British Journal of Education, Society & Behavioural Science
8(2): 70-78, 2015, Article no.BJESBS.2015.101
ISSN: 2278-0998

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Blurred Lines: A Study of Engagement in Online Learning

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Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/BJESBS/2015/16876
Editor(s):
(1) Miroslava Ožvoldová, Department of Physics, Trnava University in Trnava, Slovakia.
Reviewers:
(1) Anonymous, Malaysia.
(2) Gökhan Dağhan, Department of Computer Education and Instructional Technology, Hacettepe University, Ankara, Turkey.
(3) Sidney R. Castle, School of Education, National University, California, USA.
Complete Peer review History: http://www.sciencedomain.org/review-history.php?iid=1066&id=21&aid=8843

Original Research Article

Received 17th February 2015
Accepted 8th April 2015
Published 16th April 2015

ABSTRACT

The understanding of the educational environment is vital for the success of the learners and the course—especially in an online setting. Numerous interconnected elements exist which influence the experience of a learner. By analyzing and deconstructing seven specific terms (common words associated in the online (e-) learning research corpus (meaningfulness, motivation, emotion, behavior, cognition, commitment, and engagement), the researcher hopes to show the multifaceted, multidimensional relationship between a person and his or her online andragogic environment. Thirty-three participants volunteered to take part in this research project. Each participant was asked to define the aforementioned seven words using only those seven words. The findings of the study shed new light on the interconnectedness of these variables. By understanding the interconnectedness of these terms, online educators, theorists, and students are in a better position to be successful in their endeavors.

Keywords: Engagement; meaningfulness; deconstruction; online learning; e-learning; andragogy.

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1. INTRODUCTION

Depending on the social environment, post-secondary learners—and indeed people, in general—may be inquisitive and engaging, or may be unreceptive (Ryan & Deci, 2000) [1], isolated, and withdrawn (Chametzky, 2013) [2]. The understanding of the educational environment is vital for the success of the learners and the course—especially in an online setting. But, to imply that environment is a single variable would be overly simplistic, inaccurate, and naïve. Numerous interconnected elements exist which influence the online learning experience of a learner (Ryan & Deci, 2000) [1] —not the least of which is a person's sustained interaction (Budak & Agrawal, 2013) [3]. Just as Budak and Agrawal (2013) [3] analyzed five factors to determine sustained involvement in a particular activity—in their case, twitter chats—so too could educational researchers examine success in online activities or online courses as requiring several variables. The seven variables chosen for this study are as follows: (a) behavior, (b) cognition, (c) commitment, (d) engagement, (e) emotion, (f) meaningfulness, and (g) motivation. With these variables in mind, however, in a larger context, the aforementioned variables might be conceptualized (Glaser, 1992) [4] as the complex, multidimensional relationship between a person and his or her environment (Wessel, Ryan, & Oswald, 2008) [5]. Such a multifaceted relationship forms the foundation for this study.

1.1 Background

Engagement with the subject matter and with peers relates to the experiential elements of andragogy. Inherent in the andragogic model of learning is the need of each learner to acquire knowledge actively (Chametzky, 2014) [6]. Let us agree that the moment a learner picks up and skims or reads a course textbook or other course materials, he or she is minimally engaged. And, because he or she looked at the course material, a level of curiosity was presumably peaked. It is axiomatic that if a learner is studying in such an environment—traditional or online—and is interacting with the course materials, they have some meaning to him or her. The connection of engagement and meaningfulness is clear. However, what causes engagement and meaningfulness? In what ways are these variables related to the larger educational picture to include cognition, behavior, emotion, motivation, and commitment? And, could these variables be usefully deconstructed in order to understand the components more clearly?

Separating the ideas of meaningfulness and engagement are not always possible to accomplish in an andragogic environment. In fact, several educational theorists (Chalofsky & Krishna, 2009 [7]; Verbeek, 2002 [8]; Wlodkowski, 2008) [9] imply that deconstructing meaningfulness and engagement impedes learning as these variables are inextricably tied (Verbeek, 2002) [8] with each other. To separate these concepts is to have a less-than satisfactory environment for learners.

In starting with the belief that learning without engagement is valueless (Wlodkowski, 2008) [9] and working backwards, I believe that it might be useful to know what is needed for engagement to happen. According to Kahn (1990) [10], in his seminal work on engagement theory, when discussing engagement, it is necessary to also have cognition and emotion. Illeris (2003) [11] disagreed somewhat believing that for engagement to occur, cognition, behavior, and emotion must be present. Indeed, for a person to be engaged with some aspect of the course, he or she needs to have at least a casual understanding about the material, some (perhaps vague) interest in the material, and a willingness or commitment to do the work to acquire additional knowledge in the subject area. If a person is highly motivated, presumably he or she will be more engaged in the course and coursework than if motivation were minimal. These ideas, though logical as they may be, have not been studied in sufficient detail.

2. METHODOLOGY

This qualitative, correlational study was conducted during 2013 and the first half of 2014. Though it would appear, from first glance, that the terms *qualitative* and *correlational* might not be accurate together because this study is not a mixed methods analysis, the term correlational means a relationship or interdependence. It is that interdependence that I want to show. I used the term correlational, therefore, not according to its statistical meaning but rather its lexical meaning. Participants were obtained via several sources; they were recruited from social media websites such as LinkedIn, Facebook, and Twitter. I also used snowball sampling, as participants were free and able to tell their friends and colleagues about this study. The only requirement for participation in this study was

that respondents be either online educators or online learners.

In genetics, scientists use DNA markers to map out and clearly identify various genetic sequences and specific alternatives of genomes (Haworth, Meaburn, Price, Wellcome Trust Case Control Consortium, & Davis, 2013) [12] to determine various issues concerning heredity and genetics. It is possible to use the concept of markers, without any associated numerical values, to indicate the levels of each of the components (behavior, commitment, cognition, emotion, engagement, motivation, and meaningfulness) from high to low in a particular variable. The significance of variables on the same line indicates that they are of equal value. The goal will be twofold: First to show the interconnectedness of the variables and second to attempt to define (or narrow the definition) of the different variables.

2.1 Request for Participants

Participants were asked to create arithmetic-like equations for these seven words using only these seven words. Each participant has several years experience teaching or learning in an online environment. In this section of the paper, I present the actual request used to find participants for this study.

If you are an online teacher or learner, please help me with some research I am doing. Use only the following seven words to create as many addition equations as you wish for each word (i.e.: WordA+WordB=WordC or WordA+WordB+WordC=WordD). Which elements make up the chosen word? Here are the seven words: motivation, meaningfulness, engagement, behavior, cognition, emotion, commitment. Please respond to barry@bluevine.net or BarryCh209 (Skype). No identifying elements will be used in this research. Thanks!

2.2 Participants

During 2013 and the first half of 2014, 33 participants—seven males and 26 females—responded to the query for information. Since location was not a concern in this study, I did not query them as to their location. Yet, I know that at least one person was from Greece.

2.3 Findings

It is valuable for educators and researchers to see how the seven aforementioned words interact with each other. The (unscientific yet nonetheless valuable) results supported extant research (Chalofsky & Krishna, 2009 [7]; Illeris, 2003 [11]; Verbeek, 2002 [8]; Wlodkowski, 2008) [9] as well as added research to the field of inquiry. The results are presented in this section of the paper. The codes used in the markers for each of the seven variables are as follows: (a) mo: motivation, (b) m: meaningfulness, (c) e: engagement, (d) em: emotion, (e) cog: cognition, (f) com: commitment, and (g) b: behavior.

Each section in this part of the paper starts with the applicable marker. The marker presents the data in such as way that the reader can easily identify the important elements and the unique way they are combined. The numbers next to each code indicate how many times that variable was used in a response from a participant. For example, if one participant defined motivation as m+em, m+cog and m+b, I would code the marker in the following manner:

m (3)
em-cog-b (1)

Following the marker, I present an analysis of the data.

2.4 Motivation

The marker for motivation is as follows:

m (11)
em (10)
e (9)
b-com (5)
cog (4)

Illeris (2003) [11] explained that motivation is the feeling or emotion resulting from the mobilization of “mental energy” (p. 174). Other educational theorists have defined motivation in a more detailed manner: Motivation is the ability of a person to stir, guide, and hold his or her behavior or cognition (Jones, 2009) [13] and attention in order to complete a given goal (Glynn, Taasoobshirazi, & Brickman, 2009) [14]. Though motivation might seem, on the outset, to be a singular variable (Ryan & Deci, 2000) [1], it is not. Regardless of whether it is intrinsic (Fazey & Fazey, 2001 [15]; Saadé, Tan, & Nebebe,

2008) [16], extrinsic, or somewhere on the continuum (Fazey & Fazey, 2001 [15]; Kusurkar & ten Cate, 2013 [17]; Ryan & Deci, 2000) [1], motivation helps a person regulate his or her learning (Glynn, Taasoobshirazi, & Brickman, 2009) [14].

Several educational theorists (Glynn, Taasoobshirazi, & Brickman, 2009 [14]; Gungor, Eryilmaz, & Fakioglu, 2007) [18] wrote about a positive correlation between increased motivation (Kusurkar & ten Cate, 2013) [17] and improved achievement (as well as decreased motivation and achievement). With increased motivation, too, other tangential variables such as commitment, engagement, behavior, emotion, cognition, and meaningfulness are impacted. Similarly, decreased motivation results in decreased engagement and decreased behavior (Saadé, Tan, & Nebebe, 2008) [16].

In the marker for motivation (shown in this section), cognition has the low value of 4. Such a low value means that cognition may tangentially be required for motivation to occur. On the other hand, in order for motivation to happen, an activity must be highly meaningful to a person, as indicated by the high score of 11.

Behavior and commitment are less important for motivation than meaningfulness, emotion, and engagement. In other words, a person could be motivated to do something without putting much thought into it. But, if a person has minimal commitment to something, how could that task be meaningful to him or her? Such a contradiction may be resolved if meaningfulness and emotion are thought of as being on one side of a teeter-totter with behavior, commitment, and cognition on the other side. Meaningfulness and emotion weigh the teeter-totter to one side thereby allowing motivation to occur. As plausible as this analogy might be, it goes against the beliefs of the aforementioned educational theorists (Illeris, 2003 [11]; Jones, 2009) [13]. Yet, a continuum of motivation exists (Fazey & Fazey, 2001 [15]; Kusurkar & ten Cate, 2013 [17]; Ryan & Deci, 2000) [1]. Perhaps data in this study show a different position on the continuum than the theorists mentioned.

It is not surprising that meaningfulness is so important in the marker for motivation. With intrinsic motivation, a person must see meaningfulness in the required task (Chalofsky & Krishna, 2009) [7]. Bain (2004) [19], in his book entitled *What the best college teachers do*, offered the question, "Who gives a damn?" (Loc 420). The answer to that perhaps rather brusque question might be, anyone for whom the task has meaning. The level of meaningfulness is in direct proportion to the level of motivation a person has to complete the task. If meaningfulness and usefulness increase so will motivation (Jang, 2008) [20]. Similarly, if meaningfulness decreases, motivation will too. Conklin, Dahling, and Garcia (2013) [21] commented, the reasoning behind this relationship is that students who feel a strong emotional identification with their field of study are more likely to develop confidence within the domain of that field and a commitment to remain and finish their degrees (p. 70).

Thus, when a task is meaningful to a person, he or she is motivated to complete the task (Ryan & Deci, 2000) [1]; "motivation produces" (Ryan & Deci, 2000, p. 69) [1]. Further, this motivation is inextricably linked to commitment. Commitment, in turn, is linked with abilities and perceptions (Cable & DeRue, 2002) [22]. It should be easy to see how the interconnectedness among the variables that comprise motivation is becoming rather complex.

2.5 Meaningfulness

The marker for meaningfulness is as follows:

em (12)
cog-e (9)
com-mo (8)
b (3)

For meaningfulness to exist, according to the marker, emotion must be present. On a visceral level, for meaningfulness to occur, a learner needs to have some sort of emotion about the task in question.

Next important, in equal parts, are cognition and engagement, and then commitment and motivation for without emotion a person cannot think about or be engaged in a given activity. Meaningfulness, then, is first an emotive concept and then a cognitive one; minimal tactile ability (behavior) is needed.

It may be that emotion forms the impetus for cognition and engagement. Then, with cognition and engagement in place, a learner may have developed sufficient commitment and motivation to accomplish the required task. It is worthwhile to note that, according to the data, the relationship between meaningfulness and

engagement (Verbeek, 2002) [8], while strong, is not as strong as believed.

2.6 Engagement

The marker for engagement is as follows:

m (17)
b-cog (15)
mo (14)
em-com (12)

In a learning environment, it is commonly known by educators know that having student-centered work supports and enhances education through increased engagement. Student-centered learning is one of the main tenets of andragogy (Chametzky, 2014) [6] and, from a pedagogical perspective, is one way for students to develop deeper knowledge in a given topic (Chametzky, 2014 [6]; Shaw, Chametzky, Burrus, & Walters, 2013 [23,2]; Svirko & Mellanby, 2008) [24]. Conversely, poor engagement—along with negative attitudes, and undesirable behavior—leads to reduced learning (Mayes, Chase, & Walker, 2008) [25].

According to the data in the marker, the most important variable to engagement is meaningfulness. For a learner to be engaged, he or she must find meaningfulness in the task. But engagement can take place on different levels—behavioral and cognitive. That behavior and cognition are closely tied (as indicated in the marker with an equal value [15]) suggests a connection between the variables.

For a person to engage in an online course—indeed, in anything in life—meaningfulness—also known as a personal connection with the course material—is vital. That commitment and emotion are low in the marker could suggest that a person could be engaged without or with minimal commitment to or emotion in the activity in question. For example, if a person were flipping casually through a textbook, he or she is engaged with the material but demonstrates minimal commitment.

2.7 Commitment

The marker for commitment is as follows:

e (22)
mo (19)
m (16)
b-em (14)
cog (10)

According to the data, commitment requires a high degree of engagement. If engagement also requires meaningfulness, as was discussed earlier in this section of the research, then, by the transitive property of equality, commitment requires meaningfulness. Such statements make sense vis-à-vis the data obtained. However, it is obvious to note, after studying the data, that the value of meaningfulness is not as high as motivation for commitment. One possible explanation for a lower level of meaningfulness is that for someone to be committed to a task, he or she must be motivated before meaningfulness could occur. In other words, without motivation, commitment could not exist.

The data in the marker vis-à-vis behavior, emotion, and cognition are important to note for two reasons. First, because minimal cognition is present with commitment, it may be that commitment functions more on the affective realm than the cognitive realm. Second, commitment requires an equal, yet somewhat lower level of behavior and emotion and an even lower level of cognition. Wessel et al. (2008) [5] commented that if the connection (that is, an emotion or affect caused by an interest—engagement) and behavior (which, itself requires some level of cognition) a person has toward a given task are put together, he or she might have sufficient belief in him or herself (and motivation) to accomplish the task. It would seem, then, that it would not be possible to separate behavior, emotion, or engagement because of their inextricable connection one with the other.

2.8 Behavior

The marker for behavior is as follows:

em (13)
m(12)
mo(11)
com (10)
cog (9)
e (6)

It is straightforward to see, according to the data, that the components of behavior have decreasing values of emotion, meaningfulness, motivation, commitment, cognition, and engagement. To exhibit a behavior, a learner must want to engage in (that is, have an emotion about) the activity in question. To do otherwise would be to have a flat affect and potentially exhibit a psychosocial disorder.

In order to have an emotion, a person needs to feel a substantial level of meaningfulness toward the task, and must be sufficiently motivated to complete (or, at least, do) it. In order for something to have meaning, the person must have thought about the task and its personal value. To that end, to have a behavior, a person must be cognitively aware of his or her actions.

On a lower level, according to the data, he or she must also be committed to the task. But, what is interesting is that commitment is relatively low on the behavior marker. It is logical to believe that if a person *wants* to accomplish a task—as demonstrated by some emotion associated with the task—he or she would have the same degree of commitment. But the data (as shown in the marker) indicates otherwise.

To have low engagement (as seen in the marker) indicates that perhaps a person may exhibit a behavior without truly engaging in the activity. In an online environment, a student might not engage in the class activities thereby demonstrating sort of an *absent*, passive-aggressive attitude.

2.9 Cognition

The marker for cognition is as follows:

em (5)
m-mo-e-com (4)

According to the data in the marker, in order for cognition to exist, a person needs a high degree of emotion. Without being emotionally vested in the task at hand—even superficially—a person cannot talk about the subject with passion. Thus, in order to understand, write, or talk about cognition, a person must feel some sort of emotional and psychological connection with the material. This connection is due to the meaningfulness of the material. Clearly, then, a connection exists between cognition and meaningfulness (Ferreira, 2010) [26]. Likewise, for cognition to occur, equal amounts of meaningfulness, motivation, engagement, and commitment must be present.

It is interesting that behavior is missing from the data for cognition. The implication is that intellect (cognition) and kinesthesia (behavior) are not interconnected since a person could use cognitive skills without behavior but not vice versa.

2.10 Emotion

The marker for emotion is as follows:

cog (3)
m (2)
b-e (1)

From a psychological perspective, the concepts of emotion and engagement are the same thing (Furrer & Skinner, 2003) [27]. In order to have an emotion, a person must, on some level, be engaged with the task. Yet, it is interesting to see from the marker that engagement are minimally involved in emotion. What is important for emotion, according to the data in the marker, is cognition. The implication is that a connection exists between cognition and emotion. Indeed, according to Ekkekakis (2012) [28] a link does exist. For an emotion to happen, a "cognitive appraisal of the meaning and possible implications of the stimulus" (Ekkekakis, 2012, p. 322) [28] needs to occur. Since emotion is an affect and a behavior happens because of an emotion (according to the data presented earlier in this paper), it is interesting that for emotion to occur, cognition is the most important element.

That few participants chose to explain emotion vis-à-vis the other variables may be important to note. Given the small sample size, it may be that participants were not able to define emotion given the parameters outlined in this study. It could be that some unknown third variable issues have come into play. It seems clear, then, that further research is needed in this area of study.

3. THE NEXT STEPS

During the data-gathering period of this study, I was hoping to get many more participants. To have such a small sample size (n=33) is generally not ideal for most qualitative research studies. Yet, I am encouraged by the data presented in this paper to continue the research. It is my hope, with a much larger sample, that an analysis of the markers will result in more detailed and precise information.

4. CONCLUSION

In order to appreciate the interconnectedness of the elements, I put all the findings in a table in this section.

Motivation	Meaningfulness	Engagement	Commitment	Behavior	Cognition	Emotion
m (11)	em (12)	m (17)	e (22)	em (13)	em (5)	cog (3)
em (10)	cog-e (9)	b-cog (15)	mo (19)	m (12)	m-mo-e-com (4)	m (2)
e (9)	com-mo (8)	mo (14)	m (16)	mo (11)		b-e (1)
b-com (5)	b (3)	em-com (12)	b-em (14)	com (10)		
cog (4)			cog (10)	cog (9)		
				e (6)		

When examining the top elements in all seven variables (that is, the elements with the highest values), I noticed that several variables occurred most frequently: emotion, meaningfulness, engagement, and cognition. Of these four variables, emotion and meaningfulness occur most frequently. In reflecting on the variables of emotion and meaningfulness, I am able to discover some important connections. First, interconnectedness between motivation and engagement (Chalofsky & Krishna, 2009) [7] exists.

Next, such an intertwined relationship is strengthened by meaningfulness. This statement is logical because without motivation, a person may not have the motivation or desire to engage in doing a task. Without meaningfulness and commitment, a person is not sufficiently motivated to engage with the coursework. And without engagement, educational growth cannot occur.

In this light, the use of educational hooks (Chametzky, 2014 [6]; Jones, 2009 [13]) in a learning environment becomes even more important as these hooks allow educators to help students increase interest (Jones, 2009) [13] (meaningfulness) in a task. In addition, when learners understand how something is meaningful to them (Cole, Bergin, Whittaker, 2008) [29], a (hopefully) positive affect (emotion) is created. With a positive affect, learners can more easily be engaged in their learning because they see its value (meaningfulness) to them. The connection between meaningfulness and emotion shows how the variable of motivation might certainly have "a positive influence on learning" (ChanLin, 2009, p. 92) [30].

The aforementioned discussion was a rather detailed, circuitous way for this author to demonstrate that all seven variables (not just meaningfulness and engagement [Verbeek, 2002]) [8] discussed here are inextricably linked with each other. To what extent and in what combination the individual components of the variables are related to each other is what distinguishes the variables from each other. To attempt to separate or deconstruct the variables would result in the unraveling of all of them. Yet, there is usefulness to this task.

In the Introduction to this paper, I commented that it is important to understand the educational environment; it is crucial to learner and course success. The environment—especially if it is online and based in andragogy—is complex. Given the sometimes scary and unknown world of online (or distance) learning—because learners are not as comfortable with it as they are in traditional classrooms—it becomes even more crucial that teachers engage learners. The way in which educators accomplish this task, however, sets into motion the interconnectedness of the seven aforementioned variables. Through deconstruction of the variables, educators, learners, and educational theorists will be better abled not only to understand and deal with their own psychological or physiological needs (Ryan & Deci, 2000) [1], but also understand the building blocks in online learning.

These building blocks, much like the hierarchy of needs proposed by Maslow (1943) [31], need to be met in order to have student success. Ryan and Deci (2000) [1] called these building blocks "competence, autonomy, and relatedness" (pp. 74-75). In an online environment, these concepts are crucial and indeed inextricably tied to the tenets of andragogy (Chametzky, 2014) [6]. Whether educational theorists, educators, or learners call the foundational elements of the online experience—from the learners' perspectives—the seven aforementioned variables or the three broader terms used by Ryan and Deci (2000) [1] (for it is easy to organize the seven variables into the three terms), it is of the utmost importance that they be understood in order to guide learners in the online andragogic learning environment. Only by understanding these concepts will educators be able to meet the educational needs of learners and engage them fully in online, andragogic tasks.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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