

FACILITATING STUDENT ENGAGEMENT: THE UNIVERSITY OF PRETORIA ARCHIVES 'CENTURY IN THE NEWS' EXHIBITION AS A CASE STUDY

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ABSTRACT

Although greater numbers of historically disadvantaged students have been registering at South African universities since the late 1980s, their rate of completion is considerably lower compared to other students. Universities are under increasing pressure to democratise in order to address racial-ethnic gaps in graduation rates and to take cognisance of the diverse needs of students from a range of cultural and social backgrounds, varying levels of education and academic potential. A solution to this problem adopted by universities world-wide is the establishment of learning communities, where students could receive additional support from the institutions where they are registered to ensure the successful completion of their degree. A key feature of most learning communities is their interdisciplinary and interactive approach to education in which they incorporate active and collaborative learning activities to engage students more effectively. When considering the type of education that is offered by archives and museums, namely a combination of active learning and personal meaning making, museums seem to be ideally placed to assist learning communities in integrating diverse academic and social activities into a meaningful whole in order to convert these experiences into authentic learning. This article will demonstrate, as a case study, how specifically the University of Pretoria Archives are used for orientation purposes in a degree programme by the Faculty of Engineering to its learning community, in order to help students acquire the additional background knowledge that may not have been available to them at school, and to develop a conceptual understanding of key concepts in their discipline which would enable them to complete their degrees successfully.

Keywords: Education; student engagement; archives, tertiary education; museums.

INTRODUCTION

The involvement of museums and archives in education stretches over more than a century. Since the inception of museum education programmes in the late nineteenth century, tours aimed specifically at school groups, as well as 'activity rooms' where the learners could handle specimens and artefacts, were introduced to enable museums to complement the school curricula (Griffin & Symington, 1997:765).

However, these initiatives were, and still are, to a large extent primarily focused on children's programmes and family learning, as opposed to tertiary education and adult learners. Although many museums have internship programmes where graduates and even undergraduates can receive hands-on training, education programmes geared specifically towards

the changing needs of the university environment are few and far between (Taylor & Neill, 2008:23-32). The growing importance of a tertiary qualification and the democratization of tertiary education world-wide have necessitated pedagogical changes, which in turn have created opportunities for university museums and archives to become more involved in tertiary education.

The aim of this paper is to examine possible ways in which university museums and archives could play a role in tertiary education. In the first place the value of museums in facilitating education will be discussed. Secondly the democratisation of tertiary education and its effects will be reviewed with specific reference to the South African education system. Both these discussions are covered within a broad literature review with specific emphasis on museum education and tertiary education since the 1990s.

The University of Pretoria Archive exhibition entitled, *A Century in the News* (Van der Merwe, 2010), will be used as a relevant example to show how a museum-type exhibition can be adapted to serve as an educational tool.

MUSEUMS AS FACILITATORS OF EDUCATION

Museums provide 'highly stimulating and novel physical and social environments' that enable them to reach out and communicate in ways that are interesting and understandable to members of a highly diverse constituency (Munley, 1996:15). She also emphasises that museums are concerned with 'lifelong learning and can strengthen basic skills, basic knowledge, basic comprehension...' and she concludes that 'museums can, and do, play an important role in the process of transmitting culture and giving meaning to life' (Munley, 1996:15). Another aspect of museum education that facilitates adult learning in particular, is that museums, as opposed to many other community educational institutions, are 'places of initiation without obligation' that encourage voluntary participation (Anderson, Lucas & Ginns, 2003:178).

In addition museums are public institutions with a social vision of serving all those who have an interest, particularly the under-represented audiences (Griffin & Symington, 1997:161). The International Council of Museums (ICOM) definition of a museum has evolved in line with such developments in society and in accordance with the realities of the global museum community.

According to ICOM, 'a museum is a non-profit making, permanent institution in service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment' (ICOM, 2007). The general assertion of the ability of museum educators to turn problems into challenges and to devise creative responses, have added value to the belief that museums are capable of developing programmes and exhibitions that reflect the needs of the potential audience (Anderson, Lucas & Ginns, 2003:178; Munley, 1996:18-20).

This idea is supported by Silverman and Bartley (2013:154-155) who consider museums to be ideally equipped for the task as they are dynamic institutions

taking constant heed of the 'continually changing landscape, which encompasses new technologies, changing visitor populations, political or social changes, and increased eco-friendly concerns.' They point out that the ability of museums to embrace these changes and adapt to them will enable them to remain relevant to the needs of their visitors. Museum educators, and not necessarily marketing divisions, are responsible for many 'firsts' in museums i.e. outreach programmes, local museums, educational exhibits, and discovery rooms are a few examples. The ability of museums to adapt to changes in society and their ability to make 'learning through hands-on activities that also engage the mind' possible, and that are coupled with their 'social goals of serving the entire society, especially under-served populations' as public institutions situate museums in an ideal position to make a contribution to interactive education (Munley, 1996:18-20).

DEMOCRATISATION OF TERTIARY EDUCATION

The notion of pedagogy (teaching and training) based on interaction, inquiry and experience is not a new concept in education. Like museum education programmes, interactive learning emerged in the late nineteenth century as part of a worldwide progressive social and political drive in response to dramatic social changes. The rapid industrialisation and urbanisation in many Western countries displaced a predominantly agrarian society that led to severe imbalances between rich and poor. This situation, coupled with large-scale immigration and the cultural diversity it brought, led to tensions over jobs, wages and housing. In order to prevent major social unrest the new nationalist and representative governments of countries such as the USA and Great Britain were forced to take responsibility for the health care, social services and education of their populations, with special emphasis on the welfare of the lower working classes (Hein, 2006:162).

As interactive education had the goal of extending the benefits of modern culture to the entire population, it was believed that, if introduced into the public education system, it would be an ideal means to uplift society and promote civil responsibility. This entailed broadening the curriculum beyond traditional subjects such as the introduction of pedagogic principles from the emerging social sciences, which stressed practical experience as a basis for intellectual analysis and making arts and sciences accessible to the whole population and not only to the elite. As in the case of museums, interactive

learning has been implemented for the most part at primary and secondary education level, but very seldom at education at a tertiary level (Martin, 1983:12).

The changes addressed above in tertiary education could very well necessitate that interactive learning be reconsidered as a pedagogical alternative. Studies show that over the past decade a university degree has replaced a matriculation certificate as a foundation for responsible citizenship and economic self-sufficiency. A bachelor's degree is 'linked to long-term cognitive, social and economic benefits to individuals, benefits that are passed on to future generations to enhance the quality of life of the families of university educated persons, the communities in which they live and the larger society' (Hein, 2006:162-163; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008:540; Martin, 1983:12).

With the democratisation of society in general, especially in the aftermath of the Second World War (1939-1945) tertiary education became available to people of all classes. The importance of a university qualification, coupled with the democratisation of tertiary education, has not only led to a sharp rise in student numbers, but to an increased diversity amongst the student population. In addition, previously marginalised students came from disparate socio-economic and cultural backgrounds, 'with different experiences and varying levels of education and different needs and academic potential' which had to be accommodated (McKenzie & Schweitzer, 2001:21). Due to limited academic opportunities and cultural differences, historically disadvantaged students find it difficult to adapt to the university environment and therefore show a considerably lower completion rate. With tertiary education institutions world-wide coming under increasing pressure to ensure that unacceptable racial-ethnic gaps and poor graduation rates are addressed, there is an increased need to take cognisance of the factors that influence student completion (Kuh *et al.*, 2008:540-541; Letseka & Maile, 2008:1-12; Modipane, 2011:1592-1607; Smith, Case & van Walbeek, 2014:625-626).

International benchmarking results of tertiary education institutions are based on research outputs with strong emphasis being placed on publishing as it attracts funding. However, studies have found that 'impressive resources' do not guarantee that students will be exposed to activities that engage them in authentic learning, imparting them not only with academic knowledge but with the required social skills to be able

to make a positive contribution to society. Kuh (2003:30) is of the opinion that a more meaningful approach to evaluate an institution would be to determine how well it fosters student learning and engages students in effective education practice. It is therefore important to understand and address the barriers to effective student learning as well as the diversity of needs of a 'changing and heterogeneous population of students' in order to provide the 'support and help needed to ensure a reasonable chance of success' (McKenzie & Schweitzer, 2001:21-22).

Education specialists, who look at ways of improving methods of education agree that in order to achieve a measure of success a move away from the traditional approach to tertiary education, where the lecturer's role, as a 'knowledgeable individual and authoritative person', is to structure the subject matter to be mastered in such a manner that the students are able to absorb it (Hooper-Greenhill, 2000:16). These specialists highlight the necessity of a more student centred campus with greater emphasis on engaging students directly. This approach focuses on the processes of learning rather than the processes of teaching, and encompasses a variety of teaching practices and programme interventions to develop educationally purposeful activities. These include student faculty interaction, enriching educational experiences, collaborative learning exercises and the promotion of study groups or learning communities where academic achievement is encouraged and considered socially acceptable (Hooper-Greenhill, 2000:20; Kuh, 2003:31-32; Kuh *et al.*, 2008:555; Umbach & Wawrzynski, 2004:154).

The interdisciplinary and interactive nature of these learning activities introduces students to complex and diverse perspectives, in contrast to traditional pedagogical approaches such as the large lecture hall where students are expected to come up with the 'right' answer. The structure of this approach also promotes critical thinking and contextual learning, skills that, as emphasized by Zhao and Kuh (2004:118), are increasingly important in an era of information overload. Apart from the more obvious and visible academic gains that students benefit from, a more interdisciplinary and interactive approach encourages involvement in complementary academic and social activities that extend beyond the classroom. Students have reported greater benefits in personal and interpersonal social development, general education knowledge and practical competencies, which add to the foundation of skills and the dispositions that are

essential to live a productive and fulfilling life after university (Umbach & Wawrzynski, 2004:165). These educational approaches are also linked to positive behaviours such as demonstrating openness to diversity and social tolerance from which society as a whole will benefit (Zhao & Kuh, 2004:118).

THE STATE OF EDUCATION IN SOUTH AFRICA

South Africa witnessed one of the greatest revolutions in the history of higher education in the last decade of the twentieth century. The composition of the student population was transformed so rapidly that from a demographic point of view it could be regarded as one of the most accelerated changes in the world. The taking of office of a democratically elected government in 1994, hurried the pace of transformation processes along to such an extent that many institutions were ill-equipped to accommodate the rapid growth in student numbers (Van der Watt, 2008:4-7). The problem has been exacerbated by the apartheid system leaving possibly its most indelible mark in the field of education where the former Bantu Education policy prepared black school children only for menial labour as 'hewers of wood' (Moller, 2007:87).

In the years immediately after 1994, the newly elected democratic government realised that one of the most effective ways to eliminate the past inequalities was through education (Bozalek & Boughy, 2012:688-689). Although South Africa has, by most international standards, made relatively large investments in basic education, problems relating to a lack of resources, overcrowding, a lack of motivation on the part of some learners and with many teachers being 'under-qualified, demoralised and lacking the commitment and professionalism necessary for their professions' have made it impossible to overcome them in the short-term (Ramphela, Ndugane, Head, Machel, Maphai & Menell, 2009:19). Many rural areas in South Africa, especially the former homelands, are particularly affected by 'acute academic poverty' (Christopher, 2001:234-238).

According to surveys, as much as 45 percent of the population in these areas has never received any schooling and the number of learners who complete Grade Twelve is negligible (Christopher, 2001:149; Mojapelo, 2008:1592). The lack of a proper education infrastructure further results in learners having to travel long distances to their schools. Little maintenance is done on the existing facilities which are very basic and hardly any schools in the rural areas have libraries,

media centres or even offer extra-mural activities (Chisholm, 2013; Christopher, 2001:149; Mojapelo, 2008:1592; Van Schalkwyk, 1995:54).

South Africa currently ranks among the countries in the world with the lowest basic literacy and numeracy skills. The inadequate state of affairs of a 'rotten public education', is a serious cause for concern, as it has failed to produce the skills needed for South Africa to compete in the global economy (Ramphela, *et al.*, 2009:22; Boyle, 2006:1; DHET, 2013:63). According to the Institute of Race Relations the '... failures in public education are now the most significant factor retarding the social and economic progress of black South Africans ... denying them any opportunities to improve their social and economic standings' (Kane-Berman, 2010; Leslie, 2010:18-19). Compulsory language courses and training in computer skills were introduced by several South African universities in an effort to help previously marginalised students to overcome their academic disadvantage.

The Faculty of Education at the University of Pretoria instituted bridging courses in mathematics and science in order to help students get accepted in degrees such as engineering, information technology and medicine. However, a statistical study carried out in 2009 by the Council for Higher Education found that of all the students who enrolled in a contact university between 2000 and 2005, only 50 percent had graduated after five years (Council for Higher Education, 2009).

THE ENGINEERING AUGMENTED DEGREE PROGRAMME: A CASE STUDY

In engineering specifically, 54 percent of the students had graduated after five years (Smith *et al.*, 2014:628). It means that only 46 percent of students complete an engineering degree in four years. The engineering programme is academically challenging with a fast paced and high workload (Letseka & Maile, 2008:3-5; Smith *et al.*, 2014:628). Many students do not have a strong enough foundation in mathematics, physical science, academic literacy and information technology and do not have the study skills to cope with the mainstream four-year programme. One of the ways in which the University of Pretoria began to address this problem was by launching in 2010 the Engineering Augmented Degree Program or ENGAGE (ENGAGE, 2010). The Engineering Augmented Degree Program is a structured, five-year curriculum that helps students make the transition from high school to university

and provides support in coping with the demands of an engineering degree (University of Pretoria Archive, 2012).

The Engineering Augmented Degree Program also provides a carefully structured curriculum that helps students adjust to university life and cope with the demands of engineering studies. In this programme the volume of work is gradually increased and the support provided is gradually decreased over a period of five years. However, the workload is heavy from the onset. Above and beyond the regular curriculum, this programme offers additional modules with the objective of helping students to acquire the background knowledge they may have missed at school, develop a conceptual understanding of key concepts in the discipline and acquire problem-solving skills. The additional modules and Professional Orientation are called Developmental Modules because they help students develop a range of knowledge and skills needed to succeed academically, professionally and personally. The Professional Orientation module provides an introduction to technology and information technology and also develops the life skills, study aids and communication abilities of students (ENGAGE, 2010).

The ENGAGE programme coordinators expanded their pedagogical approach to incorporate more interactive aspects into the curriculum. For this research they contacted the University of Pretoria Archives to assist with the first year orientation programme. The programme takes the form of an 'amazing race' where the students are given various tasks to be completed at specific points across campus, with specific clues at each stop that point to the next destination. A significant number of students have indicated that adapting to the new environment of a university situated in a large city as well as the academic demands placed on them, was daunting. The aim of the programme is therefore in the first place to familiarise new students with the physical campus layout and to introduce them to the various services available. Secondly they are introduced to teamwork where the team members are from different cultural, economic and academic backgrounds. This not only prepares students for the work environment which requires consultation and teamwork, but forms part of the university's vision to build social tolerance amongst students. Rather than presenting an orientation of the campus as a formal lecture in a lecture hall, the students are expected to explore the campus on their own. With a map of the Hatfield campus, where the Engineering

Faculty is situated, students set out to complete various tasks, and the first team to find all the clues wins a prize (ENGAGE, 2010).

Part of the orientation programme includes the University of Pretoria Archives exhibition entitled *A Century in the News* (Van der Merwe, 2010). Although this exhibition was not specifically designed for the engineering programme the archive staff members, in consultation with the ENGAGE programme coordinators could successfully adapt the exhibition to address some of the outcomes highlighted in the Professional Orientation and Developmental Modules. The exhibition was initially developed as part of the University of Pretoria centenary celebrations in 2008 when the University of Pretoria Archives was commissioned to design a permanent exhibition that would give an overview of the university's history. The aim of the exhibition was to present a balanced and honest overview of the university's history, including all the various aspects that had shaped the institution since its foundation in 1910. Furthermore the exhibition was also to commemorate the positive contribution the university had made to the wider South African society without avoiding the often more controversial aspects (Van der Merwe, 2010:62).

For this reason the archive staff decided to use various newspaper articles that covered a variety of topics of the university's past. A labyrinth-type layout was created in an exhibition room with banners suspended from the ceiling that simulated the walls of a labyrinth. These banners depicted the newspaper columns and they were not set out thematically, but rather chronologically to reflect the growth of the university. The history of the University of Pretoria is thus conceptualised as having five distinct phases, i.e. foundation, establishment, expansion, transformation and innovation and are presented in distinct eras or periods that are portrayed to the audience. The change from one era to the next is achieved by visitors having to turn into a next corridor of the labyrinth. Secondly, the colour scheme of each era is also different, following the development in photography and the printed media from black and white to full colour. Therefore, there is a gradual movement from sepia for the early years to black and white in the 1930s up to the 1950s. This is followed by stark black and white that characterised the 1960s and 1970s, while the 1980s and 1990s are characterised by colour panels. From 2000 onward, the colour scheme is very bright, typical of modern media (Van der Merwe, 2010:66).

The primary outcome of the orientation programme is not to give students an overview of the university's history, but many students agreed that they enjoyed getting to know more about the past of the institution. This way of presenting the information introduces them to the concept of arranging a chronological development. Collecting, organising and presenting facts in a coherent and comprehensible manner are important skills for these students to master and will stand them in good stead in their professional career where concise presentations would ensure contracts being awarded. They are also made aware of how different modes of visual representation can convey a specific message and time frame (Advisory Committee, 2014).

Engineering is a discipline that requires the translation of two-dimensional designs into three-dimensional realities. One of the tasks given to the students specifically addresses this aspect. An aerial photograph of the campus of that time is placed at the end of each corridor, to further enhance the feel of that specific era. It also underlines the way in which the university has expanded physically and structurally over the past hundred years. Unlike the current map of the university that they are provided with, which according to international standards gives a northern orientation of the campus, these photographs have been taken from different angles. The students have to identify the angle from which the campus had been photographed, as well as identify and indicate on the older aerial views where new buildings have been constructed. In their feedback students who were registered for mechanical and civil engineering have indicated that they found this activity especially relevant to their degree. The activity enables them to hone their skills in working with different dimensions as well as developing a conceptual orientation (Advisory Committee, 2014).

The actual physical layout of newspaper articles within the exhibition room is well suited to museum-style exhibitions. The text used in exhibitions is usually divided into various levels to accommodate the more casual visitor as well as the more serious scholar to gain the amount of information required for the purpose of their respective visits. The first level of text will contain the main information pertaining to an object or a panel. This will be in a large font, enabling the visitor to identify the content at first glance. The second level of information will give more detailed information and will be in a slightly smaller font, whereas the third level of information, which will be in the smallest font, will

give background information that could interest the visitor who is willing to spend more time perusing and understanding the content of the exhibition. This division of text corresponds with the newspaper layout where the headline, which contains the core message, is in bold and in large font, whereas the subheading which gives a brief summary of the event is in smaller print and the body of the article follows in the smallest print (Van der Merwe, 2010:64).

With regard to the Engineering Augmented Degree Program (ENGAGE) the layout of the panels acquaints the students with information being presented in degrees of importance. Clues to answers of the questionnaire that the students had to hand in, as well as clues about their next stop are 'hidden' in the text, leaving it up to the students to hone their reading skills. The proliferation of electronic information sources and the ability to obtain 'quick' answers at the click of a button has led to the deterioration of reading and, more importantly, comprehension skills of students. The importance of these skills cannot be emphasized enough and affects the ability of students to come to grips with the subject matter in all fields of study. Furthermore, students need to be able to evaluate sources for quality and validity of the information they contain (Advisory Committee, 2014).

CONCLUSION

Compared to its fellow BRICS countries, i.e. Brazil, Russia, India and China, South Africa lacks graduates in key skills such as engineering and medicine. As highlighted in this article, the South African education system is currently facing numerous challenges, which the National Department of Education is not able to address alone. Museum educators continue to embrace interactive educational practices with a renewed focus on 'increasing the diversity of its audience; improving the accessibility of the museum to all people; reinforcing its duty to present accurate information and multiple perspectives' and 'affirming its obligation to communicate effectively with its intended audience' (Munley, 1996:18-20).

This is evident in South African museums where education staff has responded with enthusiasm to the call for greater community responsibility and involvement, and already established successful education programmes for primary and secondary schools.

The experience in interactive learning gained through these programmes was combined with a strong research focus in both the domains of natural and cultural history and enabled museums to make a valuable contribution to tertiary education. As shown in this case study, museums and archives do not necessarily have to develop new programmes, but could adapt existing exhibitions to accommodate a variety of learning outcomes at tertiary institutions. The call is for university archives and museums to investigate possible avenues of cooperation, e.g. the sharing of infrastructure and resources with one another in order to ensure a greater rate of graduate success.

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