

# “Facts or Fantasy”, Implementing Podcast Based Supplemental Instruction in An Open Distance Learning Context: The Case of The Univerisity of South Africa (Unisa)

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## ABSTRACT

This study explores the feasibility of implementing a supplemental instruction (SI) programme at Unisa using audio podcasting technology. It addresses high failure and dropout rates among first-year students enrolled in “high-risk” modules. A designation of “high risk” for a module makes no prejudicial comment about the course lecturer/s or students; it merely denotes that over an extended period a sizeable number of students enrolled in these modules fail to meet the expected level of performance. The study aligns itself with Unisa’s drive towards the creative use of technology, as it proposes podcasting as a channel for SI. SI is aimed at helping students registered in “at-risk” modules to develop the use of metacognitive skills and enhancing their motivation and academic performance, thus becoming more independent and proactive learners. Since participation in SI is completely voluntary, not all students might volunteer to participate. At the end of the first semester or year of implementation of SI, evaluation will be undertaken to establish whether there is a significant difference between the performance of SI participants and non-participants. Both groups of students will be invited to reflect on their experiences of the module/s. These students’ participation in other interventions such as e-tutoring would not stop.

**Keywords:** *Podcast based Supplemental instruction, student academics support and development, ‘At-risk ‘modules/courses, “at risk” students, throughput rate.*

## INTRODUCTION

Clearly explain the nature of the problem, previous work, purpose, and contribution of the paper. While many factors determine whether or not a student will be academically successful, students who do not complete their qualifications are a loss to the university, particularly in terms of subsidy, and to the country in terms of subsidy investment and skills production (Report to Council, 2012:21). Ideally, all students should complete their qualifications in the designated minimum time (Report to Council, 2012:21). One major challenge to achieving high throughput rates is the relatively high dropout rate of students as a consequence of many factors, some of which an institution cannot influence. Unisa has, however, embarked on a number of interventions to manage this risk and others. For instance, it has introduced the compulsory science foundation programme for students at risk within the College of Science Engineering and Technology (CSET) and the College of Agriculture and Environmental Science (CAES) and will be providing e-tutorial support to all first-year students from 2013. This programme was initiated by the College of Economic Management Sciences (Department of Institutional Statistics and Analysis, 2012). Many government policy

documents, including the recent draft policy on distance education, have highlighted the importance of universities focusing on increasing graduate output (Report to Council , 2012:13) At Unisa the pass rates at present stand at 58,63%.

Determining whether or not a student will persist with or drop out from their studies is as complex as the various contributing factors. All the same, universities have an obligation and responsibility to ensure the efficient throughput of their students. "Student dropout is the greatest in 1<sup>st</sup> year as the student feels overwhelmed and unable to cope" (Report to council, Unisa, 2011) In expressing their frustration, the Deans' Forum indicated that the first-year students' experience of Unisa as a result of not receiving study materials will increase the dropout rate of students (Unisa, 2011). Factors contributing towards high failure rates and low throughput rates, especially in open and distance learning (ODL), include delays in the delivery of study materials, differing levels of student preparedness for tertiary education, module difficulty, motivation levels, students' socioeconomic status, ineffective teachers and unavailability of funding. To the university, high dropout rates denote a risk of attrition. Unisa (Department of Institutional Statistics and Analysis, 2012:52) describes risk in three areas: a) the probability of registering for the module but not passing the exam, a risk area related to the measure of overall success; b) the probability of registering for the module but cancelling before the exam, which is a risk of attrition prior to the exam; c) the probability of sitting for the exam but not passing, which is the risk of exam failure. In this study the (a) and (c) categories of risks will be used

The aim of the study is to explore the feasibility of implementing podcast based supplemental instruction to help address the issue of high failure and dropout rates in historically difficult first year level module at the University of South Africa.

Classroom discourse has been recognized as important to the educational experience of students. "Speech makes available to reflection the processes by which they [students] relate new knowledge to old. But this possibility depends on the social relationships, the communication system, which the teacher sets up" (Cazden, 1986, p. 432). Vygotskian concepts concerning semiotics and the mediation of higher mental functioning by tools and signs (including speech and language) have been used by cognitive scientists and educational researchers (Bruner, 1990, Wertsch, in Moll, 1990) to study the intimate relationships between discourse and learning. Vygotsky was concerned with how the "forms of discourse encountered in the social institution of formal schooling provide the underlying framework within which concept development occurs" (Wertsch, 1990, p.116). New concepts of classrooms and formal schooling have come of age with the advent of the use of the Internet and virtual conference forums and seminars. New forms of discourse are taking place within these virtual classrooms. Computer mediated communication involves electronic discourse. This is a written form of communication that reads like speech acts of conversation. Davis and Brewer (1997) have referred to this quality as "writing talking" (p.2). Computer mediated communication is different from face-to-face conversations in important ways. Participation is asynchronous and often there is a time lag between the initial posting of a message and the responses it generates. Interactivity can be delayed by minutes, hours, days. Every participant has equal access to the conversational floor and turn taking is never an issue. Software formats delineate each participants' contribution as a separate entity and it is listed in the order received. Speakers within these conversations are not able to talk over or interrupt another. Participants are able to refer back to previous speech acts within a discussion thread in ways that face-to-face experiences never afford. Conversations are scripts that are archived and saved as transcripts. Claims have been made "that the electronic medium exercises a democratizing influence on communication" (Herring, 1992, p.250). This claim is the focus of this study. If opportunities to engage in reflection and conversations are opportunities for learning, it is vitally important to be aware of the patterns of discourse being used in this new medium of communication. Is it really true that there is more equality of participation in discussions and with the lack of nonverbal status cues are these electronic forums classrooms where power and control do not mirror society's status quo?

### **Motivation for This Study**

The published research on academic support offers little in the way of empirical evidence to encourage the use of PSI in ODL as an academic support strategy. Without this, it could be argued that an in-depth understanding of student academic support and development in ODL would surely be incomplete. A variety of studies have endeavoured rather to make comparisons between various strategies addressing students at risk in higher learning but very few target courses at risk. The Department of Institutional Statistics and Analysis (DISA) (2012:52) in its report entitled "Progress on Identifying Students 'At-risk' at Unisa" concluded its executive summary by indicating that "the process of identifying students 'at-risk' will further continue with the identification of 'modules at risk'".

Electronic discourse within computer mediated virtual courses supports conversations of practice and learning. There are performance features within these conversations that can be studied using the same focal lenses

used to examine face-to-face conversations. Conversations have negotiated meanings and values in either context. Is there a dominant speaker, one who contributes the most text, introduces the highest number of topics, and receives the most number of directed speech acts? What are the frames (Tannen, 1996) set within the conversations? How do the participants position themselves within the conversation, within the discussion group? Are particular stances sex class (Tannen, 1996) linked? Are there participants who are not “listened” or attended to?

### What Supplemental Instruction is

SI avoids the remedial stigma often associated with students at risk. It is a proactive academic intervention given to students before learning problems occur, as it is implemented in the first two weeks of resumption of lectures, providing academic assistance during the critical initial six-week period of the academic semester, before students face their first major examinations. It is during this period that attrition from courses is high (Unisa, 2011). SI use is therefore proactive rather than reactive. It is open to all students in the targeted course, and therefore pre-screening of students is unnecessary. The intervention is attached directly to specific courses. While some of the students participating in SI may be achievers or under-prepared, internal motivation is an integral component of students who participate in the SI programme as they are self-regulated. SI programmes are designed to provide and promote a high degree of student interaction and mutual support and to capitalise on the power of group study and the practice of collaborative learning and interaction through peer study groups.

### Theoretical Underpinnings of Si And Podcasting

PSI is underpinned by the theory of social constructivism (Vygotsky, 1978). Social constructivism views learning as an active process where learners should learn to discover principles, concepts and facts for themselves (Vickerman, 2009). Piaget (1935) regarded active learning as a key element for academic success.

Podcast based SI is also underpinned by the cognitive theory of self-regulated learning (Zimmermann, 2001). One common feature is an emphasis on learners being proactive and exerting control on their learning processes and environments. Self-regulated refers to self-generated –thought, feelings and behaviours that are oriented to attaining goals (Zimmermann, 2000). Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert events that happens to them in reaction to teaching.

The theory of lifelong learning considers learning through activities that foster learning beyond a specific learning environment, be that face to face or ODL. Within this approach, it is considered that learning takes place all of the time and is impacted by the individual’s environment and specific situations they encounter. According to Tough (1971) formal learning may come in two forms: intentional (through taking part in deliberate learning projects) and accidental (knowledge is obtained from world observation, conversations, TV news, newspapers, podcasts, YouTube or some confusing situations) (Naismith, 2004:3). Within this approach, learning is embedded into an individual’s everyday life, which stresses the value of mobile technologies and audio podcasting in particular.

Along with the theory described above, the theoretical concept of learning and teaching support effectively explains the use of podcasting as an example of open education resources (OER). It focuses on activities that help to coordinate learners and existing resources used for learning activities within this approach. Mobile devices are seen as tools of providing course material to students, as well as information about a particular course. This approach can be applied effectively to frame the use of audio podcasting by ODL students because, according to McGreal et al. (2011), OER are normally accessed freely using the World Wide Web either on institutional sites or in organisational repositories. Course developers, teachers and instructors are principal users of OER, but there is a growing number of students who are accessing them directly to augment their learning. OER include learning objects such as modularised lessons, video and audio lectures (podcasts), references, workbooks and textbooks, multimedia simulations, experiments and demonstrations, as well as syllabi, curricula and lesson plans.

### Podcast- Based SI

We propose the use of podcasting, mobile-learning technology as a channel for SI. The word “podcast” is a hybrid of “iPod” and “broadcast” (Ng’ambi, 2008:10). The *New Oxford American dictionary* defines a podcast as “a digital recording of a radio broadcast or of *similar programme*”. Podcasting is a method of distributing audio files commonly in MP3 format over the internet that can be played by a number of portable media players/devices such as desktop computers, laptops and mobile phones (Mehrak & Maral, 2012). The strength of podcasts in education lies in the availability of easy-to-use free software such as Audacity. Audacity supports both the production and distribution

of podcasts and the downloading of them to computers or other mobile devices by users (Ng'ambi, 2008:10). This mobile technology provides social learning spaces other than a lecture hall, tutorials or even text. Social learning space refers to the myriad of physical and virtual resources which support student-centred, interactive learning in formal and informal contexts (Oldenburg, 1991).

Podcasting technology gives students online internet-based spaces to share and discuss their understanding and to interact socially within the SI podcasting environment. With podcasts, learning occurs during discussions between students and the SI leader, who himself/herself has reached a higher level of knowledge and experience. These students therefore benefit from one another's learning experience and knowledge. Students are socialised into understanding challenging course concepts and develop positive attitudes towards the historically difficult course, taking responsibility for their learning. In this study sharing of experiences and knowledge will be made possible through the use of myUnisa tools such as online discussions and blogs.

Podcasting provides mobile, flexible, accessible and personalised learning. By using podcasts a learner is engaged in the ongoing learning activities and thus enhances their productivity and effectiveness. Podcasting also has the capacity to enhance a learner's sense of individuality and community as well as their motivation to learn through participation in collaborative learning (Ally et al., 2009). It stimulates a learner's sense of ownership of the content as they participate actively in a variety of social, collaborative and cooperative activities – all of which are centred on the mobile learning device, cellphone, MP3 or flash disc. Podcasting addresses the needs of learners in this age of wireless communication and connectedness. It is neither teacher centred nor technology centred, but it has the learner and learning as its core. Modes of communication that were spontaneously developed by the younger generation of the 21<sup>st</sup> century are being recognised to transmit higher education (Hew, 2009).

Podcasting offers new opportunities for students' educational activities, in that it can be used anywhere and anytime (Muppala, 2007). Even though ODL students are so remote from their institution of learning or faculty, using podcasts gives them full control over and access to information downloaded on their mobile devices. One of the main advantages of podcasting is that it allows the current generation of self-regulated learners to enjoy a certain amount of freedom and independence to learn.

The spoken word can influence a learner's cognition, adding clarity, meaning and motivation and conveying directly a sense of the person creating those words (Durbridge, 1984, in Hew, 2009). Auditory learning is the most portable form of learning (Muppala & Kong, 2007). Short "bite-sized" audio clips not only fill dead-time moments amidst other day-to-day activities, but also coincide with these activities for pervasive learning that is interwoven into the learner's lifestyle. This allows for learning that takes place regardless of time and geographical location (Clark, 2007). Distance education research offers significant findings on audio instruction and its effects on learning, dating back to the use of radio and television. Earlier studies investigated the impact of audiotapes and found out that students using the tapes had lower dropout rates. Results of several large-scale studies indicate that computer-based interactive programs using audio-based instruction are effective (Barron, 2004, in Hollandsworth, 2007).

One other advantage of podcasting over other audio technologies such as audiotapes and CDs is its simplicity, convenience and time saving that it offers to learners. First, podcasting greatly simplifies the process of obtaining relevant materials. Secondly, although it is possible to use audio cassettes or CDs to convey the spoken words, the ubiquitous nature of podcasting technology makes it more convenient and easy for online students to access the podcast files in MP3 format, rather than having to mail students the cassette tapes or CDs (Unisa, 2011).

## RESEARCH DESIGN

This study is both quantitative and qualitative in design; quantitatively it will use quasi-experimental design and qualitatively interpretive design.

### Data Collection and Analysis

Since participation in SI is voluntary, some students might not volunteer to participate in the programme. Therefore for any targeted module there will be two groups, participants (treatment group) and non-participants (control group). Monitoring of performance of the two groups will be undertaken quarterly and at the end of the semester/year the performance of two groups will be recorded and analysed. Both groups will reflect on their experience of the targeted modules. Our assumption is that the SI participants' performance will be significantly higher than that of non-participants.

SI leader-produced podcasts will be uploaded on myUnisa for students to access by downloading through their preferred devices. Students will give feedback on the effectiveness and usefulness of podcasts through myUnisa tools such as the blog and online discussion forum. Data about the effectiveness or ineffectiveness of this programme will be collected from online discussions, coded and analysed.

### Conclusion and Recommendations

The focus of this study is to explore the feasibility of implementing the use of Podcast based supplemental instruction programme at Unisa with the aim of reducing overall course “high-risk” status by improving students’ performance in historically difficult modules. Even as we grapple with our proposed alternative strategy, we are not so sure whether our dream is just a fantasy or a dream than can be a reality. In our minds we are convinced though that this is a fantas”tic” idea that if concretised could turn out to be one of the real strategies to change the bleak picture of poor first year academic performance in most modules

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