

# INCLUSION OF HIV/AIDS AWARENESS IN CORE CURRICULA FOR CONSTRUCTION ECONOMICS AND MANAGEMENT STUDENTS

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With the maturing of democracy in South Africa, there has been a realisation that active measures need to be taken to develop a sense of inclusivity in graduates. Given that graduates move into management, their attitudes and knowledge are pivotal to growth. Attitude and knowledge surrounding HIV/Aids is required for both personal safety and workplace management and skills. Mixed methodology was used in a study in 2014 on the inclusion of HIV/Aids awareness in main curricula for third-year courses within the Faculty of Engineering and the Built Environment at the University of Cape Town. Lecture, workshop and presentation modules were conducted through Professional Communication courses. These inputs of career path, citizenship and discipline-specific content were based on pre-assessment results and were given to two cohorts of Construction and Economics and Management students comprising 27 (first cohort) and 54 students (second cohort). The students attended a 2-hour lecture/workshop and, in pairs, gave 10-minute presentations on themes on the topic. Marks were awarded according to criteria based in HIV/Aids content and professional delivery. After judgment by two staff members and one industry representative, the four winning pairs received cash prizes. Post-assessment following the workshop and presentations was through a questionnaire (100% completion). Conclusions were that given effective collaboration between course convenors, integration of the topic within core curricula was effective; contributed to inclusivity; achieved the aims of developing workplace knowledge and skills in social and public health; and allowed Professional Communication course objectives to be achieved.

Keywords: H&S, HIV/AIDS, curriculum development, inclusivity.

## INTRODUCTION

In July 2014, the Executive Director of UNAIDS called for an end to Aids by 2030. (UNAIDS, 2014). For such an achievement he noted that voluntary testing and treatment must be able to reach everyone. To quote his speech at the 20th International AIDS conference, Melbourne, 20 July:

*“I am calling on the world to adopt a new, ambitious target: 90% of people tested, 90% of people living with HIV on treatment and 90% of people on treatment with suppressed viral loads.”* (Sidibe, 2014)

However, George (2006, in Bowen, 2014) states that deaths this year in South Africa are expected to reach 2.1/100, up from 1.7/100 in 2005. Reaching the UNAIDS’ objectives can only happen with the commitment of all involved: governments,

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industry and individuals. It can also only happen through education. Of the major sectors on which HIV/Aids has had a negative impact: mining, transport and construction, construction work has had and continues to have a particularly high incidence because its association with migrant and out-sourced labour. A factor of out-sourced labour is that it is unregulated and informal, making this sector more vulnerable to socio-economic problems, such as HIV/Aids. Studies over time in South Africa about construction and the relationship between attitudes (based in knowledge and beliefs) and types of employment all show the problem as inadequately managed. (Haupt and Smallwood 2005; Ugwu and Haupt 2005; English *et al.* 2006; English and Bowen 2012; Bowen *et al.* 2014)

In a local study (Western Cape construction firms), Bowen *et al.* (2010) surveyed workplace policies and programmes. The study covered 42 companies with data being collected via a web-based survey. Major findings were that 67% of respondents had an HIV/AIDS policy but only 19% had implemented a treatment programme of some description. The reasons cited for not having implemented a programme were cost, insufficient management resources, management being focused on productivity, and meeting time constraints. The study also referred to stigma as it felt employees wanted to avoid HIV positive stigmatization, and anonymity could not be guaranteed. For construction students, therefore, this intervention was particularly apt.

Recent extensive research by Bowen *et al.* (2014) described the need for the private sector in construction to be involved, particularly given the sector's high prevalence of Aids with its informal employment, fragmented work patterns and diverse locations. The literature on this topic indicates the challenges these conditions raise with researchers. Bowen *et al.* (2014) describe Haupt, in particular, among others, as having looked at the particular problems of contractor awareness (2003), age (2005a) and good health (2005b). Policy is fundamental to meeting the challenges – without it, there will be no drive for funding or implementation of preventative and curative measures. In a study in 2010 (see Table 1), Bowen *et al.* (2014) found that only a slight majority (53%, n=16) of the 30 firms questioned considered HIV/Aids as a long-term threat to the industry, although the majority (73%, n=22) had a programme in place. Having a programme, however, does not necessarily translate into its being active. An example of this was found in a response from a participant who knew her company had a policy on the virus but was unsure about its content:

*“They [employees] know the company has an HIV/AIDS programme but cannot remember what it entitled them to. Though all employees, subcontractors, etc. (everyone on site) has to have a lecture by the H&S officer before they are allowed on site, are given the written safety conditions on paper, including rules of behaviours expected of them on site; and the company’s policy on AIDS. They have to sign they have received this information before they can move onto site.”* (English and Bowen, 2012:43)

A later study by Bowen *et al.* (2014) found that construction under-performed in terms of programmes and investment compared with finance, transport, manufacturing and mining (Bowen *et al.*, 2014), with only 31% of construction companies having implemented an awareness programme. Given this industry being one of the most at risk, this is a poor result for the needs of the country. Of further concern is the negative effect of stigma leading to lack of uptake of treatment when needed and offered. Whilst HIV/Aids needs to be flagged as a critical concern in the construction industry, Bowen *et al.* found that only just over half of the sample conveyed

considered it a problem. For 47% it was not a problem of importance, as illustrated in Table 1.

*Table 1: Survey respondents' opinions regarding HIV/Aids as a long-term industry threat (n=30) Bowen et al. (2010:1000)*

Perception of HIV Aids	% Response
Not a problem	7%
Slight problem	17%
Neutral	23%
Problem	27%
Significant problem	26%

Negotiation for the integration of HIV/Aids content into core curricula at UCT presents challenges. Where the integration was not possible in core curricula, co-curricular interventions were designed that placed emphasis on using the existing knowledge and skills relevant to the industry. The University of Cape Town (UCT) acknowledges integration of HIV/AIDS education into curricula in its HIV/AIDS policy. The need was to include the areas in which practitioners need competency – that is, knowledge and understanding of the condition and its environment; its effect on attitudes and values; and related activities in the workplace, for example, respect for confidentiality, empathy, good communication and good interpersonal skills. (HEAIDS, 2010a).

While various interventions have shown that HIV/AIDS can be successfully integrated into academic curricula (Volks, 2012), common challenges arising during practical application of the policy include staff loyalty to their area of expertise and the concern surrounding the relevant discipline specific integration of HIV/Aids education into core curricula (HEADS, 2010a). Two structural barriers often occur when encouraging integration of core content with HIV thematic issues: first, the lecturer's personal discomfort with the topic, which results in shunning the possibility of alignment; second, the lecturer not being able to visualise the fit with the core content.

### **Aim**

Overcoming these two barriers has been part of the success of a study undertaken at the UCT Faculty of Engineering and the Built Environment (EBE). An organisational management theory of collaboration was successfully applied with faculty staff leading to two sustainable results. First, one foundation course for all engineering students incorporated the HIV/Aids and contextual content, and second, a co-curricular exercise managed through the EBE faculty was conducted. An overview of the process of integration and course alignment is outlined in the following paragraphs. The evaluation of the study presented in this paper will be used to inform the process by which the UCT HIV/Aids, Inclusivity and Change Unit (HAICU) initiates the integration of discipline specific HIV/Aids education into core curricula in the other five UCT faculties. This has relevance for other South African and African Higher Education Institutions with a need to integrate discipline specific HIV/Aids curriculum material. The strength of the study is inherent: it is grounded in theory emanating from robust research (conducted by Department of Health and Higher Education bodies) and has great relevance for construction – a growth industry in South Africa. Its weakness is that the sample group, while being 100% of the third-

year Department of Construction, Economics and Management students, the overall intake was lower than in previous years, amounting to only 81 students.

### **Background to Aids in Education**

In 2012, it was estimated that 12.2% of the population in South Africa (6.4 million persons) was HIV positive, which is 1.2 million more than in 2008 which represented a significant change over the 2008 HSRC survey (Shisana *et al.*, 2009). Since 2008, the 15–24 year-old age group has had the highest HIV prevalence, with the prevalence within this age group only recently decreasing. Currently, the HIV prevalence is 7.1% of 15–24 year olds (N= 5,890; C.I 6.2–8.1). As 17.8% of students enrol at university, the case for adequate support services, as well as learning spaces that interrogate South Africa's contextual issues within each academic discipline, becomes more urgent.

Given that the most affected age groups are women aged 20 to 34 (32.7% of all women) and men aged 25 to 49 years (23.7% of all men), universities need to take cognizance of the crisis (Shisana *et al.*, 2009). Shisana *et al.* (2009) also described 15% of the population between ages 15 and 49 as being affected. Higher education bodies in South Africa have been aware of the crisis and in the new millennium, the South African Universities Vice-Chancellors Association (SAUVCA) sought to identify the scope of the virus and its impact on education. The areas looked at were the management planning, programmes and policies that had been put in place (HEAIDS, 2010a). Findings regarding students confirmed the general ones from the HSRC enquiry described earlier – male students (19%) on average had had more than one partner in a month, which was more than women students had had (7%), but women (4.7%) were twice as likely to be affected as men (2%). (HEAIDS, 2010a:23)

Education, both formal and non-formal, is being increasingly packaged according to qualifications, delivered through pre-packaged curricula which are based on predetermined outcomes and integrated in a discourse of improving competitiveness, jobs, standards and quality (Batjes, 2005). University graduates coming out of UCT's Construction Economics and Management courses move into management and thus, can be predicted to be future drivers of Aids awareness and action in their companies. The HAICU is mandated by the office of the Vice Chancellor to work in the areas of peer education, communication, policy and curricula. The latter was the focus for this research project, with HAICU collaborating with Professional Communication Studies (PCS) in EBE to integrate public health education on HIV/Aids into core curricula so that students engage with social justice issues through their course work. It is only if the topic is thus entrenched that it will be taken seriously and not be a lightweight option or dropped entirely (HEAIDS, 2010b). For universities, this means it is linked to the degree, through Duly Performed (DP) requirements or evaluation.

Conventional wisdom suggests that engaged and relational learning is more likely to grow out of a learner-centred, rather than teacher-centred, instructional environment as learners are strongly influenced by their peers (Sulcas and English, 2010). The shift therefore, was made towards creating students that are critically engaged with their discipline and the context in which they live and work, which requires lecturers to view the university space as part of a complex social system (Rakow, 1991) dependent on the students' social context rather than as a siloed classroom space. Lecturers need to generate critical and emancipated learning spaces so that the 'temporary relationship of [lecturer] and student continues to be influenced by the larger world – a world in which classifications of gender, race and class are among the most

paramount.’ Rakow (1991:10). Lecturers who are component in their technical fields are not always comfortable, however, in moving into this nuanced environment.

Higher Education HIV and Aids Programme (HEAIDS, 2010b) described preferred modes of delivery of such material. HIV/Aids education programmes in particular require good social and interpersonal skills in the leader because of the danger that if the right climate is not created, the lecturer could come across as moralistic and the programme consequently fail (HEAIDS, 2010b). Studies indicate that a workshop rather than a lecture construct is preferable. HAICU's approach has been to offer one-day modules for students – a format it has used in the faculties of Commerce and Medicine. However, the block of time required has to be factored into the curriculum and is not necessarily available in all courses. Thus, in courses, such as the one in the EBE faculty, it was preferable to incorporate the HIV/Aids material into current course material despite the risk of staff resenting the additional material as an added burden to their preparation and delivery. The preferred model, therefore, involved team teaching – necessary where the core course teacher has no knowledge in the area of HIV/Aids – and adding an HIV/Aids component to an existing course (HEAIDS, 2010b).

In this case, Professor Paul Bowen of the Department of Construction, Economics and Management, an established researcher in this field, was able to provide expert knowledge, which meant automatic cross-disciplinary connections and support, and that no additional work for staff of the carrier department (PCS). These are factors that make for successful team teaching. A summary of the relative approaches to integration, by Mathison and Freeman, is given in Table 2.

*Table 2: Levels of integration Mathison and Freeman (1997:8)*

Level of integration	Theoretical features
Intra-disciplinary discipline-led	Enhances connections within disciplines Promotes success for all students
Cross-disciplinary correlated	Coordinated themes/content across separate subjects Emphasis of certain skills across disciplines Processes, concepts, skills, or elements of two or more disciplines together
Interdisciplinary	Processes, concepts, skills, or elements of two or more disciplines together Common themes or modes of inquiry form interdisciplinary connections Inquiry skills and discipline content are enhanced
Integrated	Disciplines lost in global perspective Theme or issue oriented Inquiry oriented
Integrative	Disciplines lost in global perspective Student/teacher negotiated themes and issues direct Inquiry oriented

If integration of the topic is done via a carrier subject, certain factors come into play. Fewer specialized lecturers are needed, but it needs to be clear who is plays which role and who is responsible for the various tasks, although the expert team needs to facilitate the assessment. In some cases, material may have to be dropped for the HIV/Aids input to be included – the HIV/Aids content may have to be truncated. Lastly, despite enthusiasm in the specialist team, there is no surety that it will be matched by the staff of the carrier subject. (HEAIDS, 2010b).

The carrier subject tends to be one of the soft skills, such as communication, which was the case in the UCT study, added to which, there is a preponderance of female lecturers in such areas. Thus, while a predominantly male faculty drives the curricula in areas such as engineering, female staff members will deliver the HIV/Aids modules (HEAIDS, 2010b). Indeed, both PCS lecturers on the CEM module were women. This reflects the changing role of teachers to include care about social issues affecting students.

To go beyond the traditional requirements of teaching, the academic needs faculty support as skills are required beyond the usual requirements for teaching a technical subject. Personal knowledge and workplace knowledge are of importance for this topic – as well as disciplinary knowledge. In the study outlined, some lecturers described the problem of keeping up with HIV/Aids topics and that some of the material they access may be dated. A further issue to be considered was duplication of activities and resources within the university, taking into account the number of participants involved (HEAIDS, 2010b).

Academics in many South African universities have provided examples of the various ways social consciousness about HIV/Aids and related health issues can be incorporated into course content. By providing students with a consciousness that helps them “*move away from thinking in terms of rules that give clear-cut, readily definable answers and toward conceptualising both problems and answers in terms of particular perspectives within the multiple, conflicting possibilities presented by experience*”, lecturers have a rare opportunity to assist students in building their individual and academic voices (Weber, 2010:131).

In all these contexts, lecturers should provide the intellectual space for students to forge connections between their experience and class material, and to honour their experiences and insights rather than quickly dismissing them as anecdotal, an obstacle in their path to real knowledge. Establishing an appropriate method for creating emancipated learning spaces often generates anxiety for lecturers who have not had to adapt or align HIV content and socio-contextual concepts within their course context.

## **THEORETICAL AND PRACTICAL FRAMEWORK FOR COLLABORATION**

Volks (2012) demonstrated in the evaluation of HAICU’s HIV/Aids pilot courses that had adopted Campbell and Cornish’s theory (2010) in the Health Sciences, and Science and Engineering faculties that the following beliefs could be discounted:

- a compulsory examinable course on HIV/Aids will automatically lead to “*Aids fatigue*” and will increase knowledge, or will change attitudes or be valued.
- compulsory HIV and Aids courses cannot be fitted into packed curricula.
- information for personal use cannot be integrated successfully with information for academic learning.

The research study on integrating HIV/Aids in Engineering and Science courses in 2012 had positive outcomes and the evaluation disproved the above statements. A pivotal outcome was the appropriateness of PCS as the carrier for the intervention. Research has indicated that this intervention needs to be couched in the curricula design by an over-arching body (in this case, HAICU) to ensure neither omission nor repetition of material (Wood, 2014). Woods also found extensive evidence that service courses such as PCS are the best drivers for HIV/Aids education but that the content must be made relevant to the core subject (in this case, construction) and to

the social and physical environment in which the students live (Wood, 2014). The challenge in the 2012 study was maintaining a cohesive programme across four different departments in EBE. In this study, the programme was contained to cohesive groups of students studying Property Studies and then to those studying Construction Economics and Management. Thus the alliance between the faculty's course objectives and HAICU's organisational objectives was kept.

The approach was that the students attended a 2-hour lecture/ workshop and, in pairs, gave 10-minute presentations on themes on the topic. Marks were awarded according to criteria based in HIV/Aids content and professional delivery. After judgment by two staff members and one industry representative, the four winning pairs received cash prizes. Post-assessment following the workshop and presentations was through a questionnaire (100% completion). A further success factor was the esteem given to the programme. This was evident in senior staff addressing students and in the mark weighting. The presentation project carried 200 out of the total of 700 marks for the course.

Clear communication and clarification of intent typified the HAICU project officer's role. Theory described by Wood (2014) shows that a department needs support in integrating HIV content into a special subject. The importance of it needs to be stressed and its relevance to the core curricula for preparing functional graduates (Volks, 2012). Therefore, part of the communication process included presenting the concept to members of the PCS department. As the members of staff were also course convenors for the programme, it was critical to clarify the concept and establish their commitment to the process. Part of this process included allaying their anxieties about addressing a topic some felt awkward about, addressing their stereotypical views and imbuing them with the confidence and tools to become involved. Wood's 2014 review showed a number of studies which recommended that the department have the outside input of an expert; this was the role played by HAICU.

Good teaching practice is that evaluation is essential to creating and maintaining collaboration. Therefore each course was evaluated to give feedback to the group members. These objectives were to preserve and enhance the course aims and outcomes, while invoking critical thinking about HIV/Aids as it relates to industry. The objectives of the curriculum integration were to focus on areas of synergy in course content to prepare UCT students to adequately respond to HIV/Aids within peer and workplace environments. The course structure included quantitative pre- and post-evaluation to measure levels of understanding both before and after the knowledge share. The results of the pre-assessments were used to define the course content. The post-assessment results informed the development and implementation of the courses for the following year, and assisted in curriculum discussions with course convenors.

## **COURSE INTEGRATION AND STUDENT ENGAGEMENT**

HAICU and PCS practitioners worked on conceptualising the inclusion of information on HIV/Aids into the professional communication course content, assessment of learning, and relevance to industry. The core subject selected for the module was the Construction Economics and Management programme. While the pilot study in 2012 had students volunteer with only volunteers attending the workshop, all the students in the two courses (27 from Property Studies and 54 from Construction) in 2014 attended a two-hour lecture / workshop. Input was given by a key researcher on HIV/Aids in construction in South Africa, Professor Paul Bowen, and by HAICU. Research was

presented on workplace programmes currently used within companies in South Africa to further the students' understanding that successful HIV/Aids education is complex. The focus on students' understanding of their roles as future leaders within the industry was emphasised during the course. They were required to understand the socio-economic context of HIV and how this could affect the labour force. Discussions about innovation in programmes that made an impact demonstrated the application of the students' critical consciousness in HIV/Aids education and workplace programmes. Thus the emphasis on HIV/Aids was not so much on personal experience, but in the context of how it affects their peer-group and employees. This objectivity took personal pressure away from the participants. Students conducted research before choosing their presentation topics.

This further engagement with HIV/Aids career-specific content piqued the students' interest, and their self-motivation to learn more about how HIV/Aids affects the construction industries was evidenced in their research. The brief for the competition was: mandatory attendance at the lecture/workshop; selection of an HIV/Aids topic; completion of an on-line pre-assessment via the university intranet; and delivery of a 10-minute oral presentation adjudicated by a panel. Benefits from this module were a certificate of competence, information inserted into personal curriculum vitae, cash prizes for the top four presentations, video recording of presentations, and recognition of work by the EBE faculty at an awards ceremony.

Summated research was presented to their peers and adjudicated by panellists comprising the PCS course convenor, a guest examiner from industry and the HAICU project officer. Adjudication of the oral presentation was graded according to certain criteria which included using more than two sources in the research, showing consideration of the challenges faced by employers, understanding of the impact of HIV and benefits of workplace programmes, and giving current examples to support any claims made. Examples of topics were:

- Project Specific HIV/AIDS Programme – on-site support, awareness and treatment
- An HIV/AIDS Clinic in Gugulethu
- HIV/AIDS Task Force Package Research
- Aids Core Training Consultants

All the talks passed the criteria set by PCS and HAICU, with the winning pairs achieving over 75%. The post-course assessment was conducted through recorded discussion. The discussion was based on questions such as the usefulness of the workshop; the connection for the student between the theory and their findings; and what connections they had made between the HIV/Aids course content and their particular construction career path. On a personal level, they were asked if they had acquired new knowledge and/or skills during the research process and whether these skills were transferable beyond the university. Finally, they were asked how they would manage a workplace with people living with HIV/Aids. It was found that the content of the workshop connected with the student's discipline and career path as these responses indicate:

*“Knowledge is power; I will do what I can to inform people.”*

*“Encourage family living environment so that the unit stays together and reduces prevalence of HIV.”*



Thus these results demonstrated that the students had acquired a thorough understanding of basic treatment, health and safety in HIV-related matters and matters pertaining to management and industry.

## CONCLUSIONS

The inquiry into infusing input on HIV/Aids into the core curricula of the Professional Communication course began in 2012 with a voluntary group. The expansion into a course with it being mandatory for all those students showed equal measures of success in terms of the quality of the input and student engagement, and the collaboration between HAICU and PCS. For HAICU, the objectives of increasing students' awareness to HIV/Aids through social and public health discourse were achieved. Overall the study and student evaluation showed that through integration of the topic into core curricula, the Construction, Economics and Management students were alerted to the importance and complexities of the subject for them as future managers in an industry which has a high incidence of the disease. The project closed with the intention that it continue to be rolled out in an integrated format to all students and in many disciplines within the University of Cape Town.

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