

EXAMINING THE ROLE OF SOCIAL INTERACTION IN ONLINE LEARNING PROCESS

EL PAPEL DE LA INTERACCIÓN SOCIAL EN EL PROCESO DE APRENDIZAJE EN LÍNEA A EXAMEN

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Abstract:

Social interaction plays a great role in facilitating learning. Especially in online learning, it is a miracle to foster interaction and context socially in learning. In this respect, the aim of this study is to examine the role of social interaction in online learning process in higher education. The questionnaire provided to evaluate perceptions of learners on social interaction role, interaction behavior, barriers, capacity for interaction and group interaction. Online education plays a great role in higher education system in fostering quality. As research was conducted in a quantitative nature by using inferential statistics, the research was taken place at the higher online education system through the application of adobe connect within the framework of social learning theory and cognitive absorption theory, knowledge construction of learners was perceived as facilitating students' engagement in activities shaped by interactions and involvement. The findings of the study shed a light on the evaluation on the integration of social interaction within online learning contexts and the role of transparency in open learning practices.

Keywords: Active learning; Construction of knowledge; Social interaction; Online education, Open learning

Resumen:

La interacción social juega un gran papel para facilitar el aprendizaje. Especialmente en el aprendizaje en línea, es un milagro fomentar la interacción y el contexto social en el aprendizaje. En este sentido, el objetivo de este estudio es examinar el papel de la interacción social en el proceso de aprendizaje en línea en la educación superior. Para ello, se proporciona un cuestionario para evaluar las percepciones de los alumnos sobre el rol de interacción social, el comportamiento de interacción, las barreras, la capacidad de interacción y la interacción grupal. La educación en línea juega un papel importante en el sistema de educación superior en el fomento de la calidad. Como la investigación se realizó de forma cuantitativa mediante estadísticas inferenciales, la investigación se realizó en el sistema educativo en su marco superior mediante la aplicación de adobe CONNECT en el marco de la teoría del aprendizaje social y la teoría de la absorción cognitiva. La construcción del conocimiento de los estudiantes se percibió como facilitadora participación de los estudiantes en actividades formadas por interacciones y participación. Los hallazgos del estudio arrojaron luz sobre la evaluación sobre

la integración de la interacción social dentro de los contextos de aprendizaje en línea y el papel de la transparencia en las prácticas de aprendizaje abierto.

Palabras clave: Aprendizaje activo; Construcción de conocimiento; Interacción social; Educación en línea, aprendizaje abierto

1. Introduction

Higher education systems have started to create the environment of 21st century skills for learners and they employ technological infrastructure and practices. Higher education systems put efforts for catching reality. Many researches put emphasis on the quality in higher education which is referred as a competitive advantage for strategic benefits. Quality management is crucial to enhance collegial activities, shared vision, knowledge sharing and learning process for continuous improvement (Srikanthan & Dalrymple, 2003). To support the efforts in quality management of higher education, online education has a strategic importance as a mission and vision for internalization. In this respect, quality in higher education through diffusion of online courses within campus and outside the campus is considered to foster management factors and commitment (Ellis et al., 2007; Gunasekaran et al., 2002).

As higher education systems are required to be restructured through the adaptation to the new technological change. Technology enhanced courses become the central of the education to demand needs of the new generation. As new generation is rotated on technology, the way of knowledge construction has been changed. Therefore digitalization has been increased in education. The new generation of the students in higher education systems pushes the increased use of technology in learning teaching process. Online education becomes a solution to supply the demand of the new generation in higher education system. Online education practices are regarded a significant part of the higher education practice to emit knowledge and learning opportunities (Austin et al., 2010).

Online education contexts, acting pedagogical and organizational aspects in a synergy puts forward to enrich benefits of constructing a bridge to share knowledge and enhance continuous learning process (McPherson & Nunes, 2006; Kelliher & Henderson, 2006). The study of Pollock et al. (2005) focuses on the importance of holistic, consultative and emancipatory perspective for quality improvement in quality management. This fosters continuous learning. In addition to this, information technology makes to face with pedagogical innovation in order to foster active learning (Pollock et al., 2005). Increased digitalization proceeds education system to catch the promises of online pedagogy. Especially in higher education, online education is a strategic opportunity to draw vision on the quality.

1.1. The role of social learning and interaction

Digitalization in education requires learners' engagement in activities. Interactions and involvement of learners facilitate knowledge construction. Lu and Daniel Churchill (2014) enlighten that increased digitalization support the sharing of resources, enhancing motivation, and facilitating reflection, social interaction and knowledge building. The study of Liu et al. (2009) underlines the role of technology in promoting student engagement within a social workspace in their learning. The study of Gouseti (2011) stresses the benefits of technology in education. Furthermore, Vanhorn et al. (2008) point out importance of communication while there is an intensified need for reflecting and researching in online education within higher

education system. Course design, role of participants, infrastructure, delivery, interaction, the factors in online learning and teaching process, contribute quality and continuous improvement (Zhao, 2003). Gouseti (2011) stresses on the importance of online communication and collaboration.

In addition, the studies put emphasis on factors in online interaction which are learner control, transactional distance (composed of structure and dialogue), feedback, and social presence. These factors shape the nature of interaction in online learning teaching process. Paying attention on these factors in online learning, teaching process enhance the capacity for interaction. The study of Lamy and Hassan (2003) underlines reflective interaction. Furthermore, the social interaction enhances reflection of learners which facilitates of being critical friend (Rocco, 2010). The study of Vanhorn et al. (2008) underlines the challenges in online education as time management, work, student, technology, support, teacher motivation considered as barriers in online learning and teaching process. These barriers limit social interaction, group interaction and collaboration. In addition, the study of Aakhus and Esther Rumsey (2010) gives details on the significant role of social support in online context. Ledbetter and Finn (2013) state that online communication is a significant factor of learner empowerment. Moreover, the study of Chen et al. (2009) stresses the importance of knowledge sharing in virtual learning environment. The study of Maor (2003) suggests a further study to conduct on social presence and interaction to online learning and teaching within digital technologies. Social learning theory sheds a light to knowledge based on construction by engaging in activities, receiving feedback that learning is shaped by interactions (Hill et al., 2009).

In this respect, social engagement that is being active in interacting with others, sharing ideas and collaborating on learning tasks for the purpose of co-constructing knowledge. Social interaction plays a great role in online learning teaching process.

1.2. The role of cognitive absorption

Cognitive absorption plays a great role to value a state of deep involvement to software (Leong, 2011). These theoretical frameworks put an emphasis on the role of social interaction in peer online learning. Being there and being together with others is essential in online learning teaching process (Lehman & Conceição, 2010). In this respect, social presence which is interactions with other is crucial for acquiring learning. The study of Killen (2007) underlines the importance of reflection for student and teacher learning development. Learning environment in online learning teaching process should rely on authentic tasks (Reeves et al., 2004). Authentic tasks cover real-world relevance, complex investigations, different perspectives, collaborative and reflective opportunities, different subject areas, integrated assessment. This shows the evidence of how social interaction, group interaction and collaboration play a great role in online learning environment. In this respect, engaging in collaboration exploration, tool mediated learning is crucial (Amory, 2012). The study of Garrison and Cleveland-Innes (2005) underlines that cognitive presence in online learning is more significant.

1.3. Success for learning

Student satisfaction is the crucial factor to underline quality in higher education (Zapalska & Brozik, 2006). As it is a major component for the higher education, student satisfaction plays a great role for the retention of online education to contribute quality. In this respect, student satisfaction in online education relies on social interaction. It is discussed social presence and cognitive absorption related to online learning environment. It is seen that social presence plays

a great role for the satisfaction of students within online learning process (Leong, 2011). Although the study of Altınay (2016) gives an insights on online learning based on peer and collaborative contexts, this is partial to reflect on social interaction in online context. In addition, Ashwin (2003) discusses supporting the learning of other students as more social that is crucial in teaching and in learning. The research study was enhanced by cognitive absorption and social learning theory. Social learning theory and cognitive absorption theory enlighten how learners construct knowledge. The study of Lu and Daniel Churchill (2014) revealed that cognitive and social dimensions of learning make success for learning. Riese et al. (2012) provide insights on the processes of interaction that learning is social. It is crucial to immerse the notion of social learning theory and cognitive absorption theory as an eclectic view.

2. Methodology

Quantitative research design was employed in this research (Cohen et al., 2000). Social interaction survey (Aksal, 2011) was conducted as a data collecting instrument to analyze the social interaction of online learners in their learning process for the knowledge construction. Data was analyzed 'SPSS 18 Statistics programmes. While analyzing data validity and reliability of questionnaire was valued by Cronbach's Alpha as ,907. This shows how the questionnaire is reliable. The developed scale on an evaluative tool for online learning and teaching process (Aksal, 2011) foster to analyze the dimensions of social interaction role, interaction behavior, barriers, capacity for interaction and group interaction in enhancing online learning, teaching through the importance of online interaction.

3. Results

As the research study rely on the notions of cognitive absorption and social learning theory, the developed questionnaire of Aksal (2011) provides an insights on gaining reflections and attitudes on social interaction role, interaction behavior, barriers, capacity for interaction and group interaction in enhancing online learning, teaching and analyze higher education systems in their online practices. In this respect, analysis on online learning, social interaction and higher education practices are indicated based on demographic information and responds towards to the developed questionnaire statements.

3.1. Attitudes of Research Participants on Online Learning and Social Interaction

The total numbers of participants are 715. The number of male participants are 389 (%54, 3) and the number of female participants are 326 (%45, 7). The total numbers of participants' faculties are 11. 215 (%30) participants are from education faculty. 36 (%5) participants are from faculty of forestry. 24 (% 3,4) participants are from faculty of literature. 5 (%0,7) participants are from faculty of health. 99 (%13,8) participants are from science faculty. 28 (%3,9) participants are from faculty of communication. 92 (%12,8) participants are from faculty of engineering. 114 (%15,9) participants are from business and administration. 53 (%7,4) participants are from junior technical college. 16 (%2,2) participants are from theology. 34 (%4,7) participants are from medical faculty. The participants of the study graduated from 5 sorts of high school. 118 (%16,5) of them graduated from science high schools. 139 (%19,4) of them graduated from vocational high school. 68 (%9,5) of them graduated from social sciences. 159 (%22,2) of them graduated from Anatolian high school. 232 (%32,4) of them graduated from 'normal' high school. 194 (27,1) of them had work experience and 522 (%72,9) did not have any work experience.

The following table shows how research participants have attitudes on the dimensions of social interaction role, interaction behavior, barriers, capacity for interaction and group interaction. Research participants responded 32 statements whether they agree or not.

3.2. Analysis of Higher Education System on Social Interaction and Online Learning

A meaningful difference was found when Table 1 was investigated with the results of the ANOVA Test among faculties ($p=,000$, $p<,05$). Post Hoc LSD results were examined in order to find out which faculties had this difference. According to this, it can be seen that the difference is between Faculty of Health Sciences and Engineering and Vocational Higher Schools. It was found that students of the Faculty of Health Sciences ($\bar{X}=130,20$) provided more positive results compared to the students from Engineering ($\bar{X}=115,10$) and Theology ($\bar{X}=119,56$) faculties.

Source of Variation	Sum of Squares	df	Mean of Squares	F	p	Meaningful Difference
Among groups	6585,923	10	658,592	3,447	,000	($p< .05$)
Within groups	134494,169	704	191,043			4-7, 4-9
Total	141080,092	714				

1: Education, 2: Law, 3: Architecture, 4: Health, 5: Arts-Sciences, 6: Communication, 7: Engineering, 8: Economic and Administrative Studies, 9: Vocational High School, 10: Theology, 11: Medicine.

Table 1. Social Interaction ANOVA Test based on Faculties of the participants

In addition, a meaningful difference was found when the results of the t-test regarding whether participants have taken a distance education course before ($p=,02$, $p<,05$). It can be seen that this difference is for those who haven't taken a distance education course before ($\bar{X}=115,20$).

Item	f	%	Item	f	%	Item	f	%
1	I agree	60,3	12	I agree	58,1	23	I agree	62,0
2	I agree	52,5	13	I agree	63,1	24	I agree	54,2
3	I agree	50,8	14	I agree	71,5	25	I agree	50,6
4	I agree	44,7	15	I agree	59,2	26	I agree	59,5
5	I agree	50,8	16	I agree	57,0	27	I agree	54,3
6	I agree	39,0	17	I agree	53,8	28	I agree	55,9
7	I agree	49,4	18	I agree	55,6	29	I agree	59,1
8	I agree	49,7	19	I agree	59,6	30	I agree	59,1
9	I agree	50,0	20	I agree	56,4	31	I agree	56,4
10	I agree	45,1	21	I agree	54,3	32	I agree	49,3
11	I agree	58,1	22	I agree	58,1			

Table 2: Frequency distribution of the responses to the items

It can be seen from Table 2 that all participants responded as 'I agree' level (mean of the items between $\bar{X}=2,60$ and $\bar{X}=3,39$).

According to the frequency analysis on social interaction role, participants are comfortable with technology, online groups, being reflective in their online learning process. They are encouraged group member to question and to lead discussions, collaborative learning strategies. In addition, they agree with being encouraged on social relationship, friendly attitudes for collaborative works in increasing learners' interaction and assisting by instructors. The statements for the theme as indicated Table 3 below.

Social interaction role
Make participants comfortable with the technology and ultimately to make the technology transparent
Encourage the on-line group to develop its own life and history Welcome shared language, metaphors, rituals and jokes
Be reflective to understand how their students learn, adapt the teaching environment
Encourage group members to question theory and practice
Social relationship, friendly attitudes must be encouraged, collaborative work should be done to increase learners' interaction and instructors must assist students
Encourage group members to lead discussions
There is flexibility of time and location
Lead a round of introductions with perhaps, an on-line ice-breaker
Feedback and motivational skills
Collaborative learning strategies require more interaction

Table 3: Social interaction role

According to the frequency analysis on interaction behavior, participants are flexible to adapt new learning style, building online teams. They don't think that online courses have isolation and they think that building up a positive constructive environment play a role for the facilitator. In addition promoting human interaction, discussions and assigning roles are important. The statements for the theme as indicated Table 4 below.

Interaction behavior
Facilitator contribute to build up a positive, constructive environment
Be flexible to adapt new learning style
Encourage discussions
Online courses do not exist in isolation
Lecturers presence in online groups is important to students that active participation is the most important factor influencing the success of online groups
Promote human interaction
Assign roles and responsibilities
Establish an online identity as e-moderator
Build online teams

Table 4: Interaction behavior

The statements for the theme as indicated Table 5 below shows the barriers that participants experienced in their online learning teaching process. Although they think the importance of social interaction, interaction behavior in online learning, teaching process, they have barriers in support, technological assistance, time, being team player, communication skills, and deliver mechanism. Participants think that there is a tension between teacher and student control of the online.

Interaction behavior

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Table 5: Interaction behavior

Barriers

52 There is the lack of support for the changing roles of students
 53 There is lack of technological assistance
 54 There is lack of adequate time-frame
 55 Tension between teacher and student control of the online
 56 Be a team player, communication skills, and deliver mechanism

Table 6: Barriers

According to the frequency analysis of the theme which is capacity of interaction, participants pay attention on having e-learning system as dependable and user friendly, computer mediated discussion, collaborative engagement with technologies. The statements for the theme as indicated Table 7 below.

Capacity for interaction

Students expect an e-learning system to be dependable and user friendly
 Understanding of the attitudes, experiences and dynamics of interaction of students is considered by highlighting the significance
 Availability and access to a common ground in a computer -mediated discussion is necessary to sustain instructional interaction over the entire length of the discussion. Instructional dialog takes
 Students' collaborative engagement with new technologies heighten understanding of influential factors shape the effectiveness factors shape the effectiveness of peer interactions, learning contexts and computer interfaces for enhancing learning from a socio-cognitive perspective
 A capacity for relationship building

Table 7: Capacity for interaction

According to the frequency analysis of group interaction, participants highlight that interaction with course content and interaction with others are important. They think that there is absence of real time feedback. The statements for the theme as indicated Table 8 below.

Group interaction

Participants learning require two kinds of interaction with course content and other participants
 Online learning groups often can develop their strong identity
 Absence of real-time feedback

Table 8: Group interaction

Conclusion

As social learning fosters cognitive process that takes place in social context, learning is reinforced by technology. Learning becomes active and interactive that reinforces construction of knowledge. In this respect, online education plays a great role to facilitate active learning and this way of learning and teaching reinforces construction of knowledge. As social learning requires modeled learning activities, it is essential to underline the importance of images and symbols and groups. In this respect, social learning becomes a theoretical stance when the social interaction is achieved in online education.

Many higher education systems have practiced online learning and teaching to accomplish diversified student learning in order to foster quality. Technology enhanced platforms become key solution to construct knowledge. In this respect, evaluating online education practices of higher education systems is crucial (Kelliher & Henderson, 2006). Social interaction provides a stance to make knowledge construction process in a synergized way.

Digitalization in education opens issues of learners' engagement, interactions while they are within construction knowledge. Therefore, social interaction becomes important for requiring social active learning (Lu & Daniel Churchill, 2014). This research study shed a light to understand the adoption of cognitive absorption and social learning in online education and give insights on the evaluation of social interaction role, interaction behavior, barriers, capacity for interaction and group interaction to enhance the online learning in higher education system.

As results revealed that higher education practices has limited practice on the role of social interaction in online education, it is seen that there is an intensified need to capture basis of social learning and cognitive absorption theory to facilitate quality in online education. Although recent studies (Chen et al., 2009; Lamy & Hassan, 2003; Ledbetter & Finn, 2013; Rocco, 2010; Vanhorn et al., 2008) underlined the importance of social interaction in online learning, this research study gives an insight to focus on social interaction and learning in the construction of knowledge in online education by stressing integration of social learning and cognitive absorption. The research study puts an emphasis on the value a state of deep involvement and collaboration exploration, tool mediated learning.

This research paper contributes literature to raise awareness on the social interaction within online learning. It is essential to practice online systems based on theoretical framework. In this respect, paper sheds a light to foster the significance of learning theory and cognitive absorption theory in knowledge construction within online learning process. This provides insights on learner experiences and perceptions on online learning to be example of other cases.

In further studies, comparative analysis of different higher education systems and evaluation on efficiency of learning management systems will be conducted to analyze the importance of social interaction in online education. In this respect, extensive suggestions will be given for learner and teacher development in online learning, teaching.

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