In all of these definitions, there is nonetheless recognition of the authority of the researcher engaged in practice (Pinnegar & Hamilton, 2009). Furthermore, self-study integrates practice with experience and theory, and thus it falls in line with what Griffiths (2003) considers important action for an educational researcher for social justice to take.

The social justice framework described by Fraser (2005) focuses on three important dimensions to achieve justice. These dimensions relate to the 'what', 'who' and 'how' of injustices in a globalised world. Through reflexive practice this self-study research aims to work towards not only recognising the 'what' and 'who' of social injustices but also the 'how' through 'doing something' by integrating HIV&AIDS education in a discipline at a higher education institution.

Studying one's own practice is sometimes labelled 'navel-gazing', and criticised as a self-indulgent approach to research. Self-study methodology, according to LaBoskey (2004, 2006), needs to adhere to five essential characteristics, which relate to the need for the research to be: self-initiated and self-focused; aimed at improvement; using multiple (mainly qualitative) methods; interactive at one or more stages of the process; and finally, validated through the construction, testing, sharing and retesting of exemplars of teaching practice. Loughran (2004:18) points out that "self-study defines the focus of study and not the way the study is carried out", so the onus is on the self-study researcher to justify which methodology is best suited to answering a particular research question.

Integration of HIV & AIDS education into a discipline

In addition to learning about HIV & AIDS education, where the focus is on health and biological and sexual relationship issues in what is termed the 'medical' model, it is important to provide opportunities across all disciplines to consider other topics related to the broader 'social' model. Such topics include issues of inequality and discrimination. Although many South African policy documents have called for the integration of HIV & AIDS education for a number of years since 1999 (Department of Education, 1999; 2001), pragmatic ways of presenting integrated learning experiences have not accompanied this legislation. Furthermore, the prospect of openly speaking about sensitive issues related to sex and HIV & AIDS education falls outside the 'comfort zone' of many teachers (Baxen & Breidlid, 2004). Integration of HIV & AIDS education, however, does not need to focus only on these sensitive and private issues. There are many other issues in HIV & AIDS education, such as discrimination and the equal treatment of people, that could comfortably be approached through integration of HIV & AIDS education in any discipline.

There are no hard and fast rules in terms of requirements for the integration of discipline, nor is the notion of including one discipline (such as HIV & AIDS education) within another a novel concept (Chettiparamb, 2007; Klein, 2006). Interdisciplinarity can also be at a variety of 'levels' along a continuum, so it is possible to rank 'interdisciplinary richness' (Nissani, 1995), depending on the position of the interdisciplinary work along a fluid continuum of the two imaginary poles of the pure disciplines. These requirements for interdisciplinarity allow for educators in any discipline to start on a small scale with a particular topic of a discipline, and then to consider how expansion or redesigning of a larger section of a discipline may be

used to integrate HIV & AIDS education.

To integrate HIV & AIDS education in Mathematics Education, I adopted the theoretical framework for integration of one discipline within another, using the approach described by Mathison and Freeman (1997), where the use of thematically based activities are used to cross disciplinary knowledge borders. This is, however, by no means the only way of implementing the integration of HIV & AIDS education into a discipline.

Methodology

I situated my research within a ‘starting with ourselves’ framework to ‘do something’ about the social justice issues that are related to HIV & AIDS, by selecting my teaching of Mathematics Education at my higher education institution. Since there is no exact or ‘correct’ manner or choice of action that has been prescribed to achieve my goal of including HIV & AIDS education in Mathematics, I decided on what was right for me in my teaching context. I developed my own views using the knowledge, skills and values that I have gained as a Mathematics teacher educator over the past 35 years.

As a teacher educator, I wanted to contribute to the battle against HIV & AIDS but lacked the particular know-how. I identified that my area of specialisation — Mathematics Education — could be an aspect to explore. Together with a volunteer group of seven final-year Bachelor of Education pre-service teachers, I started on a small scale to do something about realising my vision. Initially I felt that ‘I know I should do it, but I want somebody to tell me that I have to’ (Lubben & Campbell, 2006:486). This was because I lacked a simple structure as well as the support required to get started. I gained support from the volunteers, and together we implemented the step-by-step structure, the community mobilisation strategy, that was introduced to me during workshops conducted by Dr Marge A. Sutinen from the University of Wisconsin Medical School.

I attended two afternoon tele-conference workshops that focused on HIV & AIDS at the American Embassy in Durban on 8 and 22 June 2005. This was supplemented with a two-day workshop that I attended at the Edgewood Campus of the University of KwaZulu-Natal on 20 and 21 July 2005. This workshop was presented by the same team of researchers from the University of Wisconsin Medical School, led by Dr Sutinen. At the workshop we were given opportunities to consider medical facts about HIV & AIDS, as well as to explore teaching and learning about HIV & AIDS at the high school level. Dr Sutinen suggested a basic step-by-step plan called ‘the community mobilisation strategy’ to promote taking action. The steps in this plan are: Step 1 — Naming the Challenge; Step 2 — Recruiting people from the community; Step 3 — Developing an action plan; Step 4 — Identifying resources; and Step 5 — Becoming involved. I initiated and applied these steps to further my interest in ‘making a difference’ at my higher education institution through the teaching of Mathematics. These steps provided a starting point for my vision of integration.

Community mobilisation strategy

This process provides steps to take action against a particular concern.

Step 1 — Name the challenge

Answer the following questions:

- *What is the challenge?*
- *What behaviour will we focus on to address the challenge?*

Step 2 — Recruit people from the community

After the challenge has been identified, you will need to locate people in the community who would have an interest in helping you address the concern. List the names of persons (including yourself) you would like to invite to help you take action.

Step 3 — Develop an action plan

To tackle the challenge you need to list ways in which each of the groups or individuals listed in Step 2 can help.

Step 4 — Identify resources

Once everyone is on board, you will need to locate those things in the community that could support your plan to address the stated challenge.

Step 5 — Get involved

To increase the success of your mobilisation effort, you will need to:

- *Put your plan into action (Step 3); and*
- *Meet with volunteers periodically to review your plan and make recommendation to improve your plan.*

Keep a record of the activities that the recruited members conducted.

[Source: Adapted from the handout provided at the workshop presented on 21 July 2005 by Dr M. A. Sutinen, University of Wisconsin Medical School]

Using self-study and the mobilisation strategy

By satisfying the five defining characteristics for self-study methodology given by LaBoskey (2004; 2006) and working through the five basic steps of the community mobilisation strategy, I worked at dispelling the myth that ‘There is nothing we can do about HIV & AIDS’.

First I met the criteria required for self-study methodology provided by LaBoskey (2004; 2006) by taking on the challenge of initiating social action with a volunteer group of pre-service teachers using a ‘bottom-up’ strategy. The pre-service teachers who volunteered to work with me were seven final-year Bachelor of Education students (Van Laren, 2008). I was not told to ‘do something’ as an educational researcher: I wanted to include HIV & AIDS education for social justice reasons, by focusing on how I could live out my values of social justice more fully in my own practice as a Mathematics teacher educator.

Secondly, I sought self-improvement by studying how I bring my own scholarship into my teaching as a Mathematics teacher educator, by working towards improving the preparation of pre-service teachers in the context of HIV & AIDS. I aimed at ‘intelligent, responsive and rational’ actions (Griffiths, 2003:114) that are coherent with most of my teaching experiences as a Mathematics teacher educator. Thirdly, I made use of multiple settings so as to gain insight into integration possibilities. The settings varied from volunteer group meetings, where we prepared suitable primary school integrated materials, to a variety of school locations in the Durban area where the volunteers presented integrated lessons during teaching practice. Fourthly, during volunteer group meetings as well as reflections after having observed integrated lessons, multiple opportunities for interactions and reflections were provided. Lastly, opportunities for validation were created during interactions at volunteer group meetings, at conferences, symposia and colloquia (Van Laren, 2004; 2006; 2007; 2008; 2010). Oppor-

tunities for validation were also provided through the construction, testing, sharing and re-testing of the integrated activities that were taught and observed by pre-service teachers during teaching practice in 2005.

To dispel the myth 'There is nothing we can do', I used the five basic steps provided by the community mobilisation strategy to 'get started' with the integration of HIV & AIDS education in Mathematics education, by considering realistic and achievable strategies that suited my particular teaching circumstances, as follows:

1. Naming the challenge

My challenge was two-fold. Firstly, I identified that HIV is a serious problem for pre-service teachers and learners. Based on my research, little work or research concerning pre-service teachers and HIV & AIDS has been done and documented. I focused on my teaching and learning of Mathematics Education to make pre-service teachers aware of the HIV & AIDS epidemic through mathematical activities. The behaviour I concentrated on was the HIV & AIDS mathematical activities prepared by the volunteers and me. We wanted to promote awareness of HIV & AIDS that is appropriate for young learners (Grades 3–7). Furthermore, I wanted pre-service teachers to realise that the many learners affected and effected by the virus require the creation of an appropriate classroom environment that is free from discrimination and where learners are supported in terms of care and understanding.

Secondly, I intended to encourage, assist and work with the volunteers to develop and use classroom mathematics activities to promote awareness about HIV & AIDS. The mathematics activities were used in the mathematics classrooms of young learners to promote open discussion in a sensitive manner about issues related to HIV & AIDS.

2. Recruitment of people from the community

The volunteer group of pre-service teachers expressed an interest in helping me to address the concern. In turn, these volunteers went to schools in the community during teaching practice, where our collective concern was aired to headmasters, teachers and learners in Mathematics classrooms.

3. Development of an action plan

We tackled the challenge by learning more about how HIV & AIDS education can be included in Mathematics teaching and learning. We developed mathematical activities that were used by the volunteers in their classrooms with young learners during practice teaching. The theories of how integration may take place were transformed into action in a range of Mathematics classrooms.

4. Identification of resources

Upon asking, schools in the community granted us permission to implement our plans to address our challenge in their Mathematics classrooms. The volunteers asked for expert advice from the teachers and principals during their practice teaching that was performed in schools situated around and in Durban, South Africa. We requested comments and/or suggestions since this information would be useful to address our challenge and encourage discussion centred on HIV & AIDS education.

5. Becoming involved

To increase the success of our community mobilisation effort, the volunteers taught mathe-

mational activities that included HIV & AIDS education. I observed the integration of HIV & AIDS education in the Mathematics lessons taught by the volunteers. We reflected on our 'Draft' copies of our activities. We kept records of our actions, reflections and improvements as well as what we had learned from our experiences. I regularly justified my choices in reflection entries.

The following is an example of what we considered to be an appropriate and integrated activity for young learners (Grade 4/5) where the concept of the 'Red Ribbon' is used as a theme to cross disciplinary knowledge borders.

The Red Ribbon



Figure 1

1. *What do you think it means to wear a Red Ribbon like the one shown in Figure 1?*
2. *A Red Ribbon is a national and international symbol of HIV & AIDS awareness. Find out why the KwaZulu-Natal Department of Health has chosen this Red Ribbon for the Care and Concern, Hope and Support required for AIDS awareness. If you have access to a computer, visit the website <http://www.kznhealth.gov.za/redribbon.htm>. Below is a copy of the information that you will find.*
3. *If you were given a Red Ribbon, would you wear it? Explain your answer.*
4. *World AIDS Day is dedicated to raising awareness of the AIDS pandemic caused by the spread of the HIV virus. It is common to hold memorials to honour persons who have died from AIDS on this day.*
 - a) *What date is usually celebrated as World AIDS Day?*
 - b) *How many days are there until the next World AIDS Day?*
5. *You decided to make Red Ribbons to give to friends and family on World AIDS Day. You want to make a Red Ribbon using the piece of ribbon shown in Figure 2:*

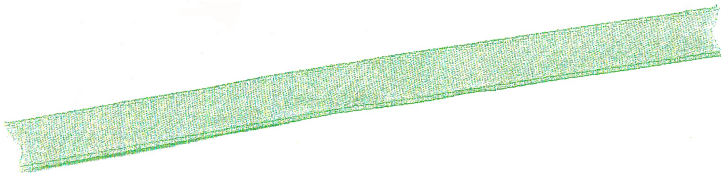


Figure 2

- a) Find the length of this piece of ribbon. Give the length in millimetres and centimetres.
 - b) How many centimetres of ribbon would you need to make 5 of these Red Ribbons? Explain your answer.
 - c) You bought half a metre of ribbon. Would you have enough ribbon to make 10 of these Red Ribbons? Explain your answer.
 - d) How many Red Ribbons could you make if you bought 2 metres of ribbon?
6. You would like to use the Red Ribbons to glue onto pieces of cardboard to remind your family and friends about the meaning of World AIDS Day.
- Make a Red Ribbon using a piece of paper that is the same length as the picture of the ribbon shown. Colour the piece of paper red.
 - Cut out a rectangular piece of recycled cardboard that is 140 mm long and 95 mm wide.
 - Glue the Red Ribbon to the piece of cardboard.
 - Write an important message on the cardboard about World AIDS Day.

[Source: Integrated HIV & AIDS education and mathematics activity, adapted from Van Laren (2009: 205-206)]

Discussion

In order to work towards an organic transformation of myself from a ‘pure’ Mathematics discipline teacher educator to a teacher educator who integrates HIV & AIDS education in Mathematics for social justice, I needed to acquire new knowledge and skills. To clarify the processes required for this organic transformation, I found the seminal work by Gouillart and Kelly (1995) useful to describe what was required of me to ‘make a difference’ in my Mathematics Education lectures. These authors presented a 4-R framework for transformation in an organization that involves reframing, restructuring, revitalising and renewing. I will explain how I made use of an adapted form of their management framework to distinguish the processes that I, an educational researcher for social justice, took up using a self-study approach to the new challenge of integration.

Firstly, *reframing* was achieved after my reflection on what, why and how I was teaching primary school pre-service teachers. I realised that the HIV & AIDS context of many South Africans was not being taken into account. Some of my pre- and in-service teachers had died as a result of the pandemic, so ‘business as usual’ in my Mathematics Education lectures could no longer be an option. To reframe, I mobilised an action plan with the volunteer group of pre-service teachers, created a vision for integrating HIV & AIDS education in Mathematics, and extended my experiences as a Mathematics teacher educator through working with a volunteer group of pre-service teachers. I used the framework provided by the five steps of the community mobilisation strategy.

Secondly, *restructuring* of my identity as a Mathematics teacher educator was required, as I was primarily concerned with making sure that pre-service teachers focused on the teaching and learning of Mathematics instead of taking into account the context in which the learners are situated. I had to make choices. Without being told what I should do, I realigned by teaching of selected topics to incorporate appropriate aspects that linked to addressing social HIV & AIDS education issues in Mathematics Education. I restructured using a ‘bottom-up’, ‘organic’ approach so that I was confident and capable of making the necessary changes for

the integration of HIV & AIDS education in Mathematics Education. This restructuring process will never cease as I am continuously seeking different and additional ways to extend the integration of the two disciplines: HIV & AIDS education and Mathematics Education. In my Mathematics lecturing the boundaries between these two disciplines will probably never disappear completely. This is the case firstly because of my vast life experiences as a Mathematics teacher educator, and secondly because, some of the abstract concepts in Mathematics are not suitable or appropriate for the integration of HIV & AIDS education activities.

Thirdly, thorough reflection concerning the value that I place on the learners in relation to the Mathematics being taught brought about *revitalisation*. I believe that the learners in Mathematics classrooms are the most important reason for teaching Mathematics. For social justice reasons, it is necessary to take action to achieve some improvement in issues related to HIV & AIDS inequalities and discrimination. By focusing on the learners, it was necessary to find creative ways of revitalising what is presented to pre-service teachers. Issues of inequality and discrimination can be addressed by emphasising the HIV & AIDS context that will influence the Mathematics classroom environment. I connected the Mathematics Education requirements that are set out in the National Curriculum Statement (Department of Education, 2002) with what is happening 'on the ground' as a result of HIV & AIDS.

Finally, in redirecting the focus from the 'pure' Mathematics, I also included the context of the learners, and this required *renewing* my past experiences and actions as a Mathematics teacher educator. For this change I needed to renew my learning so as to supplement my subject and pedagogical content knowledge of Mathematics Education with additional subject and pedagogical content knowledge of HIV & AIDS education. Being removed from my 'comfort zone' of teaching only Mathematics Education so as to develop pre-service teachers' knowledge, skills and attitudes in HIV & AIDS education amounted to risk-taking. I saw my stepping out of the comfort of Mathematics Education as necessary to assist the pre-service teachers in becoming more HIV aware, HIV competent, and HIV safe. In turn, these pre-service teachers would be able to assist learners in their future care who may be classified as 'different'. The volunteer group and I took on the challenge of integrating HIV & AIDS education in Mathematics willingly, and we made the necessary changes for the transformation required to adapt and change teaching and learning in the context of HIV & AIDS. Without extending the integration work to include larger numbers of individuals, such as a whole group of pre-service teachers registered for a compulsory Mathematics Education module, the work on the volunteer group could have become insignificant.

Conclusions and implications

Through my research I found ways of improving my practice through actions that required organic reframing, restructuring, revitalising and renewing as a teacher educator for social justice reasons. By showing that it is possible to 'do something' about the HIV & AIDS pandemic through Mathematics, I worked towards dispelling the myth that 'There is nothing we can do'. By extending and developing the volunteer group research, that included preparing and presenting integrated activities in Mathematics classrooms, various ways of expanding the integration of HIV & AIDS education in Primary Mathematics Education modules at the Education Faculty of the University of KwaZulu-Natal were discovered. Primary Mathematics Education is compulsory for pre-service teachers who intend to become Foundation, Intermediate or Senior Phase (Grades R-9) teachers.

Using self-study (Van Laren, 2008) and a 'starting with ourselves' approach, I was able

to gain insights into pedagogical strategies that I could use to further HIV & AIDS education in Mathematics Education at my pre-service teacher institution. If a cross-curricular approach to mainstream HIV & AIDS education across the higher education institution is chosen for pre-service teacher education, where HIV & AIDS education is integrated in each discipline, then it would be necessary to determine which disciplines could ‘complement’ each other so that the HIV & AIDS education remains ‘visible’ when presented with other topics within selected disciplines. Overseeing the sharing of responsibility and coordination of teaching HIV & AIDS education across a variety of disciplines would be required.

If other ‘like-minded’ teacher educators in other disciplines take up the challenge for social justice reasons, we could gain support through working collaboratively to address the myth that ‘There is nothing we can do’ about HIV & AIDS. Motivated, willing and competent teacher educators would need to be canvassed to take on the added responsibility of HIV & AIDS education within their disciplines. In addition, the assessment of appropriate, integrated learning would require alignment with the agreed integrated learning outcomes that would benefit HIV & AIDS education as well as the particular discipline.

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Author

Linda van Laren is Senior Lecturer in the School of Science, Mathematics and Technology Education, University of KwaZulu-Natal, South Africa. Her research interests lie in assessment in mathematics, multicultural and anti-racist education, self-study methodology, and HIV & AIDS teacher education in mathematics.