Student Engagement in an Online Environment: Are We Trying to Mimic Contact Education? A South African Perspective

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Abstract. There is no doubt in anyone's mind that human contact can never be replaced 100 % by any other means. When it comes to higher education it is not different. Graduation rates at contact institutions are higher than distance learning institutions. It is equally true that since the inception of distance education the assumption has been that the greater the duplication of contact education the greater the chance of success. Although the content could be identical in both modes of delivering education, and the difference is contact versus non-contact from there on the differences exceed the similarities.

This study examines existing literature in student engagement and uses post facto research. Then it proposes a framework which could enhance student participation which increases the possibility of graduation of a student in an Open Distance Learning institution.

Keywords: Student engagement · Graduation rates · Attrition · eLearning · Open Distance Learning

1 Introduction

Educating the youth in any formal way it could be, face to face mode (F2F), fully online mode (eLearning) or a blended mode (blended, hybrid, mixed), a combination of the first two and predominantly face to face. In all three situations, there is the content, the student, the teacher/ lecturer and the environment that the teaching-learning situation takes place. The ultimate aim of the institution is to produce self-reliant graduates, using the humanist approach to education.

Graduation rates though around the world (excluding highly selective institutions such as Harvard or Oxford) are unacceptable as they vary from around 20 % in distance learning to around 40 % in contact learning [1–4]. Graduation rates in ODL, as a rule, have always been lower than F2F education [2, 4]. However there are studies which show that there is no significant difference in academic success in two controlled groups [5]. As the highest percentage of drop-outs occurs in the first year ([2, 4]) in 2015 Unisa, an Open Distance Learning (ODL) institution, introduced the Extended Programme where the first year of study extends by a year. Among the many factors of attrition identified by the literature ([3–7]) student engagement is one such a factor.

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Many authors [3, 5, 6, 8] agree that student active participation (interaction, engagement) is a major factor for academic success in any mode of education delivery. This study discusses the similarities and differences between face to face (F2F) and ODL education and how can student engagement may be improved.

1.1 eLearning Vesrus Face to Face Learning

Although there are many similarities between the distance and F2F education it is the differences that in the end could be the strong points of each mode of education delivery (see Table 1). Studying the literature for the past decade it revealed that while F2F education is moving more towards blended education, the online education delivery is improving especially through technology. The differences below are self evident and ODL institutions should take advantage of that. As technology has been established to have a positive effect on engagement [2, 6–11] then ODL institutions especially should become more of innovators in the use of technology. F2F institution should also try not to mimic ODL course deliver as O'Neill et al. [11] warn. Use of technology could lead to a competitive disadvantage by increasing student intake for financial reason as attrition will increase and possibly lower standards.

Salmon [7], also warns against the mimicking of F2F by ODL institutions by using instruction and transmission of knowledge as they should rather design their courses for interaction, engagement, building knowledge and skills and flexibility.

Studying Table 1 it is clear that both online and contact institutions have their strengths and their weaknesses. Instead of trying to mimic one another they should use their strengths. Their uniqueness make them both of equal importance.

The most important similarities though are: There is an instructor, expert in their field, syllabus, students are expected to study, discuss and learn, write exams mostly under the same conditions (excluding online exams), receive accredited degrees and at postgraduate level there is no difference as the modus operandi is almost identical. In both cases academic success is measured on what students have learned and throughputs; and in both cases throughputs are unacceptable and many factors of attrition are similar. Student engagement as stated above is one such a factor though the means used to achieve it could differ.

1.2 Student Engagement

Treating an ODL institution as such rather than as a duplicate of a F2F institution, if we accept the statement of Tinto [12] and others [6, 7, 11, 14] that persistence is related to student's engagement with his/her studies and the institution then the question to be answered is: What does the literature says about student engagement and what can a government, through legislation, and the institution, through implementation, do within their limits and control, to enhance student engagement in an ODL environment?

By student engagement is meant that the student will play his/ her part by devoting time and energy on educationally purposive activities given the favourable conditions created by the government and the institution [8]. The institution thus will "employ

Table 1. Differences between online and contact education

Online/Distance	Traditional/contact
(1) Flexibility-fit study around our schedule/ convenient	(1) Follows specific daily/weekly time Table
(2) Instructor more readily available	(2) Instructor could only be available during class or specific times of the week
(3) Can take exams online	(3) As a rule the exam take place in a venue
(4) No time or space constraints	(4) Bound by space and time
(5) Style of instruction mostly student driven	(5) Style of instruction mostly teacher driven
(6) Adaptable teaching styles	(6) Predominantly "one size fits all"
(7) Synchronous/asynchronous	(7) Synchronous
(8) Open access (independent of family, personal or work conditions)	(8) Limited access (mostly for matriculants in undergraduate studies)
(9) Can cater for widely distributed student population (rural, urban, international)	(9) More localised student population
(10) Dynamic classes	(10) Static classes
(12) Low throughput	(11) Higher throughput
(11) Time management promotes self-discipline	(15) Most contact time is determined by the institution
(12) Receive mostly delayed feedback	(12) Could get immediate feedback
(13) Properly conducted virtual classes can be very collaborative, as students feel more free to share their knowledge	(13) F2F can inhibit some student from participating in class
(14) Teachers can answer a great number of students' questions (synchronous/asynchronous)	(14) The time in a class is hardly enough for the teacher to cover the syllabus, never mind answer students' questions
(15) Teaching styles could be modified to accommodate student's learning style	(15) Normally teaching styles are rigid, predictable
(16) Learning content, language proficiency dependent.	(16) Foreign African lecturers are not easily understood when they speak.

effective educational practices to induce students to do the right things [5, 6, 13, 15] and Pascarella and Terenzini [5] go as far as to say that the students' part is "the single best predictor of their learning and personal development."

Research on student engagement in South Africa was done by Strydom and Mentz [14] who adopted the National Survey of Students Engagement (NSSE) into the South African context where the South African Survey of Student Engagement (SASSE) was developed.

The NSSE (SASSE) measures five indicators for good educational practices: These are: Level of academic challenge, whether active and collaborative learning takes place, the degree of student-staff interaction, enriched educational experiences, and supportive campus environment. This study accepts the SASSE as a reliable instrument of

measuring student engagement even though was designed for F2F it can be applied in ODL perhaps with a few modifications to take care of some of the differences and be used as an advantage.

1.3 Student Engagement in an ODL Environment

It was stated above that student engagement is used as the main construct for this study and literature showed that student participation could be the single predictor for academic success. The case study by Pirrakeas et al. [1] is used here to focus on certain variables which have been identified to be valid in a South African ODL institution. The reason for using this case study is that having collected data from the institution there are great similarities between the Greek ODL institution and the South African one.

Pirrakeas et al. [1] classified the factors for dropping out into intrinsic (student-rated) and extrinsic (institution-related) factors. Since this study concentrates on student engagement only factors within the control of the individual and the institution are considered and recommendations are made.

As this study deals with the extended programme that was introduced in 2015 a post facto research method is appropriate which aims at taking proactive measures to improve the student engagement of the first year students and the outcomes can only be measured at the end of the year. Preliminary findings already indicate the student activity in the online platform has increased by more than 500 % and submission of the first assignment has increased by 300 %. These percentages sound 'abnormal' but not in the applied context where in 2013 there were about 0.002 participations (active or passive) per student and in 2014 became 0.01. The non submissions of the first assignment in 2013 was 30 % while in 2014 it dropped to 12 %. These two factors were identified by Pirrakeas et al. [1].

1.4 Science Foundation Programme, eTutoring and Student Engagement

In South Africa, Subotzky and Prinsloo [16] state that "Despite substantial government funding incentives, numerous policy initiatives and well-intentioned efforts, retention and success rates are notoriously poor", especially in an ODL environment. They sight among other reasons, under-preparedness for higher education; most students come from disadvantaged backgrounds; lack of high-levels skills shortages; high HIV/AIDS infection rates (especially in South Africa that has high rates of infections); and Tinto's [3] famous 'revolving door' syndrome which is created by opening access without ensuring maximum potential success.

In 2007 an additional programme was implemented what is known now to be the SFP programme (Science Foundation Provision), a kind of supplemental programme. The APS (Admission Point Score) is used for the differentiation. An APS of 19 or less for Diploma courses and less than 25 for Degree courses are used as the cut off points.

In May 2013, the Senate of the University approved that the SFP programme is converted to a new model (rather than supplemental), what is known as an extended programme that came to effect in January 2015, similar to mainstream but the first year is extended by a year.

2 Student Engagement Framework for a Foundation Extended Programme (FEP)

Designing a student engagement FEP for an ODL environment as a rule it cannot be founded in a F2F success programme but extend on Prinsloo's [17] research which was conducted at Unisa. The differences to F2F have to be used as the drivers for such a framework while the similarities should be evaluated and strengthened. The four pillars that the FEP is based on are the teacher, the student, the content and the environment where the education phenomenon takes place, with teaching assistants (TAs) (not just tutors) augmenting online learning. The Framework should be guided by Foundation Principles which cater for the underprepared student and change the normal mainstream role of all four components. Since the content is predetermined, the design of delivery and method and materials augmenting the content are teacher dependent.

The Teacher. The role of an online educator has been defined among other names tutor, teacher, facilitator, promoter, manager, discussion leader and E-moderator and is a complex one (Vlachopoulos cited in [13]). Such complexity is difficult to be described in a limited space. However the most important points are highlighted here below.

When the teacher is aware of the importance of the differences, with exception of points 12, 13, and 14 (see Table 1), they are all connected either directly or indirectly to student engagement as a result his/ her facilitation must contain actions that promote such engagement. Briefly and ODL teacher should:

- be a diagnostic Action Researcher [20, 21] and an innovator.
- Possess Pedagogic Content Knowledge (PCK) [22] and be able to implement the famous '5-stage (access and motivation; socialization; information exchange; knowledge) e-moderating model' by Salmon [6].
- be able to apply the cognitive load theory (CLT) which can improve online discussion by reducing the cognitive load [13].
- be able to use tools based technology such as LMS, social media and mobile technologies, which can be used to 'force' the student to do collaborate, do their assignments online or use of educational games which demand engagement [19]. But one should be aware of 'course overload', as stated above, on students, teacher and TAs [11, 13] as they require comprehensive feedbacks [7].
- also provide a platform for social interaction and collaboration by the use of blogs, discussion forums, wikis and plods by applying '5-stage e-moderating model' by Salmon [6] as stated above.

The Teaching Assistant. The teaching assistant [TA}, must be a qualified educator who can play a very important role in the successful delivery of a course, ensures effective learning outcomes [6, 18] as well as contributing to the student satisfaction and as (s)he is the buffer, an interface [18] between the teacher, the student, and the institution. TAs should also possess PCK. The role of a TA at Unisa other than the duties stipulated in the contract, is briefly one of pedagogical, social, managerial and technical.

Pedagogical because it entails involving students in an active collaboration, facilitating construction and building of knowledge and the testing of this knowledge through interaction with others. Social because (s)he must create a friendly, comfortable and welcoming social environment in which students feel that learning is possible. Managerial, because (s)he must management and administer his/her course, and is usually the students' first point of contact for practical and administrative questions about the course. Finally technical as it includes, supporting the students in becoming competent and comfortable with ICT systems and software that compose the e-Learning environment.

Online Environment. The environment here includes the virtual classroom, the administrative side of the institution (human resource), and the technology (e.g. LMS) used for education delivery which should be reliable and the content could be included. Gönöç and Kuzu [23] found that student engagement is affected by the existing technological structure (ICT), faculty member's technology use, effective technology integration, and student's technology use regarding courses. Part of online environment could also be the whole layout of the site that the module is kept and certain web design rules and regulations prevail.

The institution has to create such environment that anything within its control will ensure the removal of all barriers that contribute to student non-engagement. The ideal environment is suggested to be a collaborative one among the students [1, 3, 7, 13, 15].

The Student. If one accepts that an ODL environment should be student centered, it is not just about what the institution can do for the student to ensure it develops a satisfied engaged student by removing all the institutional barriers but the student is also saddled with enormous responsibility. Both student and the institution are responsible for student engagement [8, 23]. That responsibility at times could be the sole reason for student withdrawal irrespective whether other circumstances contribute to it.

The student's role is briefly contained in the definition of successful student engagement [8]. In simple terms is the amount of time and effort the student spends on academic and other activities that lead to academic success. It must be borne in mind the findings of Xu, Du and Fan [24] who cite a number of authors who found that many students, have a negative attitude towards online groupwork (Smith et al., 2010), prefer to work individually and tend to be larkers (Gafni and Geri 2010) and online students often face the issue of social emotion (Wosnitza and Volet 2005) [24].

Technology: The Common Denominator. As all four components are connected to a greater or lesser extent by technology in a digital knowledge era, it is necessary to examine its role in engaging the student with the other three. A number of authors [2, 7, 14, 16, 24] warn us of hidden dangers in the application of technology:

- Full reliance on technology could have detrimental effects on students' performance and subsequent withdrawal.
- Technology should be used to augment learning.
- The fact that the students (or TAs or teachers) could be competent in using other technologies (e.g. mobile technology) should not be assumed that they are equally

competent with LMS [7]. Gönöç and Kuzu [23] speak of digital natives (modern students, technologically competent) and that technology builds the bridge the teacher and them.

3 Conclusion

An ODL institution shares common goals with a F2F institution as well as curricular and a number of factors that contribute to student's academic success. However it also differs from a F2F institution and it has to accepted as such and not mimic it. The unique way of education delivery on the one hand is its greatest advantage on the other hand everything has to be designed around it. For example the teachers' roles, the students' needs, the administration must satisfy eLearning criteria providing a student centered collaborative approach which could lead to student satisfaction and thus get a more engaged student. It is assumed that an engaged student stands a better chance for success than a non-engaged student. The way forward is to create model the above framework using Structural Equation Modeling using the four constructs, teacher, student, tutors and environment and perhaps technology to examine how successful is each in their roles.

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