

## **E-LEARNING AND WEB 2.0: A VALUE CREATION PERSPECTIVE FOR GLOBAL ENGAGEMENT**

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### **ABSTRACT**

A model of student-faculty and student-student interactions using interactive Web 2.0 technologies in e-learning is offered and explained using literature from service-dominant logic research. This paper provides a fresh perspective with regard to how value is co-created by both faculty and students through a set of experiences and interactions.

### **INTRODUCTION**

Over the last decade or so, a new type of higher education institution (HEI) has begun to emerge, being enabled most significantly by technological advances through the Internet. These technological developments have added a new competitive dimension with the emergence of two distinctive trends; the increased use of e-learning mechanisms by traditional HEIs, and businesses specializing in Internet based learning solutions (Allen & Seaman, 2008). The implementation of an e-learning strategy holds several obvious advantages for HEIs. It improves the financial standing of the HEI through the reduction of both variable and infrastructure costs, provides a source of differentiation and competitive advantage, provides global reach, adds another communication and feedback channel in student-HEI interactions, and potentially increase student satisfaction through the reduction of class sizes and thus improving service performance. As can be appreciated, the benefits of an e-learning strategy to HEIs are manifold, and have led many HEIs to invest significant resources and effort to its successful deployment.

In recent years, e-learning has experienced phenomenal growth and has evolved from being an alternative mode of study for distance education students to become one of the main modes of delivery employed by HEIs in the broader ecology of blended learning. The flexibility brought about by e-learning had initially presented HEIs an opportunity to expand their market bases both nationally and internationally in the bid to remain competitive (Binsardi & Ekwulugo, 2003; Ivy, 2001), and increasingly HEIs are now extending their use of these technologies to include the utilization of interactive Web 2.0 tools such as blogs, wikis, social media and virtual worlds in virtual learning environments (VLEs) that further liberate themselves from the spatial constraints of their 'brick and mortar' campus. For example, both faculty and students are now able to use the internet to access course learning resources, contribute to online blogs and reflective journals, and attend virtual classrooms facilitated by platforms such as Elluminate, and the use of social media such as Facebook have shown potential in building an enthusiasm for learning and a sense of community within the student cohort (English & Duncan-Howell, 2008; McLoughlin & Lee, 2008).

New features of e-learning technology incorporating Web 2.0 tools now have a real potential to replace traditional classrooms, and to an extent address some of the earlier concerns of e-learning such as the loss of interaction between students and instructors (Kriger, 2001; Clark, 2000). With an increasing student cohort adopting these technologies, the way faculty interact with students is changing. HEIs are now increasingly faced with a conundrum: while the next generation of students classified as 'digital natives' (see Prensky, 2001, 2009; Oblinger & Oblinger, 2005, Jones, Cross & Healing, 2010) may appreciate the flexibility that comes with e-learning; as they migrate

away from traditional classroom environments to VLEs, the extent of personal face-to-face interaction with faculty decreases as spatial distance between the students and the HEI's physical campus increases. With this service separation, an increasing number of HEIs have been redefining the manner in which they interact with their students. The contribution of this paper is thus to discuss the consequences of this change by re-examining how value is created in the student-HEI relationship for next generation learners. A service-dominant logic perspective is discussed that provides insights for key challenges for HEI's management and future research needs in the area.

### **A VALUE CREATION PERSPECTIVE**

From a marketing viewpoint, a key consequence of the new operating environment for HEIs is the concept of value creation. Value creation is a significant driver of marketing strategy and forms the fundamental basis for interactions within the student-HEI relationship. Indeed, it has been suggested that value creation should be the fundamental basis for *all* marketing activities (Woodruff, 1997; Holbrook, 1996). The fundamental definition of value is the trade between benefits and sacrifices – a view that is strongly influenced by the economics of marketing exchange. Over the last two decades, there have been extensive literature on the concept of value creation, and how value may be packed into a product and delivered to the customer. Recent literature has extended this view to define value as multi-dimensional in nature (e.g., Babin & James, 2010; Holbrook, 2005; Sweeney & Soutar, 2001). For example, Holbrook's (2005) definition considers value from an experiential perspective, which incorporates a wide range of factors apart from economic factors. Babin and James (2010) suggest that the emerging

multidimensional value definition allows one to move beyond the goods-dominant (G-D) logic of marketing, to focus on actions and experiences rather than costs and benefits.

With the emergence of the S-D logic of marketing (*see* Vargo & Lusch, 2004; Lusch, Vargo & Tanniru, 2010), value is now seen as a measure for assessing the extent to which a service has succeeded (Babin & James, 2010). Two of the key foundational premises (FP) of S-D logic (*see* Vargo, 2009) that hold particular relevance to the context of our discussion is that the customer acts as a co-creator of value (FP6), rather than a consumer or destroyer of value; and that an enterprise only offers value propositions to the customer through its resources (FP7). We believe this perspective can be successfully applied to the student-HEI relationship, particularly in the current environment of service separation brought about by e-learning. From a S-D logic perspective, we note that students are increasingly moving into a role of being co-creators of value with the HEI, where students are active participants in the co-production of their learning outcomes. This perspective has become more relevant as e-learning moves to incorporate more interactive Web 2.0 tools, where the student is expected to create content and act as co-teachers in an environment that fosters experiential learning (Stavenga de Jong *et al.*, 2006). Current thoughts on pedagogy support this view by defining learning as a process that the student experiences rather than a product that is sold to the student (Seaman, 2008). Thus, if we take that the role of the HEI is to provide a set of operant resources (skills, knowledge of instructors, and learning mechanisms such as e-learning platforms), and students co-create value for themselves depending on how they interact with these resources; the process of value creation becomes of critical importance to understanding the relationship the student has with the HEI. We present the traditional classroom

learning model (Figure 1) which illustrates that the production of learning resources lies with faculty. Faculty then delivers value through their learning resources. Student group/tutorial interaction is possible, but there is little to no inter-group/tutorial interaction. Figure 2, on the other hand illustrates the e-learning model from the perspective of S-D logic. Here, faculty and students co-produce learning resources. Students act as co-teachers in VLEs through blogs and the creation of podcasts and other learning content. Co-creation of value is enabled through rich student-faculty and student-student interactions through wikis, social bookmarking and virtual classrooms such as Elluminate. There is rich intra- and inter-group/tutorial interactions enabled by Web 2.0 tools; allowing greater scope for information sharing with the entire student cohort (e.g., via RSS feeds and social bookmarking).

### **Value Drivers**

Given this perspective of S-D logic, we define value creation in the student-HEI relationship as the set of student experiences within student-faculty and student-student interactions that utilize HEI operant resources in learning activities to achieve set learning outcomes. It is important to note that the focal point is the student and not the HEI. This relates strongly to the view held by Heinonen *et al.* (2010) who propose that marketing should start considering an in-depth understanding of customer experiences. The ultimate outcome of a HEI's efforts should therefore be to construct and maintain pedagogically sound tools in learning environments to support the set of student experiences, resulting in 'value-in-use' (*see* Grönroos, 2006, 2008) for students.

From the above definition, the central question that arises is how HEIs can support (1) students' ongoing interactions, (2) learning activities and (3) experience structures. First, interaction is a key source of value – in the interactive process with a firm's operant resources, the customer is able to realize the value that emerges (Grönroos & Ravald, 2009; Smith & Colgate, 2007). This particular source of value is believed to derive from joint participation where both customer and firm interact, participate and collaborate to achieve valued outcomes for the customer (Grönroos, 2011). Recent literature have provided some insights such as the firm's ability to create dialog as an effective way to co-create value (Ballantyne & Varey, 2008; Lusch & Vargo, 2006; Lusch, Vargo & Tanniru, 2010). In the context of e-learning, it would be prudent to extend this view of value creation through firm-customer interactions to include customer-to-customer interactions, or in this case to account for both student-faculty and student-student interactions. Future iterations of e-learning technology should focus on building facilities to support these levels of interactions in a bid to bolster value creation and close the spatial distance or 'transactional distance' that inherently exists in employing such technology (Dron, 2007). Through this, the HEI's role is to facilitate collaboration to achieve personalized learning and open discussion. Such facilitation of interaction has also been seen to influence quality perceptions of the online course (Peltier, Schibrowsky & Drago, 2007; McLoughlin & Lee, 2010).

Second, learning activities designed by faculty have the potential to foster greater student engagement and interest to interact. The efforts faculty makes in their engagement with students have long been documented to have a positive influence on a student's interest in the material as well as effective learning (e.g., Brophy, 1986). Students want teachers to

make the subject 'alive', make it relevant to today's circumstances and involve the students in activities that cultivate active learning. In e-learning, these sources of value may be achieved through a set of Web 2.0 tools working within the principles of social constructivism (*see* Barab et al., 2007; Jones, 2011; Willey & Burke, 2011) and constructionism (*see* Hmelo-Silver, Duncan & Chinn, 2007; Kim, 2005) – where in social constructivism, student groups construct knowledge for one another, collaboratively creating a small culture of shared resources; and in constructionism, students construct their knowledge and understanding through a set of experiences based on solving set problems. To illustrate, social constructivist approaches has as a central principle that knowledge is created by learners in the context of and as a result of social interaction. A group of students might be involved in the production of an assessment task directly in a wiki, but also be guided by a faculty member who provides scaffolding in the same wiki (McLoughlin & Lee, 2010). The principles of constructionism may be similarly applied using social media to aid experiential learning approaches. Students may produce a podcast or video presentation on interviews with industry personnel in a case study, utilize a blog as a reflective learning journal during or on completion of a field assignment (for individual work), or produce a set of wiki pages (for individual and group work). These examples highlight that the efficacy of these tools lies in their empowerment of students to create their own content for distribution to their peers rather than the use of technology for the mere dissemination of lectures or other instructor-centered information (Lee, McLoughlin & Chan, 2008).

Third, we define experience structures as the perceived characteristics of the service space within which interactions and value-creating activities are performed. Smith and Colgate (2007) referred to the service environment as a source of value, making reference to aspects of the physical environment such as retail store atmospherics and other physical aspects of the consumption experience. Similarly, in the traditional classroom learning model, there have been well documented research on the impact of the associated learning environment such as the physical classroom arrangement of desks and chairs, lighting, as well as psychological and social dimensions such as class participation and personalization (e.g., *see* Church, Elliot & Gable, 2001). In the next generation model of e-learning, these structures put in place to support the customer experience will be replaced by the characteristics of the VLE, and psychosocial dimensions controllable by the faculty member acting as the instructor or facilitator of the interaction processes.

Keeping in mind the precept of the preceding discussion that value is created through interaction maintenance and constructivist learning activities, these necessary experience structures by definition provide the ‘lubricant’ to ensure the mechanics of value creation are working smoothly, and without such experience structures, the process of value creation may be in jeopardy.

### **RESEARCH AND MANAGERIAL IMPLICATIONS**

HEIs have traditionally been product-based organizations, with faculty members and academics having substantial power to determine ‘product offerings’ (programs, courses) and delivery methods. The emergence of e-learning as a major pedagogical instrument has fundamentally transformed the way HEIs traditionally operate and how faculty

interacts with students. The S-D logic perspective of the next generation learning model is a student centric model that has as its fundamental precept the student's ability to interact with faculty and other members of the student cohort to create value. The preceding discussion of the drivers of value holds several key implications for HEIs. HEIs will need to build institutions that clearly understand which consumers they are targeting, what those consumers need, and the structures that support the interactions and experiences that occur in the value creation process.

### **Exclusion Issues**

As HEIs move toward a model of value co-creation, students are able to be active participants in content sharing opportunities to create learning material and act as co-teachers in the co-production of learning material. Keeping in mind that in this model value is created by the experiences of *all* actors involved in the interaction process (Prahalad, 2004; Prahalad & Ramaswamy, 2004), the question arises as to whether particular types of students are 'good' or 'bad' as co-producers in this process. The acceptance of certain 'bad' students into online courses has the potential to negatively impact on the value creating processes of the rest of the student cohort. Are there particular types of students that can create significantly good learning materials using Web 2.0 tools? Given the context of our discussion on how value is created, HEIs need to start thinking not in terms of whom their customers are for their online courses but rather figuring out who should *not* be their customer. This method of exclusion is a very different approach to that based on traditional segmentation strategies. This is an interesting area that will require further research. We will, however, offer our thoughts on

the possibility of devising an exclusion strategy based on a segmentation of student learning styles.

Research in the area of learning styles has been extensive; consequently, this body of work has presented several conceptualizations of the way a student approaches learning. The major stream of research in this area is founded on the deep and surface approaches to learning (Biggs, 1987; Entwistle, Hanley & Hounsell, 1979; Marton & Saljo, 1976). A deep approach to learning is characterized by students intending to seek meaning and understanding from the material being studied through elaborating and transforming the material. A surface approach to learning, however, is characterized by students intending to simply reproduce the material being studied through memorization tactics. While the surface approach to learning depicts learners in passive roles, students adopting deep approaches are active learners who are particularly suited to constructivist learning models such as that previously discussed as a driver of value in the next generation learning model. Here, the exclusion of surface learners in online courses has the potential to vastly enhance the value creation capabilities of deep learners interacting with one another, by overall improving the social environment or 'learning space' (Kolb & Kolb, 2005).

### **Value for Money Issues**

While we have already discussed that the interactions involved in co-production will have many value co-creating opportunities; with the very nature of involving customers in the co-production of their own services, comes the customer expectation that some savings would be passed on to the customer. This is certainly true in industry examples where

IKEA has passed on the savings to the customer by having the customer transport and assemble furniture themselves, and online banks where online 'self-service' transactions reward customers with more attractive rates and lower fees. Certainly one way for HEIs to re-balance this perceived disparity in value for money is to lower course fees for online courses, but with the inescapable flow-on effects of unwanted re-positioning as a 'budget' course, this may not be a wise strategy for many established HEIs. In a bid to help re-gain perceived value for money, HEIs need to develop unique propositions linked to their online courses that are congruent with the value creating processes already happening. For example, if the HEI was to develop industry linkages for face-to-face company visits, or short internships in the online student's local area, the physical third-party interactions with company personnel would compliment the existing value creating interactions in the online course with faculty and other fellow students and further assist to introduce professional skills to the curriculum (Kelley & Bridges, 2005). If one was to acknowledge that the role of the HEI is to prepare graduates for jobs in the real world rather than in virtual worlds and for them to adopt the heutagogical perspective of 'self-determined life-long learning' (Ashton & Newman, 2006), then online courses need to extend students' learning beyond the confines of the VLE to fully authentic real world industry experiences.

### **Policy Issues**

The use of Web 2.0 and social media tools are increasingly part of our daily lives. Use of such interactive tools in education draw out several issues that have been fiercely debated in academic boards and senior leadership circles of HEIs as well as in numerous web forums; with 'experts' presenting both sides of issues such as why teachers should or

should not be Facebook friends with their students, risk management strategies to prevent embarrassing posts by individual staff members that may harm the reputation of the HEI, among others. Consequently, many HEIs have started to acknowledge the need for formal policies and guidelines governing the use of social media and other RSS feeds. These have largely been adopted from industry and have predominantly been generic in nature - centering around issues such as code of conduct (e.g., “be respectful”, “be truthful”, “think before you post”, etc.), copyright issues, use of disclaimers, confidentiality of information, taboo topics and content, and more generally how to use such tools ‘positively’ following overarching philosophies such as ‘do no harm’.

Rightly so, these policies and guidelines exist to protect HEIs from potential legal repercussions of misuse. However, the introduction of these tools now as powerful mechanisms to facilitate interactions and value co-creation in teaching has drawn out several other issues that are not currently addressed by the majority of HEIs. As students take on the role as co-producers of learning material, questions of ownership, re-usability, control, and censorship of student-generated content emerge; as do personal security issues such as cyber bullying, student equity and accessibility issues, and the need to govern what is appropriate student-faculty relationships on social media such as Facebook and Twitter (e.g., in some cases, the use of social media such as Facebook had been shown to reduce teacher credibility (Mazer, Murphy & Simonds, 2007). These issues demand responses at the policy and strategic level. HEIs need to consider these issues and the risks to the institution associated with either internally or externally hosting Web 2.0 services, ways in which these risks can be controlled, and to clearly define policies and guidelines that give best practices to faculty and students and show

where and how to use these tools to optimum effect from a teaching-use perspective. However, because of the relative immaturity of Web 2.0 technology and in particular its current infancy in teaching and learning, we would suggest that such policies initially not be overly prescriptive so as to stifle its continued experimentation and growth.

## CONCLUSION

This paper had drawn attention to the implications of an e-learning strategy – a strategy that is increasingly employed with greater intensity by many HEIs in response to increased competition, prevailing difficulties in sourcing funding, and an attempt to cater to the changing needs of the next generation of learners who have spent their formative years in the digital age. Advances in technology have changed the way many HEIs interact with their students. In particular, new features of e-learning technology incorporating Web 2.0 tools now have a real potential to replace traditional classrooms. These interactive learning platforms solve the age old criticism of e-learning's lack of interactivity by turning learners into co-teachers with the sharing of students' thoughts, ideas and other content through blogs, wikis, social media and virtual worlds.

As many groups of students become more content with interacting with their faculty remotely through these technologies, the implications for student-HEI relationships are important. There is an urgent need to re-examine how value is created in these relationships. The S-D logic perspective discussed provided a fresh perspective, and a new line of thinking with regard to how value is co-created by both faculty and students through a set of experiences within student-faculty and student-student interactions. This viewpoint has the potential to fundamentally alter the mindset of HEIs who have

traditionally devised strategies to deliver as much value as possible through its products and services. The new focus provided by S-D logic is rather for HEIs to acknowledge that they can only facilitate the value creation process by fostering rich interactions, constructing learning activities that enable enriching learning experiences and creating structures to support these experiences.

While the objective of this paper in discussing these perspectives on value creation in the student-HEI relationship have been fulfilled, we concede that new questions have been opened in the process – for example, should exclusion strategies be applied? If so, on what basis should exclusion be applied? Which of the experience structures proposed contribute most to interactions and hence value creation? How can HEIs assist faculty in this regard? What are the implications for HEI positioning and branding? In this, the perspective taken in this paper therefore potentially directs a new path of research in the area of marketing education research.

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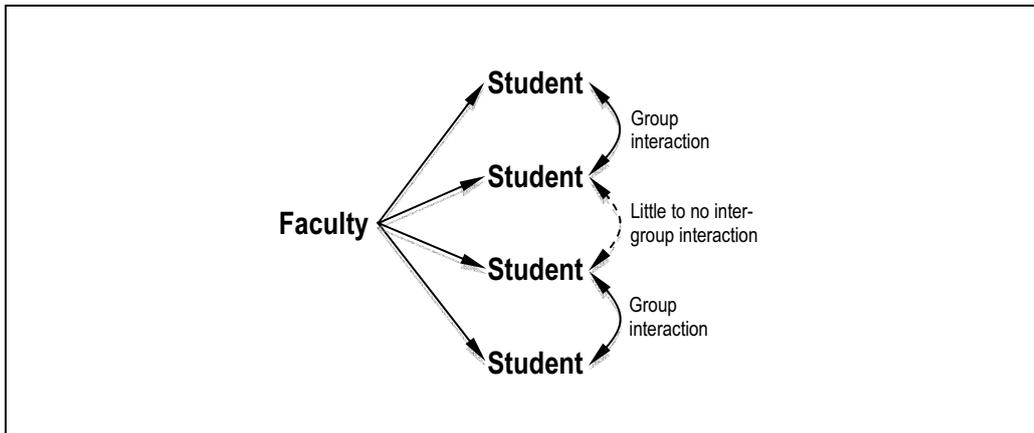
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**FIGURES**

**Fig. 1. Traditional classroom learning model**



**Fig. 2. e-Learning model from the S-D logic perspective**

