

Examination of connectivist theory in English language learning

The role of online social networking tool

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Abstract

Purpose – The purpose of this paper is to examine the role of technology and online communication platforms in English language learning based on connectivist theory.

Design/methodology/approach – Questionnaire and checklist were used to examine the role of online communication tools in the learning process. The data analysis was done with SPSS.

Findings – Results showed that being involved in collaborative learning and dialogue increases connectivist knowledge, reflection and negotiation. Online communication tools can be used as an effective supplementary material for learning.

Research limitations/implications – The limitation of this paper is that the number of participants was limited to 27.

Practical implications – This paper gives insights on the use of language and technology integration.

Social implications – New way of learning and language learning become essential for the pedagogy and learner in the higher education.

Originality/value – The paper is original in its research context and gives a value to contribute new way of learning based on approach.

Keywords Learning, Social networking, Online communication, Digital age, Connectivist theory

Paper type Research paper

Introduction

At its heart, connectivism sheds a light on the knowledge that is distributed across a network of connections, and learning consists of the ability to construct and navigate those networks. Knowledge is not acquired as though it were a thing. It is not transmitted as though it were a type of communication (Downes, 2011). In the mid-twentieth century, development in the technology in all fields created an “information society” that is significant in economic, educational and cultural activities (Merier, 2007). Changing the way of accessing the knowledge and different language codes, learning becomes dynamic, continuous, emergent and interconnected. In this respect, network society within the frame of global and digitalized life happens.

The set of connections can be formed by actions and experiences that help knowledge creation within a realm of connectivist theory. As the process of learning has changed and been influenced by complexity, dialogue and experience, social negotiation and mediation support the knowledge construction and skill development. It is important to learn how to construct and negotiate learning with network of connections. In the digital age, ICT-integrated courses



and programs consider connectivist theory the heart of instruction in order to allow students to gain from actions and experience by constructing connectivist knowledge. Connectivist theory requires an abundance in which course content is created and shared with others, dialogue and negotiation occur and experience is expanded through dialogue as a result of sharing and exchange with the set of connections (Bell, 2011). Significantly, practice in real-world situations is crucial for the developmental process in which social and communication environments for collaboration and dialogue are elements that need to be fostered. In fact, supplementary materials show how foreign language learning can be enriched with the support of collaboration, dialogue and negotiation with peers in classrooms. In this respect, supplementary materials that promote collaboration, dialogue and negotiation with peers increase motivation and social communication through an interaction of individual and network variables as they incorporate learning and social communication abilities for foreign language learning. This shows how learning analytics is essential for enhancing learning of individuals within the network society (Tschofen and Mackness, 2012).

The use of online materials in the blended learning process is vital for foreign language learning as supplementary material or a platform to share materials with others for authentic and effective learning. Within the realm of connectivist theory, online materials enhance learning that occurs through social, technologically enhanced, recognizing and interpreting patterns. Furthermore, diverse learning sources provide conceptual and social connections for constructing and sharing actions and experiences based on dialogue and negotiation tools. Experience is the best teacher of the knowledge; therefore, connectivist theory with ICT integration and connection making has become popular. The study of Gerard and Goldie (2016) focuses on the merits of connectivism for using digital technologies in teaching and learning. Using digital technologies through benefits of resources within different learning environments put an emphasis on the learning analytics. In addition, learners who cannot personally experience events need to act and derive their competence from the connections. A study by Mayisela (2013) concluded that students with access to mobile technology had an increased opportunity to access the courseware of the blended learning course. Mobile technology further enhanced student-to-student and student-to-lecturer communication through the use of social networks.

The literature review emphasizes the significance of the online course and supplementary materials in foreign language learning. Furthermore, the literature found that online communication and social networking tools encourage collaboration and communication, which enriches language learning. In addition, discussing and sharing ideas and experiences within an online platform increases learners' confidence and helps them construct connectivist knowledge from social connections. In line with classroom instruction, computer-aided instruction and exercises help peer support, increasing the learners' reflection, negotiation and critical thinking skills. In addition, the literature found that online platforms increase motivation for language learning. Significantly, massively open online courses have become a solution for the connectivist learning process, which incorporates language learning and ICT integration in the learning process (Altinay *et al.*, 2017).

Learning could be perceived as a life-long process and each learner has his/her matter or approach to gather knowledge (Mondahl and Razmerita, 2014). For a life-long educational success, learning strategies should be designed efficiently which would be helpful for the learners' ability to understand what it means to learn (Mondahl and Razmerita, 2014). Harrison and Thomas (2009) declared that successful learning is related to how learners interact with the persons around them in order to handle a problem in which they cannot find any solution by themselves.

The one of the most popular educational technology is Web 2.0 which is simply understood as "a bottom-up organization of tools and activities that are housed on the Internet" (Orr, 2007, p. 53). Web 2.0 is also a way for individuals to connect, communicate

and collaborate. Anderson (2007) defines Web 2.0 as the set of applications on the internet which facilitates more socially connected area where everyone is able to add and edit information online.

There are numerous kinds of applications which can be considered as Web 2.0 technology and they are already being used in educational settings. Commonly and well-used applications are Wiki (Wikipedia), blogs (Blogger), short text messaging (Twitter), social bookmarking (Delicious), social network (Facebook, Myspace, LinkedIn, Edmodo), media-sharing services (YouTube, Flickr, Slide-share) and podcasting (Apple University). For this study, one of the social network tool "Edmodo" was used as an online communication tool.

Nowadays, learning is becoming more universal and thus humans may invent technologies and applications which may encourage them to move outside of the economic and social borders to enhance their lives. The popularity of social networking websites has become an international phenomenon for the last decade and it becomes a social norm and a new life style for many people from different parts of the world (Boyd and Ellison, 2008).

Social networking through online communication tools enhances the language learning that suits learning preferences. Although orientation and training is necessary for learners to reach out, the quality of learning, peer support and supervision provides the true nature of the teaching and learning process. Also, online supported learning in a collaborative and reflective environment can help construct knowledge and increase time management, reflection, negotiation and communication skills.

Self-management is very important within this online communication (social networking) process; it is the developmental process of relating the internal/individual to external/individual. It relates to all that we have evolved as a species about learning, growing and developing as human beings, physically, emotionally, mentally and spiritually – education, training, therapy, counseling and consulting, human potential activities, physical development and coaching. Self-management is the manifestation of those skills for development (Volkmann, 2002; Altnay, Dagli and Altnay, 2018).

Facilitating reflection, negotiation and collaboration is the critical process in which an online platform enriches learning from experience and constructs knowledge from the connections within the realm of connectivist theory. In this study, connectivist theory was conceptualized to incorporate collaborative and reflective dialogues among learners to encourage reflection, collaboration and motivation in learning. The literature review found that very limited research studies have examined the role of connectivist theory in language learning.

Some studies revealed that social media or social networking provides benefits for language learning purposes and thus providing a considerable contribution to learners to learn language more effectively as it serves friendly and relaxing environment (Altnay, Altnay, Dagli and Altnay, 2018). Moreover, it is believed that social technologies could provide contribution to social awareness and improves social interactions and can be applicable in higher education (Tay and Allen, 2011).

Jee and Park (2009) indicated that social networking sites (SNSs) such as Livemocha motivates language learners to conduct a search for other language learners on the site and to build friendships in much the same way as they would on other SNS such as Facebook. Brick expressed that constructed friendship through SNS would provide mutual advantages for both parties such as providing feedback on each other's oral and written work and communicate asynchronously via an in-built texting tool or synchronously via voice over the internet protocol tool.

Compared to traditional learning environments, social technologies may encourage active approaches and provide opportunities to socialize (McLoughlin *et al.*, 2006) and facilitate flexibility in terms of publication, re-use of study content, sharing opinions during the stage of knowledge generation (Hamid *et al.*, 2014). Moreover, Griffith and Liyanage (2008)

mentioned that SNSs could create chances to lecturers to access more personal information about their students and therefore more informed about the student profile on the class.

Creation of knowledge while learning language relies on the provision of student-friendly materials via podcasts, videos that this helps take the attention of the students and gain knowledge to learn language (Chartrand, 2012).

In addition to all these, the literature stays partial in exploring the impact of online communication tools to foster foreign language learning. Therefore, this study may provide invaluable insights into the internalization of connectivist theory in foreign language learning with the support of online communication tools. Therefore, the following research questions are considered:

RQ1. How do learners perceive the impact of online social networking tools for learning?

RQ2. To what extent do dialogue, negotiation and communication through online support enrich learning?

Methodology

The research study has the notion of quantitative research design. Bryman (2001) describes the quantitative method as “entailing the collection of numerical data and as entailing a view of the relationship between theory and research as deductive, a predilection for natural sciences approach and as having an objectivist conception of social reality” (p. 62). In this study, the participants’ perceptions and experiences provide valuable insights to understand the role of connectivist theory in learning supported by online social networking tools in the inductive process.

Considering the nature of this research, connectivist theory was conceptualized along with online social networking tools in one semester (approximately seven weeks) in an English course at English Preparatory School. The learning process was based on the idea that:

- learning with the support of online social networking rests in the diversity of opinions;
- learning is a process of connecting specialized nodes or information sources;
- learning may reside in non-human appliances;
- the capacity to learn is more critical than what is currently known;
- nurturing and maintaining connections is necessary to facilitate continual learning;
- the ability to see connections between fields, ideas and concepts is a core skill;
- currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities;
- decision making is itself a learning process; and
- choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality.

While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision. Before implementing the connectivist learning process, the learners received orientation and training to inform them about supplementary materials and online social networking tools. This session was the milestone for the research to help learners internalize learning objectives and activities. The process was implemented under the supervision of a tutor who provided immediate actions if necessary. At the end of the process, the learners’ perceptions and experiences were examined along with by checklist.

In line with the inductive process, case study through action research was employed to diagnose a problem and seek a solution based on change and development within the base of creating awareness on different learning environments in the digital age (Johnson, 2002). Therefore, in this research study, case study through action research becomes a research tool to improve the practices of learning in which collaborative activities provide enhancement (Mills, 2003). To examine the role of connectivist theory in learning with the support of online social networking tools and the learners' perceptions and experiences, the self-reflective and evaluative process and group support through peer support and tutor supervision provided practice in connectivist theory in learning with the support of online social networking tools were conducted. As connectivism relies on learning through autonomy, connectedness, diversity and openness, using the reflection, negotiation and dialogue through online social networking tools as premises of the connectivist theory was successful in the practice side of research study (Tschofen and Mackness, 2012).

Context and participants

A total of 27 participants who agreed to participate and complete the questionnaire become part of this research study. Among the 27 participants, 9 (33.33 percent) were male and 18 (66.67 percent) were female. The ages ranged between 20 and 24. Learners were from different countries and their level of English was intermediate. The participants' weekly number of lesson hours was 20 at the intermediate level and the study took approximately two and a half months. Purposive sampling was used and a volunteer tutor who wanted to practice new theory was involved in this research with a class of 27 volunteer learners. The informed consent form was used to get the participants' permission to be involved in this research process.

Data collection technique and analysis

In this study, training was done to inform learners about the research process and course of actions. Observation checklist and a questionnaire provided in-depth data to examine the role of connectivist theory in learning with the support of online social networking tools through the learners' perceptions and experiences. The questionnaire identified learners' perceptions of using Web 2.0 tools for practicing materials and the changes in their attitudes toward English language learning through Web 2.0 technology. The questionnaire used a five-point Likert-type scale to identify the learners' perceptions. The participants responded to 27 items by indicating whether they "Strongly Agreed (=5), Agreed (=4), Undecided (=3), Disagreed (=2) or Strongly Disagreed (=1)." Also, the researcher applied checklists to get the participants' perceptions of the supplementary materials and their experiences within the action research process. Furthermore, the questionnaire was analyzed with SPSS 17.

Findings

The descriptive results of the study

Self-reflective and evaluative process and group support which is actualized by means of peer support is covered by cycle; and by the use of online social networking tools, practice in connectivist theory in learning was equipped with the tutor supervision. Connectivist theory proved to be successful by the help of using techniques such as the use of reflection, negotiation and dialogue as premises in online social networking tools. According to the descriptive results of this study, all students have computers and an internet connection. Most access the internet from home and school and 11.3 percent of students also access it from their mobile phones. The majority of students (85.19 percent) have a broadband connection. Most students use the internet to send e-mail (16.99 percent) and for social

networking and research for homework (16.34 percent). The biggest problem with using the internet is slow connection (35 percent) followed by disconnection problems (28.33 percent) and downloading problems (21.67 percent). Although most students use SNSs, none of them use Ning, Edmodo, Edu2.0 or tagged as an SNS. Most of them use Facebook (50 percent) and Twitter (20.37 percent) as SNSs. More than half of the students (54.55 percent) use English while communicating on SNSs, and it reveals that most of the students use SNSs every day. These descriptive results justified that the uses of social networking of students make students connected to each other and they are exchanging their experiences and knowledge in enhancing their learning. Although they have technological barriers, they are gaining competence through digital technologies in research, communication and teamwork.

Components of course design and its impact on learning

According to Fraenkel and Wallen (2006), checklist is one of the most frequently used measurement instrument in the research studies. It consists of a list of several characteristics or activities presented to the participants of the study and they are asked to study the list and mark opposite the activities or characteristics that they have dealt for a period of time in order to learn satisfaction level of learners with the Web 2.0 teaching and learning materials and network, a checklist is prepared by the researcher. The aim of the checklist is to elicit the perceptions of the learners about the benefits and difficulties of using Web 2.0-based materials. Checklists required suggestions and the participants' comments. Although participants were asked to fill in the forms completely, most replied to many items by ticking on yes/no or not sure, and they ignored the comment section in the checklists (Tables I and II).

For this study around 20 different various supplementary materials were given to students. The evaluation of the supplementary materials by students revealed that most of the informants ($n = 21$) found the proficiency level of the materials appropriate. Two learners said that the materials should be more interesting and motivating. Although more than half of the respondents ($n = 18$) were satisfied with the interest level of the supplementing materials, five learners said the materials should be more scientific, "be chosen from daily life themes or practices" or made more interesting by adding some mystery to increase learners' motivation. As a result of these, prepared supplementary materials should be carefully designed according to connectivist theory for better understanding (Table III).

In this study, each supplementary material designs differently according to their aims. Five of the participants said the size of the letters should be increased to ensure easy readability of the content. Three informants said there should be more spacing between the lines. Four participants said the background should not be white (Table IV).

The participants' opinions about the material as a whole were more positive than the traditional materials and methods ($n = 19$). Most of the learners ($n = 17$) found the technique and use of materials helpful. Again, nearly all students agreed that this material worked as effective language learning.

Discussion

Case study through action research and connectivist theory principles

Case study through action research focuses on the people involved in the research and developmental changes happen for the participants about the focus. It takes place in the classroom in a real-world situation with the aim to solve real problems. According to Ferrance (2000), action research is learning by doing. The study of Bell (2011) gives insights on the role that connectivism is a theory of learning by merging with the role of social and cultural contexts. This is similar to Bandura's Social Learning Theory that proposes that people learn through contacts and exchange of knowledge and experiences.

Items	SA	A	UD	DA	SD
Social networks allow me to collaborate with my peers and teachers of my course more frequently	26.6	55.5	7.4	3.7	3.7
Social networks allow me to communicate with peers and teachers of my course outside the traditional classroom setting	29.6	51.8	11.1	3.7	3.7
Using social networks makes language learning less interesting	0.0	7.41	15.5	37.0	37.0
Social networks allow me to have a more detailed, in-depth conversation with my peers and teacher about the course	11.1	3.3	29.6	22.2	3.7
Social networks do not allow me to communicate effectively with my peers or teacher	3.7	29.6	7.41	59.2	0.0
Social networks cannot improve the quality of students' language learning	14.8	7.4	29.6	37.0	11.1
Social networks have proved to be an effective language learning tool	11.1	55.6	22.2	7.41	3.7
Using social networks suits my learning preference	3.7	59.2	33.3	3.7	0.0
I feel more comfortable sharing and discussing my ideas on social networks than in a traditional face-to-face classroom	7.41	37.0	25.9	18.5	11.1
Social networks allow me more time to reflect effectively on others' comments	11.1	59.2	25.9	3.7	0.0
Compared to face-to-face classes, I am more comfortable responding to online discussions using social networks	7.41	37.4	22.2	29.6	3.7
English language teachers should be trained/educated to use social networks in their teaching	25.9	55.6	7.4	11.1	0.0
My use of social networks facilitates a more comprehensive understanding of the topics covered and/or addressed in class	0.0	33.3	44.4	22.2	0.0
I would rather do exercises by hand than with a computer	11.1	18.5	18.5	44.4	7.4
Teaching with social networks offers advantages to language earners	18.5	59.2	14.8	7.4	0.0
Social networks are not a useful language learning tool	0.0	11.1	14.8	48.1	25.9
I enjoy participating in the class through social networks	25.9	37.0	14.8	22.2	0.0
I find social networks easy to use	22.2	66.6	11.1	0.0	0.0
I want my teachers to use social networks for department courses as well	25.9	44.4	25.9	0.0	3.7
Social networks allow me to express my thoughts clearly and openly	14.81	59.2	11.1	14.8	0.0
I get ideas about what everyone is doing/thinking about current topics/homework from social networks	22.2	59.2	7.4	11.1	0.0
Social networks inhibit my ability to express my thoughts and opinions	3.7	37.0	29.6	18.5	11.1
Social networks enable me to develop my language skills	22.2	40.7	11.1	25.9	0.0
Social networking allows me to do interesting and imaginative work	18.5	44.4	22.2	14.8	0.0
Social network use has increased my motivation to learn English	29.6	37.0	18.5	14.8	0.0
I want to know about more Web 2.0 technologies available on the internet for English language learning	25.9	48.15	25.9	0.0	0.0
I have seen some Turkish teachers use social networks for language learning	25.9	33.3	18.5	22.2	0.0

Table I.
Descriptive statistics

Notes: SA, strongly agree; A, agree; UD, undecided; DA, disagree; SD, strongly disagree

Criteria	Yes	No	Not sure	Comments	Recommendations
Appropriateness of the level of the students	21	2	4	No problem understanding the materials and exercises	
Suitability and interest	18	5	4	The texts have to be more interesting or motivating or be chosen from daily life practices	Modify them or make some minor changes by adding interesting things
Effectiveness of materials	22	1	4	No problem with understanding materials	

Table II.
Content design

McLeod (2011) explained that social learning theory emphasizes that learning happens within a “social context.” It is believed that people in society learn from each other. This can happen by either modeling or observing. By the use of social networking, participants can learn and model from each other.

Impact of social networking tools for language learning

Merit of being digital native relies on the use of social networking based on connectivism. Especially in learning and teaching process, digital technologies make learners connected and support their learning process by providing different learning environments. Technology-enhanced learning makes sociotechnical context for learning (Bell, 2011). Social networking tools create a new community where teachers and students can easily communicate without seeing each other unlike face-to-face traditional classroom. This new changing way of teaching-learning environment definitely brings about impacts. The impacts of social networking tools for teaching and learning can be identified as the teacher–student roles. Kukulska-Hulme and Shield (2004) expressed that online language learning sites are started to play a crucial role within the more formal pedagogical environment for foreign language classrooms.

Learners’ perceptions of using Web 2.0 tools

The results of the questionnaire show that students have positive feelings about using social networking with supplementary materials in English language learning. As the use of Web 2.0 technologies spreads rapidly into daily life, all people should eliminate negative attitudes about it and adapt in order to keep up with technology. The aim of this research was to discover the impact of using social networking, to provide supplementary practice materials to university students learning English, to identify learners’ perceptions of using Web 2.0 tools for practicing English language learning through Web 2.0 technology.

Conclusion and recommendations

This study discussed implementing connectivist theory in foreign language learning with the support of online social networking tools based on the action research process. It expanded knowledge on how connectivist theory in learning is an effective practice in language learning in the digital age. It yielded significant results that supplementary materials and online courses provide motivation and confidence for English language learning. The study revealed how online social networking tools (e.g. blogs, Facebook, etc.) support learning and

Criteria	Yes	No	Not sure	Comments	Recommendations
Appropriateness of font size	19	5	3	Font size should be increased to ensure easy readability	
Appropriateness of line spacing	21	3	3	The spacing between the lines should be increased because it prevents readability	Increase line spacing
Appropriateness of background color	22	1	4	It should be more colorful	Use colorful things

Table III.
Visual design

Criteria	Yes	No	Not sure	Comments	Recommendations
Suitability of the material as a supplement to in-class learning	19	2	6	An effective alternative for revising pre-learned subjects. Suitable and more effective than alternate supplementary materials	
Provision of learners’ needs	18	4	5	Learning would be more effective with more exercises. Some materials have to be improved and made more interesting	Increase the number of exercises. Modify them
Effectiveness of materials	21	2	4	Helpful	

Table IV.
Overall design

how connectivist theory is supported by technology, which increases motivation and enriches learning (Küfi and Özgür, 2009; Altınay, Altınay, Dagi and Altınay, 2018).

While analyzing the use of social networking to facilitate learning educational aspect understanding the essence of constructivism theory is crucial, constructivism is grounded in cognitive psychology and only much later it is applied to educational theory and practice. A web-based learning era can support constructivist learning through numerous activities and numerous information set which are available on the internet. Texts, graphics, audio, videos and other multimedia sources lead to an increase in student motivation (Woo *et al.*, 2007). Engaging learners in a connectivist theory-based learning process with the support of online social networking tools increases reflection, negotiation and collaboration experience and enriches connectivist knowledge. By involving peer support and collaboration with online platforms, learners could reflect and negotiate the learning process (Akcil *et al.*, 2018).

In a conclusion, although the study provided significant contributions to the literature on the impact of connectivist theory with the support of online social networking tools in language learning, it is recommended that further studies can conduct longitudinal studies and the theory's shortcomings can be outlined in further studies. Moreover, it is recommended that different study groups and more participants can be involved for further studies.

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