Social challenges of using Computers to teach Socially Disadvantaged Groups in the new South Africa

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ABSTRACT

In this paper we describe the social challenges of using computers to teach socially disadvantaged groups in the new South Africa. The majority of people from low socio-economic backgrounds are Africans. There is evidence that these learners perceive good education as a redress to their plight. As a result of this perception, students from historically disadvantaged social groups are in large and increasing numbers entering institutions characterised as 'historically advantaged'. Be that as it may, these numbers are insignificantly small and are more likely to drop out. This paper reports on the state of the educational system for previously disadvantaged social groups, why the theme of this conference “learning communities on the Internet” remains a pipe dream for these social groups and how the Multimedia Education Group at the University of Cape Town is responding to the challenge through computer-based interventions.

Keywords: Disadvantaged Groups, Interactive Computer Based Technologies

1: INTRODUCTION

One of the problems of higher education in South Africa is over supply of students and poor academic performance [1]. Anecdotal evidence, in South Africa, suggests that there is a correlation between poverty and academic performance. For example 95% of poor people are Africans; 33% are coloured, 2,5% Asians and 0,7% Whites. The dropout rate of students in higher institutions assumes very similar percentages. We infer from these observable phenomenal that histories of people and their social settings including the language of instruction impacts on what and how people learn. What we are continuing to see is an increase in enrolment of African students; institutions continuing with their foci on teaching cognitive components or technical skills etc with little or no regard to histories and social settings as a result institutions fail to cultivate human beings. Grunert [2] cites Noble (1991) alluding to this misdirected effort: the goal of education is neither the engineering of learning as an end in itself nor the production of cognitive components or technical skills for technological infrastructure of the information age; rather it is the cultivation of human beings, through an encouragement of a deep self-understanding along with an understanding of and participating in the world.

2: BACKGROUND

“If we can escape such baggage from the past and design new educational models for the future, there is no reason why South Africa cannot compensate for the past inadequacies of its school system while providing first world education and training standards to all its citizens” [3]. The government of South Africa is currently allocating nearly a quarter of her the government’s expenditure to education. Education competes with resources with other sectors such as health, social welfare and housing, where the needs are also substantial.

The challenge in all these is how to effectively exploit ICT (Information and Communication Technologies) to design new educational models that takes into account social complexities, accessible and intuitive, help scaffold engagement with academic discourse. We conducted a survey among learners from the socially disadvantaged social groups with the view to gaining insight on what defined them.

3: SURVEY

A total of 200 questionnaires were distributed to students at two campuses, Port Elizabeth and East Rand. Port Elizabeth campus is located in Zwide and East Rand is near Johannesburg. Both these locations represent typical residential areas of the poor people. The two campuses are located there to provide easy access. 99% of students are from previously disadvantaged background. Of the 200 questionnaires, 146 (73%) questionnaires were returned. Respondents were either doing computer science related courses or were users of computers at the university. This was
our convenient sample because by virtual of being computer users, we had assumed that they knew about the importance of computers in education. The hypothesis testing was done using chi-square and Pearson coefficient.

We asked questions about accessibility to computing facilities before and after university hours. What their learning experiences have been in time and location bound environments, and their perceptions of Internet based education.

65.5% were male and 34.5% female. 74.6% were less than 25 years old. 24.7% were in year 1, 25.8% in year 2, 40.2% year 3 and the rest had spent more than 3 years at the University. Almost two thirds of the respondents (62.8%) had not used a computer before coming to university. 26% of these who had not used computers were older than 25 years. 73% were not computer literate, almost 90% (87%) had no PCs at home later on access to internet outside the university.

4: OBSERVATION

86% of respondents needed more time to learn and understand material. 75% needed for freedom to choose when to learn and when to write exams. At least 76% of learners found the academic calendar with fixed dates of exams not suitable for them and this were divided on gender lines. 69% said learning via Internet was an answer to educational difficulties. The perception was that Internet based learning would provide them with the flexibility. There was some concern though, 58% said the majority of people would be denied education (referring to internet based learning) on account of not having access to PCs or being computer illiterate.

95% of those who wanted to learn at their own pace found the fixed academic year with fixed exam unsuitable. This need for flexibility was attributed to family sizes. 81% said Internet based learning will empower them.

96% of learners who wanted more time to learn and understand the material used a computer before coming to university. 97% of learners who were computer literate before coming to university would be happier to have a choice on what to learn in terms on content.

5: CONCLUSION

The need for self paced learning, in which the learner determines when and what to learn with flexible calendar rather than the physical distance are reasons people choose distance education as opposed to contact. In the past, distance education was associated with mail and the post service, the World Wide Web (WWW) has radically changed both the concept and administration of such courses. Peraya [4] cites Bates postulating that the WWW has serious implications for education and training and goes on the tabulate; learning can be independent of time and place, and available at all stages of person's life. The learning context will be technologically rich. Learners will have access not only to a wide range of media, but also to a wide range of sources of education. At the University of Cape Town, the Multimedia Education Group, MEG. (http://www.meg.uct.ac.za) is currently involved in research into the potential of interactive computer based technologies and approaches (ICBTA) to support effective learning and teaching for academically under prepared learners. Our efforts are mitigated by the inflexible academic calendar, time-bound courses, and lack of learners’ freedom to negotiate content with the expert, general lack of choice on the language of instruction (English is use where the learners mother tongue could have been effective.

Finally, no matter how great we innovate, the real challenge is how to make these innovations contribute in addressing a REAL problem. How will this International conference on Computers in Education respond to this challenge?

6: REFERENCES