

An Insight into the New Learning Model for Educational Fraternity: LEAM

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Abstract:

With the advent of technology e learning has got a big boost that has facilitated the educators to get access to better learning experience in schools colleges and universities. The paradigm shift from traditional paper based study material, registration and other allied activities to the mobile has actually driven the demand for information and has generated new forms of data which is easily accessible. There are plethora's of learning sets that have learning content and can track human behaviors. There are new analytics approaches that have carved new ways of comprehending trends and behaviors in students which eventually improve learning design, boost the student's retention and give space for students personal learning as well. Authors propose the foundational LEAM (Learning Education Analytical Model) which lays emphasis on the interactions of stakeholders (learners) with the data set for examples visuals, maps, user friendliness and solution seeking. This model can be adopted by the educational institutes who are interested in analytical processes and are supporters of personalized education learning. It also tests the efficiency in upgrading the students retention rates.

Keywords: Learning environment, education, learning behavior

I. INTRODUCTION

Although data analytics capabilities have been developing over the last 10–20 years, there has broadly been a disconnect between business intelligence and the use of data for supporting learning-based hypotheses. For example, although data have been gathering in educational databases, the capability and know-how for using it to advance learning and improve the student experience has barely begun and only rarely been investigated (Ferguson, 2012a, 2012b). With the build-up of data from learning management systems, customer relationship management systems and student-based systems, some universities have begun to investigate how to increase student retention, improve student-centered services and to develop more interactive learning experiences.

The move of universities, e.g., towards a more service-centered ethos often driven by rising costs of education and the introduction of student fees, has created an environment in which data have taken on an increasing value as a proactive tool for ensuring student recruitment, for lifting the quality of service delivery and finding new ways to make cost savings throughout the sector. In general, few of these studies have been visible in the literature, and although some of these data have invariably been left undisclosed due to competitive advantage, overall the comparatively recent nature of the software tools and the high costs of data analysis as well as the lack of interoperability of data sets and diversity of vendor offerings have left much of this evidence untapped and unpublished.

Let me first outline the main areas of the study and give a linkage from the previous studies. The paper highlights the LEAM for the purpose of providing a changed environment for the students learning experience thereby increasing the student's retention and providing a structural base for students personalized learning. The model so created by the authors shall guide to create such a dashboard that would provide for admissions, teaching and students services. When the authors were interacting with the stake holders, there were two main considerations. Primarily that the stakeholder at least had one active enrolment and were engaged in under graduate program.

II. LEARNING ANALYTICS: BACKGROUND AND REVIEW OF THE LITERATURE

Learning analytics is emerging as a key area of study in education science. However, searches for journal articles in the field reveal that this is a study area in its infancy with few scientific studies currently available and few theoretical pieces published at the present time. Early available papers include reviews of the field, ex, Buckingham Shum and Ferguson (2012), Ferguson (2012a, 2012b) and Siemens and Long (2011). Other papers such as Buckingham Shum *et al* (2012) have considered the broader issues around the use of "big data" systems for supporting learning. The first Association for Computing Machinery international conference in learning analytics was held in 2011 (eg, De Liddo *et al*, 2011; Duval, 2011), and the earliest models of learning analytics begun with a social learning analytics approach developed by Ferguson and Buckingham Shum (2012). There is also evidence in the literature of new analytics tools being developed (Ali, Hatala, Gašević&Jovanović, 2012), and there are some early indications of how learning analytics might support personalization of the learning experience. Work by one of the authors has described a more general paradigm shift from knowledge-based learning approaches to more experiential learning experiences that utilize mobile and immersive

content that can be built around the learner (de Freitas, 2014). Another of the authors has been developing theory for the analysis of user behavioural data from digital learning experiences while acquiring analysis experience with big data sets. It is rightly said that there is a difference between e-training and e-learning in fact e-learning is more than the electronic training. We can say that e-learning had come long back. It was primarily during the time of transformation of individuals and organizations from the traditional to the modern way of online teachings.

Time has come that researchers look for the innovative approaches or ways to complement the training. This is primarily because of the accelerating pace of change and growth in acquiring knowledge. According to Rosenberg (2006) classroom learning will always hold a special position in the way of learning because it is the place where the students can interact, collaborate, create and experiment new things.

Though there has been a rise in the higher education, cost involved has exponentially increased. There has been a dramatic change in the education landscape because of the emergence of e-learning, user-friendly web sites and above all the reusable content which provides the learners substantial benefits over the old ways of imparting knowledge that is campus based. However, there is an urgent need for necessary changes to be made in the infrastructure because of the paradigm change in the personalized learning experience.

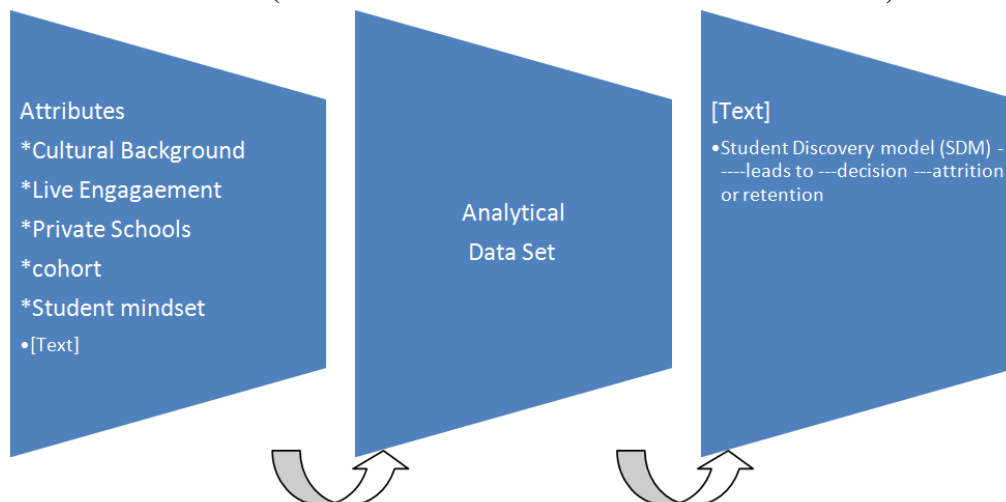
It has been seen that there is a strong correlation between the learning process and technology-based learning. Technology-based learning has created a greater commitment on the part of students. It is important the learning institutions should be in tune with the international standards; however, most universities need to focus on the quality of teaching; learning aids and facilities are available so as to enhance student's success and satisfaction.

Given table summarizes a comparative study between traditional and e-learning

	Traditional learning	E-learning
Discussion	Teacher teaches as planned	There is an equal participation of the students
Learning process	Generally there is no individual learning	Focus is on individual learning
Subject matter	It generally covers the subject matter from basically one source only	It encapsulates the matter from various matter right from books, journal, experts etc
Focus of learning	It generally focuses on 'what' rather than 'how'	It focuses on how rather than 'what'
Motivation	There is less motivation as there is less involvement of the students	There is a high level of motivation as there is personal involvement of the students.
Role of the mentor	Teacher acts as an authority	Teacher motivates the student for self-improvement by being personally involved in knowledge search.
Place of learning	It is confined to the pillars of classroom	There is no fixed location

In this study, we have highlighted the importance of data analytics, which plays an important role in ensuring students' enhanced learning and satisfaction. This satisfaction and enhanced learning facilitate the high retention rates and encourage the workforce to compete on the global arena.

III. LEAM (LEARNING EDUCATION ANALYTICAL MODEL)



The LEAM has been developed by the authors to study the SDM with the help of analytical attributes. Authors have developed this framework of SDM (Student Discovery model) to study the various attributes of behaviour that we have an impact on retention. However, it is a big challenge for the universities to maintain this retention rate as the attrition rate is very high. Since it is a descriptive study, authors interacted with the stakeholders to have a better

understanding of the situation. For the purpose of analysis data was drawn from variety of sources across the campus of CSJM University. We also tried to interact with the students who were related to the “distance from campus” to know their views as well. Privacy and ethic procedures were taken due care.

IV. RETENTION STUDY: OVERVIEW

For the purpose of understanding the scope of this study it is important to highlight the student’s journey into the education arena. The journey basically begins from the step of marketing (where the student knowledge about the learning institute is limited. After he progresses with the admission process where both the university as well as the students go down a deeper with their interactions. Interactions between the two facilities both of them to decide whether to proceed or no. With the progression in the enrolment phase information regarding student expands year by year till the program gets completed. This is the main scope of this study. There is a deep rooted relationship between the students and universities which is kept even till the time they are alumnus or employed.

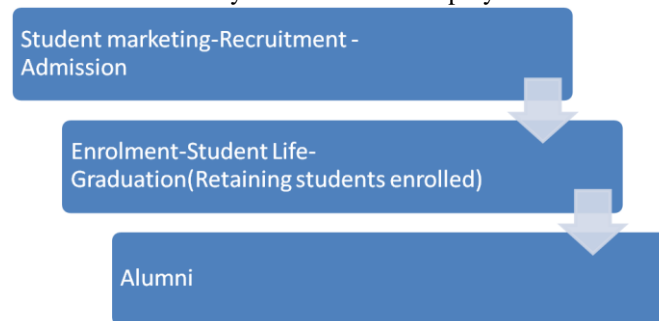


Figure: retention study within the journey of the student's experience

From the discussions with the stakeholders of the education fraternity it was finally concluded that the cultural backgrounds do not any effect on the retention of the students. However there are students with greater perceived cultural differences are likely to assimilate and more likely to attrite. When we talk about on live engagement of the students with the help of online lecture materials in addition to onsite attendance then decreases the chances of attrition thus increasing the chances of retention. It was also noticed that students who were from private schools were more motivated to study then they have higher retention. Another attribute that was observed by the authors were that it was not above mentioned themes that have an impact on the retention or attrition. It is student’s personal mind-set as well which works as a decisive tool in retention and attrition. It was observed students who were happy with their academic performance are less likely to attrite. Last factor on which authors had a discussion was cohort. It was noticed that the students closer to the average age of their cohort were more likely to be retained.

The focus here is on retention results, but over time it can be applied LEAM to a host of other questions with impacts on teaching, learning and higher education policy and leadership.

V. CONCLUSIONS AND FUTURE STUDY

Here we have tried to highlight the need for the paradigm from the traditional learning analytics to dynamic learning analytics. Authors have used the wide spectrum of perception and the involvement of the students in the university. We also envisage the educational landscape that brings information together in a highly variable and rapidly changing environment.

Improvements which have been stimulated by the dynamic learning analytics strategy shall provide a vital and useful resource for the university, having an impact upon student retention rate, coming up with appropriate and well timed content, vocational guidance and SSS(Student support Services)

We hope that the data shall provide an impetus for the future research and shall provide a foundation for further investigation pertaining to business support, improving educational landscape and providing satisfying student experience.

Finally we envisage that the evolution of other models can provide new approaches with students and groups at large.

Our vision of learning in the future will draw in educational, employability, work-integrated learning and skills-focused components to ensure a better coordination of work, study and life to ensure that student time is well prioritized and used within a framework of seamless systems that will support and steer students through the best matching set of learning experiences adapted to their strengths, interests and aspirations to bright up the future of the nation. Let’s make a change!

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