

## **Learner Support Services in ODL: Using Mobile Technology as Support Service for the Invisible Student**

*Mupa Paul, Kurasha Primrose and Chiome Chrispen*

Zimbabwe Open University, Masvingo Region, P.O. Box 1210, Masvingo

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**Abstract:** Mobile technologies have come to serve the invisible student in Open and Distance Learning (ODL). The study sought to investigate ways through which mobile technologies can be used as learner support services for students in the ODL system. It was prompted by the growing concern for quality service delivery for students and customer care concerns in the Zimbabwe Open University. The study was qualitative by nature. The descriptive survey design was employed and an open ended questionnaire was used as the data gathering instrument. Convenience sampling was used to select respondents who had come to attend weekend school tutorials. The major findings were that mobile technologies are a major innovative way of supporting teaching and learning of students, who are by their nature, invisible. Areas such as research supervision, tutorial letters, reminders, announcements, e-learning, internet access, concept explanations, among others, are areas in which ODL institutions can use mobile technologies instead of making the student travel all the way for research supervision and the other services.

**Key words:** Open and Distance Learning • Invisible student • Mobile technologies • Learner support • Cognitivist psychology

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### **INTRODUCTION**

Mobile technologies offer new opportunities for distance learning and enable people to collaborate anywhere [1]. The growth in usage of mobile phones in Africa has expanded opportunity for business, social and educational transactions. [2] state that the technology has grown in sophistication, expanding functionality more than could have been possible a decade ago. The process of sending a text message from a mobile phone has become not just telecommunication, but the interaction of the computing power of the handset with the computing infrastructure of the telecommunications process. In higher education mobile learning has become a major area of study and growth [3].

A key factor in learner success in ODL programmes is the provision of learner support services. The policy encourages providers of ODL to carefully consider the scope and nature of the learner support services offered having regard to the characteristics of the target audience, the means of delivery, the cost implication of services and the likely benefits for learners, particularly in keeping drop-out rates low. The importance of mobile

technology cannot be overemphasized as support service for ODL students. It is argued that digital ICTs have the potential to change the basic pedagogy of traditional university:

Fundamental technological change ultimately results in significant structural change, regardless of whether the affected participants choose to join or resist the movement. The changes that universities have weathered over the centuries did not depend on their basic technology. Information technology did and does [4].

The pressure remains on institutions to reach learners in ways familiar to learners, especially mobile phones. [5] corroborates that view when he states “Libraries need to be on the move, taking digital access...to individuals anywhere and anytime”. This is the case with ODL institutions. The University of South Africa (UNISA) Library introduced mobile phone services in 2008 to reach its learners because students learn away from campus. The services are tailored to reach students wherever they may be located. UNISA utilizes the Short Message Service (SMS) to inform students about registration, examinations, assignments and other important information. Mobile learning as a concept has

come about by virtue of the availability of mobile technologies such as mobile phones and handheld computers.

[6] indicates that the main reasons for having student support integrated in an ODL system are that:

- Students want support (cognitive support to learning)
- It reduces drop-out rates (affective support to promote learning and success)
- Learning often needs mediation of some sort (systemic support to help students manage the rules and systems of the institution so as to encourage persistence).

[7] goes on to say that student support in ODL aims primarily to assist students to learn successfully and recognizes that in such a system there is a need to help students with their feelings of confidence and self-esteem and so energize them in ways that would encourage them to be persistent and succeed. The innovative use of ICT based systems is known to be able to deliver these goals very effectively.

The growing use of wireless technology and mobile devices suggests that training and education cannot ignore the use of mobile devices in the learning/training process. An increasing number of workers are working outside the office and they will require just-in-time training wherever they are located [8]. According to [9] mobile devices can be used to increase cognitive growth at the individual level and an individual's motivation is enhanced when he or she is able to develop based on needs and context. Knowledge is information in context and knowledge creation is location-dependent and situation-dependent. Mobile learning devices allow learners to learn wherever they are located and in their personal context so that the learning is meaningful [10]. This is the case with ODL students.

The Web is a communication technology that can simultaneously provide something to talk about as well as the means to hold the conversation. Some authorities sum up this characteristic:

The value of the Net doesn't simply lie in the way it allows groups of people to talk with one another. It also comes from the way that, unlike telephones or video links, the Net can provide common objects for participants to observe, manipulate and discuss. It's not, then, simply a medium for conversation, nor is it just a delivery mechanism. It combines both providing a medium for conversation and for circulating digital objects.

Furthermore, it also allows participants to turn the ongoing conversation itself into another object of conversation for further reflection [11].

The Web is the first universal communication technology that provides this dual capability of providing two-way communication and the ability to share and manipulate information using the same medium. In traditional print-based forms of distance education, study guides were designed to include simulated communication, [12]'s guided didactic conversation: with limited opportunities for real communication by letter, telephone or email. However, online alternatives overcome the paper-based limitations by providing opportunities for real communication (both synchronous and asynchronous) using the same medium that carries the learning content. This represents a significant pedagogical difference; more research is required to understand the emerging pedagogical structures and their inherent educational potential.

**Conceptual Framework:** [13] defines mobile learning as 'the intersection of mobile computing and E-learning: accessible resources wherever you are, strong search capabilities, rich interaction, powerful support for effective learning and performance-based assessment. The use of mobile devices in learning is referred to as mobile learning (m-learning): this is the delivery of electronic learning (e-learning) materials on mobile devices such as personal digital assistants (PDAs), mobile phones, Tablet PCs, Pocket PCs, palmtop computers, etc.

**Theoretical Framework: Cognitivist Psychology:** Cognitive psychologists claim that learning involves the use of memory, motivation and thinking; and that reflection plays an important part in learning. They see learning as an internal process and suggest that the amount learned depends on the processing capacity of the learner, the amount of effort expended during the learning process, the depth of the processing [14] and the learner's existing knowledge structure [15]. The theory of dual coding [16] states that memory is enhanced when information is presented both in the verbal and visual form. According to constructivism, learners interpret the information and the world according to their personal reality; they learn by observation, processing and interpretation and then personalise the information into personal knowledge [17]. Learners learn best when they can contextualise what they learn, both for immediate application and to acquire personal meaning. Mobile

learning facilitates personalised learning because learning (and collaboration) from any place and at any time allows the learning to be contextualised.

**Research Methodology:** This research was grounded in the qualitative paradigm. The use of a qualitative approach to research studies relies on the data production methods that are flexible and sensitive to the social context that such data is derived from, without losing any of the standardization or structure and on data analysis methods that presuppose the understanding of the complexity that is entailed onto the details [18].

**Research Design:** The research employed the descriptive survey design. It is argued in educational research that:

Descriptive survey is a method of research that describes what we see over and beyond [19].

Thus the researchers chose this method as it allowed respondents to say exactly what they conceived of as the leadership with eyes for managing innovative ODL programmes [20].

**Instrumentation:** The open-ended questionnaire was used as the main data gathering instrument. It is argued that:

Questionnaires and surveys can be used to gather either quantitative or qualitative data [21].

Open ended questionnaires gave respondents an opportunity to elaborate on issues asked [22]. Open-ended questions provide a response format that gives respondents the freedom to provide answers which they care to make. The researcher then has to make sense of all the responses given, construct appropriate categories and then code the categories so that the data can be analysed. Open-ended questions are the most important questions on the survey by offering important and unpredictable insights into human behaviour [23]. It is suggested that open-ended questions allow for more detailed expression of respondents' views [24-25] and that qualitative information on the respondents is far more helpful than aggregated statistical data.

**Sample and Sampling Procedure:** The population for this study was 350 students at the Masvingo Regional Campus of the ZOU who were attending weekend school tutorials. A sample of 125 students was conveniently sampled. This study focused on respondents who had the knowledge and experience in ODL, who had time to

complete the questionnaire and were willing to take part in the investigation [26]. All 125 students had completed at least three semesters in the university.

## RESULTS

**Mobile Phones as Useful Communication Devices for the Rural Student:** Respondents were of the feeling that the use of mobile telephones is very relevant for the rural students who find it costly to travel to regional centres just to see the schedules for weekend school tutorials. Mobile phones are communication tools that may establish voice (sound), text and image links between people in order to exchange information and in this way can give support to the teaching and learning process. This implies getting information from a source; putting questions to and getting answers from a tutor; and exchanging ideas between students. All this must be in a simple form [27]; for example, a task definition or a motivational message, verifying the information gathered.

**Accessing of learning and course materials:** The respondents highlighted a lot of benefits that accrue from the use of mobile technology as support services for the students. The following ideas were raised:

- *Accessing of downloadable digital information ranging from definitions to short paragraphs or even page downloads from books/manuals*
- *Sending and receiving of information in text form*
- *Sending of information/ queries in text form and receiving audio feedback (real or synthesized)*

The use of mobile technology is narrowing the gap between the student and the content. As such, the distance is just a physical distance from service centre and not interactive distance between the learner and the subject matter. Mobile technology reduces that gap. Certainly, the boundaries between face-to-face and distance pedagogies are blurring [28].

**Creating a social environment that encouraged dialogue between learners and staff and between learners themselves:** The respondents highlighted that mobile technology helps to create a social environment that create dialogue between the student and the tutor and among students themselves. As such they said mobile technologies assist in:

- *Communication between learners and teacher/supervisor either through text or voice calls*
- *Communication between learner either through text or voice calls*
- *Learners/ supervisors using mobile phones to communicate via a server verlinked to websites or even radiopodcasts*
- *Two way communication through either SMS or voice call to support students' requests for assistance to help with pacing with regard to completion of a particular task.*
- *Accessing exercises or tests and past examination questions for study and review*

[29] indicated that the tutor is the principal source of instruction, support and guidance for students. Tutors therefore need to use mobile technologies effectively as a support service to ODL students.

**Accessing Internet from Cell Phones:** Respondents raised the issue that mobile technologies can be used to access internet data for assignment writing and research purposes. Quality is the song of ODL systems since they are under the spot light of international observers like ISO. Students have to produce quality work in order to meet such standards through thorough research practices. ODL students then need a library anytime anywhere which is where the cell phone can be used to access internet.

[30] is of the view that the use of the Internet is one way of supporting and meeting the needs of distance learners and that many scholars use the Internet to collect data from all over the world for research purposes. However, the problem in Africa is that progress has been very slow [31]. This was the case in this study involving an African university. Students said that the internet connectivity in rural areas was very poor and not easily accessible. This can be a dilemma especially to an open and distance learning student doing research where one is expected to demonstrate skills in interrogating literature from various sources.

**Mediation with course and learning materials:** Respondents were of the opinion that mobile technologies support students by mediating them with course and learning materials. The idea behind ODL pedagogy is to increase interaction between the student and the content or the learning material. Provision of academic support for learning using mobile phones can help students and can thus be provided in two forms and can usually focus on providing homework/coursework support.

- *Access to content and other information that would otherwise be unavailable*

[32] appears to support the views of students in this research when he argues that learner autonomy in distance education is important. He went on to say that educators have to expand their self-awareness in order to develop greater empathy and sensitivity to the needs and perspectives of distance learners.

**The Use of SMS:** Respondents highlighted that students are motivated by the use of SMS as learner support service. SMS is the most common and frequently used mobile service. It is present in every kind of mobile device and offers the possibility of reaching all mobile users. The idea is to build courses composed of SMS 'pills' - short textual learning objects - together with multiple-choice tests delivered by SMS. The learner can answer tests by simply replying to the test SMS question with an SMS containing the answer. The system tracks the answer received from every single learner, verifies the results and sends him or her a new SMS containing the test results and suggesting improvements. [33] pointed out that effective guidance and advice should be given to students.

**Mobile Technology Improves Coordination and Leads to a Shift from Asynchronous to More Synchronous Cooperation Which Results in a Better Learning Performance:** Respondents stressed the use of mobile technology and highlighted that lack of this facility results in individualized work which is not profitable to students. Students can split exercise work into evenly sized sub-tasks, on which each group member worked individually. This approach seems to be most efficient for them, but didactically it is sub-optimal for ODL students. By splitting up the work, they miss out on discussing their ideas, do not get a shared understanding of their work and can hardly contribute to each other's work. By integrating mobile technology, the available information about social presence and communication tools allows group members to coordinate their work in a much more flexible and spontaneous way [34].

Mobile technology helps to reduce the cognitive load of students. Some students are managers and usually have a very high cognitive load. They have only a very limited capacity to keep details and issues of little importance in their mind long enough for them to be handled. Mobile technology provides them with an opportunity to deal with more of these tasks when they are not in their office, as long as they can be done online right away. Sending an e-mail or message or reaching the right and available partners quickly to make decisions, helps them to tick things off the list as soon as they appear [35].

**Mobile phones are used to provide administrative support for the management and for Dissemination of administrative information to students:** It came from the respondents that mobile phones can be used to provide administrative support for the management. Fees balances can be communicated through mobile phones. For example; informing of test dates, dead lines i.e. helping the learners to learn about and deal with the complex administrative structures and processes of the institution. This is in the form of:

- Text messages from phone to phone
- Text messages from computer to mobile phone (email to ms)

It is argued that students need to be exposed to crucial learning experiences for effective learning to take place. In their studies, Alexander and McKenzie made the following observation:

The use of a particular information technology did not, in itself, result in improved quality of learning or productivity of learning. Rather, a range of factors are necessary for a successful project outcome, the most critical being the design of the students' learning experiences [36].

**Encouraging collaborative learning and the creation of new knowledge:** Respondents raised the issue collaborative learning through mobile technology. Students can assist one another in areas of difficulty as they correspond. Tasks can be discussed and clarified and this works as scaffolds for students to reach greater heights. To that end, students are encouraged to collaborate on projects through using mobile phones to:

- Communicate and provide support for each other by text or voice calls
- Sharing of information using Bluetooth
- Collect/capture data in the form of pictures
- Uploading or addition of revised or newly created information (in the form of text and graphics) onto specific websites

**Effective use of mobile phones for learner support at the moment seem to be:**

- Support for homework
- Access to relevant information
- Access to Test banks
- Sharing what they have learnt with others
- Creating new bits of knowledge
- Data collection

Research has shown that peer collaboration is an effective means of learning [37, 38]. In collaborative learning, students generally work together in groups of two or more. The mobile application system enhances students' collaboration, as it gives them the possibility to communicate and cooperate just by using the platform [39].

**Mobile Technology Supports the Build-up of a Community Network That May Last Longer than the Course:** Not only working and learning together, but also sharing private issues might be important to build up lasting friendships and a working community network. The more opportunities there are to have informal conversation, the more likely it is that a community might work. Awareness of the location and social presence of others provided by mobile technology may often serve as a motive to start informal conversations by chance or to ask for help. The evaluation of the mobile technology system should show if the frequency of communication increases and if people feel that these new methods would improve the social network among the students.

**Mobile Technology Enables Case-study Exercises Which Might Be Integrated into Everyday Scholarship for Research Processes:** Respondents highlighted that research is a core component in their studies in which mobile technologies can be used to assist them. Due to their small size and light weight, mobile devices can always be carried with one. Thus, it is always possible to

get spontaneous access to a workspace with all data, documents, tools or people. We assume there are spontaneous opportunities during everyday academic life where it would be possible to link them in some way to an ongoing case-study exercise - perhaps it would be the sudden chance to interview a key person met at the lunch table; or perhaps an unexpected incident that could be used as an exemplary anecdote from practice; or perhaps simply an idea triggered in the mind by some event [40]. Mobile technology provides ways to keep the current context so that others can understand the situation (using integrated camera; voice recording; saving the information on current awareness status such as location, time or people around) and make immediate notes that can be used as a reminder and notification for other group members [41].

## CONCLUSIONS AND RECOMMENDATIONS

The study concludes that mobile technologies are a major innovative way of supporting teaching and learning of students, who are by their nature, invisible. Areas such as research supervision, tutorial letters, reminders, announcements, e-learning, internet access, concept explanations, among others, are areas in which ODL institutions can use mobile technologies instead of making the student travel all the way for research supervision and the other services. Mobile technology supports the build-up of a community network that may last longer than the course. Research is a core component in students' studies in which mobile technologies can be used to assist them. The study recommends the need for workshops that train both tutors and students on the innovative ways of using mobile technology as ODL practitioners. Such workshops would help them to understand the strategies of using Mobile technologies in ODL systems. Where possible, the institutions could periodically invite experts in Mobile technology usage to address both lecturers and students so that they realise the internationalisation of knowledge and use of the support service.

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