

Influence of Learning and Teaching Centers in Supporting Students' Performance and Retention Given Present and Future Education Trends: Exploring the Micro-Foundations of Educational Strategy

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Abstract

In response to challenges consequential to students' education paradigm shift from traditional and dependent learning to active, independent and computer aided learning and the difficulties that have been encountered by some students, mostly less intellectually advantaged, and the possible consequential loss of student satisfaction in education and the educational system, this research study explores the services of Learning and Teaching Centers, especially in relation to the provision of student learning support plans and programs, to escalate student's satisfaction with their education and the educational institutions they are enrolled in. To this end, the current research study features a fourfold analysis. After a brief presentation of past and present education trends, this study presents projections of future trends, and explores possible students' loss of satisfaction with their corresponding courses, study programs, and educational institutions/universities they are enrolled in, as a consequence of the possible bumps experienced during their educational paradigm transformational process, from totally dependent to independent learning approaches (Felder and Brent, 1996; 2003; Helou and Helou, 2008). Thirdly, the current study presents the findings of a research project undertaken by the authors to explore the impact of university Centers of Learning and Teaching services on student satisfaction, performance, completion and progression, and their loyalty and retention. Finally, the current study concludes with a presentation of a summary of the main notions featured in the paper and provides directions for future research.

Keywords

Learning and Teaching Centers, Student Satisfaction, Student Retention, Student Completion, Future Education Trends

I. Introduction

Should technology be employed for 'teacher-centered' or 'student-centered' instruction approaches? and, what is the benefit attained out of predicting future educational trends? Amongst other salient issues addressed in the current paper, this research study attempts to provide responses to both of these questions. As technology continues to play a significant role in education, any forecasts concerning the future of education must embrace an exploration of technological trends. Furthermore, the application of additional technology into education, leads to further adaptations and change. This section presents a review of the educational trends and paradigms of the past and the present, while predictions of future trends will be discussed in the following section. Full classrooms of seated students from one end of the room to the other, taking notes while listening to the wisdom of the almighty and expert professor, has mostly been in practice. Many academics, mostly 'traditionalists' (Felder and Brent, 1996), believe that active learning (Bellanca, 1990; Bonwell and Eison, 1991; Bullard et al., 2008; Prince, 2004) is only a fad, and that the provision

of long traditional lectures will continue to be practiced in the future. Nevertheless, as technological advances speed on, and as technology continues to be integrated into education, regardless of educators' and/or students' resistance to active learning and student-centered modes of instruction (Prince, 2004), change and adaptations in education will occur.

In addition to information explosion, changing trends in technology, world economy, and workplace and workforce demands – given that almost all industry and business are nowadays applying state-of-the-art technology, are all reshaping education, right from Kindergarten activities all the way through to Higher Education study programs and delivery instruction modes. From the almighty professor, holder of all insight and unchallengeable wisdom - presiding in undergraduate and postgraduate classrooms and research meetings/sessions, to transmit information and knowledge to the receiving students – to educators and facilitators of learning and research undertaking (Helou, 2005; Kronic and Helou, 2008). Thus, with this paradigm shift in education, roles have now been transformed (Helou and Helou, 2008), whereby the facilitator's main role is now to provide an effective learning environment that assists with the transformation of students from passive receivers of information to active seekers of knowledge, through the employment of engaging and collaborative activities, necessitating the use of technology to communicate and access the information needed for the undertaking of internal and external inductive research.

The above mentioned current trends, and the change in the education paradigm from the dependent 'traditional instructional mode' of instruction (Felder and Brent, 1996), to the independent 'student-centered modes' of instruction (Bullard et al., 2008; Helou and Helou, 2008; Prince, 2004), beg the following questions: Where do these trends take the education system? What will be their influence on the education system? Will all academics, at some stage, accept the changes such trends provoke? and, most importantly, will students' adaptation journey from being passive receivers of information to becoming active seekers/researchers of the knowledge sail smoothly? In other words, will students' interactions with the technology being made available to them go in accordance with set plans? and, if not, that is, if the road is 'bumpy' (Felder and Brent, 1996), with hurdles and challenges on the adoption highway, what options do educational institutions and/or educators have to facilitate the transformation? Furthermore, as the need for technologically fluent workers is a main driving force impacting on educational reform, a main question relating to the frustrations currently expressed by some of the intellectually less fortunate students is how technologically fluent are they?

In light of the above mentioned questions, partly featuring challenges to the adoption of active learning and student-centered modes of instruction, as being currently witnessed in some classrooms and in online delivery environments, and to curtail possible loss of students' satisfaction and loyalty to the course, program of study,

and possibly the educational institution/university, which results in incompletions and exit (Hirschman, 1970; 1995); the current study investigates the salience employing a complementary approach to cultivate and nurture students' satisfaction and loyalty, as well as assist with their continued participation and engagement with their respective study programs, and encourage their continued commitment to the educational institution they are enrolled in. This entails the preparation of individualized and collaborative student/s support study programs (Claxton and Murell, 1987; Grasha, 1990; Lee and Lee, 2016), based on their individual learning style/s (Dillenbourg, 2000; Felder and Sliverman, 1988; Gentry and Csete, 1990; Graham, 1997; Kouyoumdjian, 2012; McDaniel and Einstein, 1986; Meier, 2000; Sternberg, 1977), by the University's Centre of Learning and Teaching (Lee and Lee, 2016), for use by the less intellectually fortunate students, to be undertaken simultaneously during the students' adaptation journey, and continued thereafter as need dictates.

To this end, the current research study features a fourfold analysis as follows: After a brief presentation of past and present education trends, this study presents projections of future trends, and explores possible students' loss of satisfaction with their corresponding courses, study programs, and educational institutions/universities they are enrolled in, as a consequence of the possible bumps experienced during their educational paradigm transformational process, from totally dependent to independent learning approaches (Felder and Brent, 1996; 2003; Helou and Helou, 2008). Thirdly, the current study presents a briefing of a research project undertaken by the authors to explore the impact of university Centers of Learning and teaching services on student satisfaction, performance, completion and progression, and loyalty and retention. This study further explores the implications of employing such individual and collaborative student/s support study programs to assist the intellectually less fortunate students with their individual educational paradigm transformation from a dependent to an independent and active learning approach. This research paper finally concludes with a summary of the main notions covered in this study and provides directions for future research in this area.

II. Future Trends in Education: Towards Virtual Educational Institutions

This section provides projections for future educational trends, which have been formulated based on the authors' observations and past professional experiences, findings of the representative literature surveyed, and the views expressed in discussions with learning and teaching staff and faculty members from various departments/schools including education, psychology, law, business and commerce, electrical and computer engineering, information technology and general science. Moreover, as educational institutions – including schools, colleges, specialized institutions and universities), aim at graduating students capable of participating and effectively contributing to the domestic and global economy, and as most firms and industries are in full adoption of state-of-the-art technologies, the need to continue, and for some, to escalate their spending on Information and Communication Technology (ICT) is critical to preparing children and students for future demanded jobs.

A main future trend lies with the fact that improved pedagogy will take precedence over the learning environment, as individual students adopt an active and computer supported inductive learning approaches (Cetrone and Davies, 1994). As Rutz et al. (2008) explain, in terms of what the future entails, educators' ability to

effectively manage virtual classrooms - where there are no place and time limitations, efficiently engage students, and successfully affect learning, will be of the essence. With this information and digital age, the world is experiencing a new era in education, where a main challenge for educators is the effective simulation of the traditional classroom environment in virtual classrooms, which in essence should reflect an identical mirror image replicate of the traditional classroom atmosphere. As such, a main crucial issue for academics to keep in mind is assisting students with their transition of becoming active learners (Bullard et al. 2008; Felder and Brent, 2003), researchers, and seekers of information and knowledge. As previously mentioned, this is facilitated by an adaptation of the role of the educator from that of a 'lecturer' who believes that technology should be employed for teacher-centered instruction approaches, as in the traditional instructional model, to a 'facilitator' and a 'curriculum developer', encouraging students to adapt and adopt engaging and collaborative models (Prince, 2004) of learning, regardless whether they are in a classroom environment, using the blended teaching approach, or purely online through distance education programs.

Virtual environments offer an exceptional prospect for students to engage in numerous interactive arrangements including group work, team formations, group leadership and management, as well as the undertaking of exceptional analytical and research work, manipulating variables in controlled environments, and using web-based and virtual world technology tools (Rutz et al., 2008). Virtual environments make an excellent learning and education venue for various fields of study, including medicine, engineering, education, arts and sciences, and for all business programs in accounting, finance, marketing, management, international business, banking and entrepreneurship, as well as economic policy and practice. Its applications in terms of education and research are limitless.

Examples discussed by Rutz et al. (2008) of the applications of virtual environments include: (1) allowing engineers, architects, product and service designers and managers, as well as artists of all sorts, to investigate with the creation of new prototypes, as well as the design and pre-testing for possible social inferences and future likely customer response, in relation to both new and improved products and services; (2) facilitating active learning of diverse groups including paramedics and medical and emergency personnel; (3) enabling collaboration by student teams, research teams and business partners, while serving as a meeting place for the connectivity and exchange of ideas, visions and possible courses of action; and (4) facilitating out of class student centered instruction and the engagement of virtual worlds by breaking the time and place barriers, thus, allowing for the availability of the subject matter and the assigned assessments and activities at a time – day or night - and place – home or office - convenient to students.

Furthermore, investigations with entrepreneurial behaviour, consequential to a set mind frame and spirit, and an analysis of the resultant decision-making, can now be facilitated at both small-scale enterprise and corporate levels of analysis, through setting up a business venture and exploring various related business functions including the preparation of a business plans, strategic management plan, marketing plan including pricing and a mixture of traditional and digital promotional campaign aiming at achieving market and profit objectives, operational plan covering day-to-day functions/activities, exploring finance and funding sources, evaluating new ventures and new product/service innovations, exploring the interphase between strategic management functions/dimensions and the level of corporate

entrepreneurial intensity and its impact on organisational recovery pathways if needed, studying creative decision making given specific marketplace trends, exploring the impact of the level of customer loyalty on customer experience and service recovery ... etc. In terms of policy reviews and theory development, virtual environments allow for the testing of possible managerial practical implications. In relation to framework and model building, virtual environments also allow for the testing of the possible applicability and adaptability of the framework or model in focus to various systems and at varied levels of analysis.

Another important trend in education is to encourage students to shift from a 'just-in-case' information piling, where the students are made to learn a lot of information that they may never use in the future, to 'just-in-time' learning approach, where students are trained to become life learners, in terms of being able to find the facts/information when needed, and use it accordingly. Thus, once again, encouraging students to move on from a passive learning approach to an active learning approach. This cannot be overemphasized as with advanced technological learning aids, and curriculum re-design and re-development, while keeping individual student learning styles in focus, students will be able to spend more of their time on learning materials and activities, thus, concentrate, on areas of study that are of interest to them. The available literature on learning styles (Felder and Sliverman, 1988), indicate that the majority of college-age students tend to be visual learners (Kouyoumdjian, 2012; McDaniel and Einstein, 1986; Meier, 2000), which now can be further facilitated with the effective integration of technology into curriculum design and development activities.

The educational community is now witnessing the extension of the educational entrepreneurial spirit and mindset with more educational institutions – involving faculty and IT academic related department and school allocated staff – experimenting with various actions, including on-going research work, related to further innovative integration of new technologies with educational curricula, to further enhance student learning avenues, and cater for a broad range of individual student learning styles. Furthermore, the educational community is also witnessing escalated entrepreneurial educational actions and projects – both physical and research related – as evidenced by the increasing number of educational institutions' experimentations with innovative classroom student seating arrangements, provision of state-of-the-art technological equipment, and other educational ambiance and atmospheric related tools and services, aimed at stimulating effective student learning moods and mind frames as a means of enhancing their engagement and concentration, in an attempt to affect deeper understanding of the assigned subject matter, including the facilitation of their engagement with in class and out of class allocated educational activities. As Rutz et al. (2008) noted, more traditional classrooms are getting flipped into electronic classrooms, thus, enabling image projections, multi-media and computer animations. This represent only the beginning of the road leading to the future educational enterprise. Towards the end of it, the educational community will be witnessing the integration of wide range of further innovative technologies as learning enablers in electronic classrooms. This further enhances the classrooms' learning environments by augmenting students' learning mood stimulations and hopefully motivating a more focused students' mindset, thus, improving their likelihoods of attaining an enhanced student learning experience.

Web-based socially connected and well networked education should not be discarded, as it will constitute a salient factor

impacting student learning. The eagerness spirit displayed, and actual high rate new technologies adoption by students of all ages, act as a strong indicator that students may indeed benefit from socially connected education. Accordingly, work-integrated learning, as in real company related projects and/or internship programs, or even as in virtual internships with technology, service, manufacturing, and other companies from a wide range of industries, including education, may present students with the opportunity to develop professional networks unlimited by place (Rutz et al., 2008).

Another interesting future trend is that shortly on the market there will be computers with voice translation technologies which permit direct communication with a diverse range of people from different countries around the globe (Molitor, 1998). Pertinent questions in this regard are: How will this, for example, impact experiential learning? peer learning? and, study abroad programs? Furthermore, what will be the associated social implications on students?

In contrary to the traditional educators' beliefs, active learning and student-centered instruction are here to stay. For many years now, students who were previously accustomed to being spoon fed in their primary, secondary and high school educational years, and even possibly while being freshman and sophomore students in their respective major disciplines, have been adapting – or at least attempting to adapt - to become independent and self-reliant learners, all under the scaffolding efforts of their educators, and, possibly, the more academically achieved students in their respective classes/grades. An increasing number of educators, once traditionalists, have now been re-designing and re-developing their respective curricula, unit contents, lesson activities, delivery modes and techniques to cater for and facilitate a more self-reliant student learning.

The use of wikis, for example, necessitate participants to provide the content. Rutz et al. (2008) provide the example of writing a term paper, where instead of preparing it in separateness, to only be eventually viewed and graded by the academic in charge, following the traditional educational approach, students are now able to collaboratively engage in contributing and developing it, while, simultaneously, getting peer-review assistance, prior to the educator's marking. This, accordingly, provides not just a valuable interactive learning experience for the participating students, but also a valuable source for the enhancement of their self-confidence as a consequence, which, in turn, acts as a motivator/catalyst for further progressive learning.

III. Centers of Learning and Teaching: Learning Support Programs

Most educational institutions, being schools, colleges and universities, have established centers for learning and teaching, whose main role is to assist students with their learning difficulties, by providing individual and collective learning support programs based on student/s' learning needs. Research was undertaken with both undergraduate and postgraduate students enrolled in three diverse faculties, namely, education, psychology, and business. The aim was to study the impact that effective and successful learning support plans and programs have on student satisfaction, performance, completion, progression, loyalty and retention. The main question of the research study was to assess whether such individualized and collective support learning plans and programs can be employed as a recovery mechanism to education dissatisfaction, that is, can they be used to neutralize dissatisfaction that may arise in less intellectually advantaged students during

their educational paradigm adaptation journey – as related to their transformation from the traditional and dependent to the active and independent learning approaches? A related question is whether they can be used as a pre-intervention mechanism, that is, to prevent dissatisfaction from formulating in the first place if implemented with early signs of student's lack of attendance and/or participation, or with early observations of unsatisfactory performance, that is, before the student falls into the 'At Risk' status.

To facilitate the empirical analysis, surveys were prepared and conducted on 250 (50% male and 50% female) university students, in education, psychology, and business. Survey questions were divided into three sections. The first set of questions asked participants about their level of satisfaction with their individual course, its delivery mode, their personal learning, and their performance in the subject. The second set of questions asked participating students to respond on their satisfaction, participation, and level of help attained by individualized and collaborative learning support plans and programs. The last set of questions requested students to report on their overall satisfaction with their education program, modes of instruction applied, and their overall performance. In the last section of the survey, there were two additional questions about the student's overall loyalty towards their department/faculty and the university. Multiple regression analysis was conducted, and the regression models were validated as suitable. This study generated two main outcomes. First, the level of a student's satisfaction with their learning support plans, programs, and experiences with the Center of Learning and Teaching positively impact their level of satisfaction with their respective course, study program and their loyalty to the university. This confirmed to be true for students in all the three fields of study, namely, education, psychology and business programs. Secondly, the findings of this study further indicated that a student's level of satisfaction with their course and study program, in turn, positively impact their performance, completion, progression and retention intention. The above findings of this study is in support of earlier findings of Lee and Lee (2016).

IV. Conclusion

This study concludes by providing a summary of the main ideas presented in this research paper, an evaluation of the limitations of the current study, and directions for future associated research in the area. In terms of future trends in education, given the increased participation of major educational institutions worldwide in virtual worlds, the associated huge investments made to this end, the advantages and benefits expected to be achieved by these institutions as a result, coupled with the expected growth of wikis (collaborative content creation) and socially inclusive activities, especially among high schoolers and university students (Rutz et al., 2008); it is extremely unlikely that the dissemination of education using virtual environments will disappear, as traditional educators would like to believe. Furthermore, the current traditional educational environment fails to address pertinent changes in students' expectations (Rutz et al., 2008), and the impact of the fast speed technological advancements in both the public and the private sectors, being the future place of employment of most current students.

One methodological criticism that could be made of this study is that the participants involved were randomly selected from one higher education institution. Future research could overcome this problem by involving a considerable number of educators and students from various tertiary institutions located in areas having

different multicultural blends and socio-economic conditions, and compare their respective teaching practices and views on cognitive developmental learning.

As previously mentioned, in addition to the pressures from the government, industry and business firms, technologically advanced students will also demand independent and lifelong learning skills (Gentry and Csete, 1990). As a concluding statement, it is worthwhile to note that it is of the utmost importance for educators to cooperate and work hand-in-hand with technology designers to progress education through the employment of technology (Graham, 1997).

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