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Matt Halliwell

University of Wollongong, mhalliwe@uow.edu.au

Mark Freeman

University of Wollongong, mfreeman@uow.edu.au

Khin Win

University of Wollongong, win@uow.edu.au

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Recommended Citation

Halliwell, Matt; Freeman, Mark; and Win, Khin, "Understanding Learning Outcomes through Member Needs, Motivation and Satisfaction: the Development of a Conceptual Model" (2016). *ACIS 2016 Proceedings*. 62.

<https://aisel.aisnet.org/acis2016/62>

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Understanding Learning Outcomes through Member Needs, Motivation and Satisfaction: the Development of a Conceptual Model

Matthew Halliwell

School of Computing and Information Technology
University of Wollongong
Wollongong, Australia
Email: mh605@uow.edu.au

Mark Freeman

School of Computing and Information Technology
University of Wollongong
Wollongong, Australia
Email: mfreeman@uow.edu.au

Khin Than Win

School of Computing and Information Technology
University of Wollongong
Wollongong, Australia
Email: win@uow.edu.au

Abstract

Social and interactive eLearning environments have the ability to provide learners with a beneficial eLearning experience to achieve specific learning outcomes. ELearning environments can be a positive experience if they incorporate the learner's needs, motivational factors to increase participation of the learner and to achieve satisfaction in learning knowledge. The interactive nature of social and interactive eLearning environments incorporates engaging features evident within Social Media and Web 2.0 Technologies to increase interactivity within the eLearning community. Learning Outcomes determines if the learner has achieved their competencies in actual or perceived results. This paper proposes a new conceptual model that focuses on understanding specific learning outcomes by examining whether learners needs are met before examining their eLearning experience and engaging motivational elements in order to achieve satisfaction. As a research-in-progress the next stage is to validate the conceptual model by testing it through data collected from social and interactive eLearning environments to show accuracy.

Keywords Member Needs, Motivation, Satisfaction and Learning Outcomes

1 Introduction

Social and interactive eLearning environments offers learners a beneficial eLearning experience to achieve specific learning outcomes. A beneficial eLearning experience requires identifying the specific need of the learner. A beneficial experience focuses on a learners motivational factors these enhance their participation to acquire satisfaction in learning new knowledge. Previous literature has explored the reasons behind why individuals engage in online environments to satisfy their overall needs in different contexts. The literature explores the eLearning experience prior commencement of learning and documents the entire process towards the ending results in achieving specific learning outcomes. Satisfaction is reached based on their overall experiences that contribute towards specific learning outcomes. Based on previous literature, this study highlights four propositions that focus on the desires of a learner throughout an eLearning experience. These four propositions are used to propose a new conceptual model based. The conceptual model focuses on the process of learning including; Member Needs, Motivation, Satisfaction and Learning Outcomes.

2 Member Needs

The significance behind using the 'Theoretical Framework of Member Needs' developed by Wang and Fesenmaier (2004) is that it explores the various types of 'needs' that online users desire to engage in online communities. This framework provides an understanding of the complex interactions between users and the community in which they interact. Initial implementation of this framework focused on the participation of users interacting with online travel communities to understand the functional, social, psychological and hedonic needs of the user-base (Wang and Fesenmaier 2004); however these were based on Web 1.0 technologies. Web 2.0 technologies, such as Social Media outlets, were not developed when the framework was created. The framework has since been applied to these current technologies (Zhivov, Scheepers et al. 2011), with Facebook researched using the framework. Understanding the initial implementation of this framework, each of the four needs identified is explored below.

Functional: focuses on the fulfilment of specific member activities within the community (Wang and Fesenmaier 2004). For function needs two key requirements are needed: efficient methods of communication; and a convenient way for communication to occur (Zhivov, Scheepers and Stockdale 2011). Individuals participating in online communities can be contributors; illustrating their passionate desire to contribute ideas and an overall sense of feeling pressured in providing information to other members (Chen 2012, Kang and Schuett 2013). For eLearning communities functional needs include access to timely information to facilitate their learning.

Social: focuses on the social communication established between members to engage and form connections with existing and new members. When social norms and trust is established (Zhivov et al. 2011) members can become 'socialisers' with an established level of social connections and contributions made to the community and 'insiders' with an overall strong social personal connection and contributing actively to the community (Chen 2012). For eLearning communities social needs can be beneficial through both the exchange of information and support for fellow learners.

Psychological: focuses on the overall participation within the online community which encompasses the sense of belonging and affiliation with other online users and expression of identity (Wang and Fesenmaier 2004). The success of eLearning communities flourish when a variety of members acquire a sense belonging to group of individuals online and feel comfortable enough to define themselves online.

Hedonic: focuses on the perspective that online users are identified as 'pleasure seekers'; involving a wide range of activities which embodies amusement, entertainment, fun and elicit enjoyment (Wang and Fesenmaier 2004). For example, online users can assume a new persona and explore new worlds of fantasy through role-playing (Wang and Fesenmaier 2004). These positive emotions can lead towards achieving a level of happiness when engaging with eLearning environments. The aim of the model produces a new insight into how participants interact within a social learning environment by understanding their needs, motivation type of engagement in order for them to achieve a sense of satisfaction from the overall design of the social and interactive eLearning environment.

Proposition 1: A learner will engage with social and interactive eLearning environments if their Member Needs are met by the eLearning community.

3 Motivation

There is a large body of research focusing on how motivation impacts learning. Motivation provides energy, direction, energized method of being active in achieving goals and a level of ownership with participants (Deci and Ryan 2000, Ryan and Deci 2000, Kim et al. 2015). Motivation extends a users desire to engage due to identifying specific ‘Member Needs’ to demonstrate what factors encourage regular engagement for a reward or purely for interest. In a learning context, the ARCS Model of Motivational Design (see Table 1) has been developed. ARCS Model of Motivational Design identifies four concepts attention, relevance of knowledge, overall confidence in achieving knowledge and satisfaction reinforcing their accomplishments (Keller 2010). These four concepts illustrated below captures a specific Member Need that encourages learners to engage in eLearning environments. To capture the learning perspective of a specific ‘Member Need’ being achieved requires a level of motivation. The four concepts that are introduced are focused on the learners attention, relevance of knowledge, the overall confidence achieving the knowledge and satisfaction reinforcing their accomplishments (Keller 2010)

Table 1: Concept and Definition of the ARCS Model (Keller 2010)

Concept	Definition
Attention	Focuses on stimulating the curiosity to learn content and capturing the interests of the participants who are keen to learn (Keller 2010). In the learning context, two issues acquiring and managing the attention of the learner in a direct manner (Keller 2010). Key stimuli activities is one key strategy to acquire learner’s attention.
Relevance	To acquire positive attitude from learners, personal needs and or goals must be met for the learner (Keller 2010)
Confidence	Assisting learners to achieve their success, they must feel and believe that will succeed (Keller 2010)
Satisfaction	The use of rewards will reinforce their accomplishments (Keller 2010)

The ARCS Model identifies four unique concepts that focus on the desire to be motivated to allow new content to be learnt (Loorbach et al. 2015). The ARCS Model is based on Self-Determination Theory (SDT) which is a broad framework (meta-theory) that is used in studies of human motivation. SDT distinguishes between extrinsic and intrinsic motivation based on the variety of goals or reasons that aims to provide a rise to an action (Deci and Ryan 1985 cited in Ryan and Deci 2000).

3.1 Extrinsic and Intrinsic Motivation

Extrinsic motivation focuses on the individual behaviour by external contingencies that have reward benefits of tangible items as a form of incentive (Deci and Ryan 2000, Zhao and Zhu 2014). This can focus on attaining a desired outcome based on results from a particular behaviour (Safa and Solms 2016). Intrinsic motivation is a form of active involvement that individuals find interesting or enjoyment due the nature of the activity not focusing on the desire for seeking the reward or pressure (Ryan and Deci 2000, Safa and Solms 2016). Chung et al. (2014) introduces a research model in the context of a food franchise exhibition where motivation factors of both intrinsic (escape and event attractions) and extrinsic (information gain) nature account for the behaviours involved in booth visiting which can also contribute towards unplanned booth visit behaviour. Verhagen, Feldber et al. (2012) identifies the theoretical consideration by stating within the extrinsic and intrinsic perspective of motivation, both perceived usefulness and entertainment values are identified as key examples for specific system characteristics (e.g. use of use). There are unique examples of extrinsic and intrinsic motivation presented which highlights the differences between each. These examples can develop a clear link towards learning contexts through extrinsic motivation factors (information gain and perceived usefulness) and intrinsic factors (entertainment value) (Verhagen et al. 2012, Chung et al. 2014) in aiming to engage learners in content delivery.

Proposition 2: Extrinsic and intrinsic motivational factors have a positive impact on a learner’s use of and satisfaction with social and interactive eLearning environments.

4 Satisfaction

Satisfaction is created from a pleasurable experience that can influence learners to be motivated in eLearning environments and to succeed. The significance of satisfaction is that it determines if a learner is satisfied with their eLearning experience based on the type of motivational factors that are designed to enhance participation in learning knowledge. Satisfaction is a source of internal reward to reinforce a learner's accomplishments (Bomia et al. 1997, Keller 2010, Lee et al. 2014). Liaw (2008) 'Conceptual Model of user satisfaction, behavioural intention and effectiveness toward e-learning' identifies that not only a learner's characteristics influence their satisfaction but also environmental factors about the system (for example multimedia instruction, system quality, system interaction). Satisfaction is dependent on the behavioural intention from Member Needs and motivation being evident as a driving tool to define the overall perspective of the eLearning experience from the learner's level of engagement with the system.

Proposition 3: The perceived satisfaction of a learner from a social and interactive eLearning environment is based on their level of engagement with the system (behavioural intention – Member Needs) and motivation.

5 Perceived and Actual Learning Outcomes

Learning Outcomes focus on the outcome of the learning experience that a learner achieves. Prior literature on this topic has identified two types of learning outcomes that occur when a learner interacts with learning content; actual and perceived learning outcomes. Perceived learning outcomes focuses on the perception that a learner generates through the learning environment they are exposed and the knowledge and skills obtained (Allan 1996, Nygaard et al. 2009, Prøitz 2010, Bahous and Nabhani 2011). Waheed et al. (2015) findings on the conceptual model developed, illustrates that perceived learning effectiveness can be positive prediction based on student motivation to use eLearning portal. The significance behind using Waheed's is that perceived learning effectiveness relates towards having motivation in place to engage; this is triggered only through defining the particular desire of the learner from their associated Member Needs.

Actual learning outcomes focus on the final achievement of the acquired knowledge, skill or competence (Adamson et al. 2010). This focuses more on the physical result rather than perceptions generated. In traditional learning a grade is typically achieved by a learner as the end result of actual learning. This is achieved through testing knowledge, skills and competencies (Adamson et al. 2010, Akyol and Garrison 2011). Actual learning outcomes fall into three classifications:

- **Cognitive Outcomes:** association with intellectual learning and the type of knowledge learnt throughout the duration of the learning process; this does include comprehension and application (Kraiger et al. 1993, Yu et al. 2010, Duque 2014)
- **Skill-Based Outcomes:** development of technical skills and critical thinking (Kraiger et al. 1993, Yu et al. 2010)
- **Affective Outcomes:** include the learners attitude, satisfaction, and overall appreciation of the experience (Yu et al. 2010)

Both perceived and actual learning outcomes share the common feature of demonstrating the learner's engagement abilities in acquiring content. Whether this is in the form of motivational devices (e.g. Assignment Module being an extrinsic motivator (Waheed et al. 2015) and actual result is achieved (a grade).

Proposition 4: When a learner is satisfied, there is a link between perceived and actual Learning outcomes these influence the overall learner's experience of social and interactive eLearning environments.

6 Conceptual Model

The Conceptual Model is developed (Figure 1) based on the presented literature exploring four key areas: Member Needs, Motivation, Satisfaction and Learning Outcomes. The purpose of the proposed conceptual model is to illustrate the overall desires and motivational factors that learner seeks to engage to be satisfied whilst achieving specific learning outcomes.

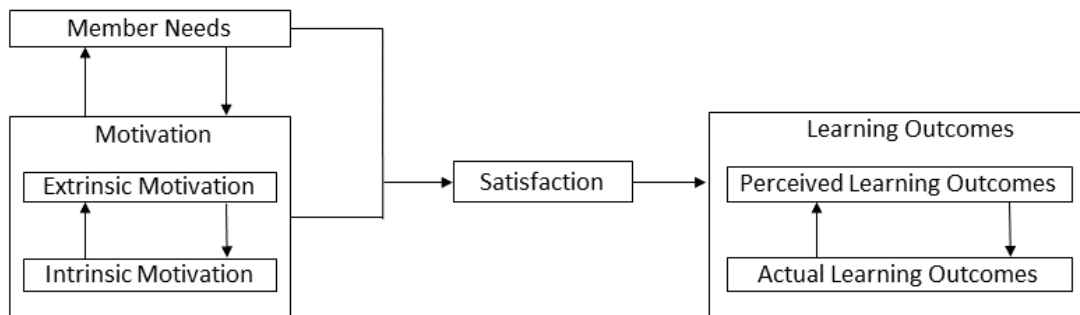


Figure 1: Social and Interactive eLearning Environment Conceptual Model

The constructs of the conceptual model play a vital role in understanding the entire process of the eLearning experience in Social and Interactive eLearning Environments. Member Needs identifies four specific needs that assist in defining the type of learner that seeks to learn knowledge in Social and Interactive eLearning Environments; Functional, Social, Hedonic and Psychological needs determine a specific reason why learners engage. This sets the stage for being motivated to learn. Thus, understanding the engaging factors of motivation is highly important. Learners can achieve a feeling of satisfaction based on how the content is delivered to them. This is in the form of extrinsic and intrinsic motivation. From the literature conducted, extrinsic motivation factors can be identified as ‘information gain’, ‘reward benefits / incentives’, ‘entertainment value’, ‘attaining a desired outcome from a particular behaviour’ and ‘perceived usefulness’ (Deci and Ryan 2000, Chung et al. 2014, Zhao and Zhu 2014, Safa and Solms 2016). Whereas intrinsic motivation is ‘entertainment value’, ‘perceived usefulness’, and ‘interesting or enjoyment’ (Verhagen et al. 2012, Safa and Solms 2016). The ending result is determined by two factors; perceived and actual learning outcomes. This demonstrates the perception of the learner generated in regards to the exposure of the knowledge and skills acquired (Allan 1996, Nygaard et al. 2009, Prøitz 2010, Bahous and Nabhani 2011) versus the final achievement acquired through knowledge, skill, competence and achieving grades (e.g. assessment task) (Adamson et al. 2010, Akyol and Garrison 2011). To achieve the end results whether it would be a perception generated or actual results learnt, getting to this stage and understanding the engaging factors of motivation is highly important. To understand satisfaction in this conceptual model, it is determined at the ending result of the learning experience. Questioning the experience as a pleasurable one can be discussed.

7 Future Direction of Study

This paper has introduced a new conceptual model that focuses on improving our understanding of learning outcomes and learner’s eLearning experience when engaging with social and interactive eLearning environments. The literature explores the various types of Member Needs that will determine the engagement of the learner within the eLearning community once their needs are met. These needs focus on various areas of reasoning to learn knowledge; functional, psychological, social and hedonic which forms their competencies to learn. Engaging features found within Social Media and Web 2.0 Technologies assist in motivating the learner to participate within the eLearning community through extrinsic and intrinsic motivational factors; through content creation and sharing. Satisfaction is met once these components are fulfilled by the learner findings which assist in determining the perceived and actual learning outcomes. Future work is required in order to test the proposed conceptual model for its accuracy based on the literature conducted. Collection of data will be required based on the learners overall findings of systems to determine if their learning outcomes have been met by understanding why learners wish to engage in social and interactive eLearning environments.

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