

Learners' interaction with university staff units and administrations in distance learning

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Abstract: This paper provided an overview of the types of interactions in the distance learning environment mentioned in the literature, which are represented in the interaction of the learner with the content, the interaction of the learner with the teacher, the interaction of the learner with the learners, the interaction of the learner with the technological system and the interaction of the learner with the graphical interface. It added a sixth type related to the interaction of the learner with the employees of the university units and departments, such as the Admission and Registration Unit, the Academic Advising Unit and others.

This type of interaction, we refer to, plays an important role in the distance learning process and when it occurs, it will likely help learners to cope with the technical and psychological problems they face and will drive their spiritual, social and physical growth, in addition to cognitive growth, that is through technical support services and curricular and extracurricular activities which provided by university's units and administrations. This paper also revealed the relationship between the different types of interaction, how they are affected by each other, and the dependence of some on each other, and it proposed a model that demonstrates this.

Keywords: distance learning, types of interaction, learners' interaction

تفاعل المتعلمين مع موظفي وحدات الجامعة وإداراتها في التعلم عن بعد

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كلية التربية || جامعة حائل || المملكة العربية السعودية

المستخلص: قدم هذا البحث نظرة عامة عن أنواع التفاعلات في بيئة التعلم عن بعد المذكورة في الأدبيات وهي: تفاعلات المتعلم مع المحتوى، وتفاعلات المتعلم مع المعلم، وتفاعلات المتعلم مع المتعلمين، وتفاعلات المتعلم مع النظام التكنولوجي، وتفاعلات المتعلم مع الواجهة الرسومية، وأضافت بعداً سادساً يتعلق بتفاعلات المتعلم مع موظفي وحدات الجامعة وإداراتها، مثل: وحدة القبول والتسجيل، ووحدة الإرشاد الأكاديمي، وغيرها.

يلعب هذا النوع من التفاعل الذي نشير إليه دوراً مهماً في عملية التعلم عن بعد وعندما يحدث، فمن المرجح أنه سيساعد المتعلمين على التعامل مع المشكلات الفنية والنفسية التي تواجههم، وسيؤدي إلى تعزيز نموهم الروحي والاجتماعي والجسدي، بالإضافة إلى النمو المعرفي، وذلك من خلال خدمات الدعم الفني والأنشطة المنهجية واللامنهجية التي تقدمها وحدات وإدارات الجامعة. كشف هذا البحث أيضاً عن العلاقة بين أنواع التفاعل المختلفة، وكيف تتأثر ببعضها البعض، واقترح نموذجاً يوضح ذلك.

الكلمات المفتاحية: التعلم عن بعد، أنواع التفاعل، تفاعل المتعلمين

Introduction

Distance learning, which is constantly changing and developing since its inception, has passed through a number of stages, and evolved from learning by correspondence into the platforms using a number of techniques including videoconferencing, discussion forums and virtual classrooms.

Today, internet-based learning is one of the most common kinds of distance learning. Interaction is one of the most important factors that influence the quality of internet-based learning (Karatat, Yilmaz, Bagriacik, Cemal, Ermiş & Gürbüz, 2017). Interaction within the context of distance learning means: the effect that result in the acquisition of knowledge.

Distance learning theorists classified the interaction into several categories. Moore, (1989) proposed three types of learners' interactions at distance classrooms: learner - content interaction, learner – instructor interaction, and learner -learner interaction. Hillman, Willis, & Gunawardena (1994) added the learner – interface interaction, while Bouhnik & Marcus,2006 described a fifth type which is the learner-technology system interaction.

This paper adds a sixth dimension describing learners' interaction with the staff of university units and administrations. This type of interaction plays a vital role in the learning process. It supports learners who are psychologically and geographically isolated. Learners may need to settle the technical and psychological difficulties they may encounter during learning, or to accomplish transactions at the Admission and Registration Unit, Academic Counselling Unit, The Deanship of Student Affairs and others.

Firstly, this paper will explain the interaction in distance learning, and the theoretical basis for it, then it will show the different types of interaction in the distance learning in details, suggested model illustrating the relationship between the different types of interaction will be delivered. This model will help designers of distance learning programs and those who implement it to understand the interacting parties within the context of distance learning and how these different types of interaction are connected to each other.

Interaction and Distance Learning

Studies pointed out the importance of interaction in distance learning considering it an essential condition for the occurrence of the learning (Tu & Corry, 2003). In a distance learning environment, interaction is considered as both a challenge and an advantage at the same time. It is a challenge because of the temporal and spatial gap that distance learning creates between instructor and learner, learner and peers and learner and university staff. Another challenge that hinders interaction within the context of distance learner is the lack of potentials, weak internet network, especially in remote areas, and lack of technical skills for some instructors and learners.

On the other hand, interaction is an advantage for distance learning, as Parker & Parker (2013) cited from Jaffee (2007) that distance learning provides students with more opportunities for interaction

than traditional learning. This is attributed to the possibility of hiding students' ID, thus allowing them to talk openly and discuss their ideas freely without getting awkward. In addition, asynchronous interaction gives students more freedom, flexibility and control over the time and number of logs into the recorded lecture.

Distance learners differ in their reliance on interaction, according to their age, gender, personal characteristics, extent of self-regulation, and their own learning modes (participant, Independent, competitive, dependent and avoidant). The more independent students prefer less interaction, while younger ones or first year students rely more on interaction. Students with high intrinsic motivation show little desire for interaction, since they have their own learning. Studies have shown that female interaction is higher than male interaction in virtual classroom discussions, and revealed that students with lower status interact less than their peers who consider themselves to be at a higher level. (Schellens, vankeer, Valcke & Wever, 2007; Eom, 2009; Parker & Parker 2013). Moreover, the characteristics, and features of the interacting parties, including content, instructor, technology system, interface and university staff are factors that help stimulate or weaken interaction.

Theoretical basis of Interaction

Many theories, such as the social constructivist theory, support the importance of interaction in learning. This theory describes learning as a social process occurring through social interaction, where learning takes place through the introduction of social interaction which begins as a process of personal relationships between individuals and between individuals and their surroundings. Then it occurs as a mental process within the individual himself. Vygotsky believed that the general progress proceeds in accordance with a general law: that is, any function of an individual's cultural growth which appears on two levels: once at the social level and then at the psychological level. He also pointed out that man does not interact with his environment directly, but through cultural tools which take the form of artistic tools such as: paper, pen, and technical tools, or psychological tools related to the regulation of individual mental processes and control of behavior, such as language, speech, (Crane, 1996).

Connectivism Learning Theory has expanded interaction to include interaction with technical tools, content and people. This interaction is not necessarily to take place face to face but through time and place. In other words, learning occurs through creating of practice communities or learning where dialogue, negotiation and collaboration take place through technology and the global web to which four billion people get connected (Wang, Chen & Anderson, 2014).

Connectivism Learning Theory considered the true power of the internet and what it offers to learners today is not the content that can be found through research, but rather the links that can be established with others and the collaboration that may occur between them. This theory has set several

principles that collectively draw a new picture of what learning could mean in light of the information age, including:

1. Learning and knowledge rests in diversity of opinions.
2. Learning is a process of connecting specialized nodes or information sources.
3. Learning may reside in non-human appliances.
4. Capacity to know more is more critical than what is currently known.
5. Nurturing and maintaining connections is needed to facilitate continual learning.
6. Ability to see connections between fields, ideas, and concepts is a core skill.
7. Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
8. Decision making is itself a learning process. 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 (Utecht & Keller,2019).

Types of interactions in the distance learning

Interaction with Content

Virtual learning platforms provide the instructor with the feature of downloading the educational content in various formats including: text, audio record and video, The World Wide Web also displays more and more information, pictures and diagrams that can enrich the learning process.

However, this feature doesn't necessarily mean that learning has occurred. It is rather a process to transfer information only. In order that learning occurs, there should be an interaction between the learner and the content, which requires the learner's carrying out an activity to develop or modify and correct the various cognitive structures of a specific topic through acquiring new information and merging them with their previous knowledge. This includes finding a link between fields, ideas and concepts and creating a new meaning out of them. Within this scenario, students may become more active participants in their learning.

Learners' interaction with content can be enhanced through taking care of it's design. Janicki & Liegle (2001) cited in Swan (2002) developed a list of ten concepts that support interaction with the content:

- instructors acting as facilitators;
- use of a variety of presentation styles;
- multiple exercises;
- hands-on problems;
- learner control of pacing;

- frequent testing;
- clear feedback;
- consistent layout;
- clear navigation;
- available help screen.

Interaction with the Instructor

Interaction is a life feature, all living creatures show patterns of interaction. A Person feels happy when interacting with one's family, friends and animals and when observing plant interaction and their response to light, water and others, especially in rural environments that depend on agriculture and animal husbandry for their economy. In the field of education, most instructors admit that their most joyful moments in teaching spring out from the relationship they can develop with their students, and interacting while they learn together. This is one of the basic stimulators and concerns in their working life. Likewise, a great number of learners claim that the relationship they establish with instructors is an integral part of a meaningful learning experience. Many students feel that communication with the instructor is the most valuable part of distance learning (Baker, 1998). Figure 1 describes some forms of the verbal interaction between learner and instructor:

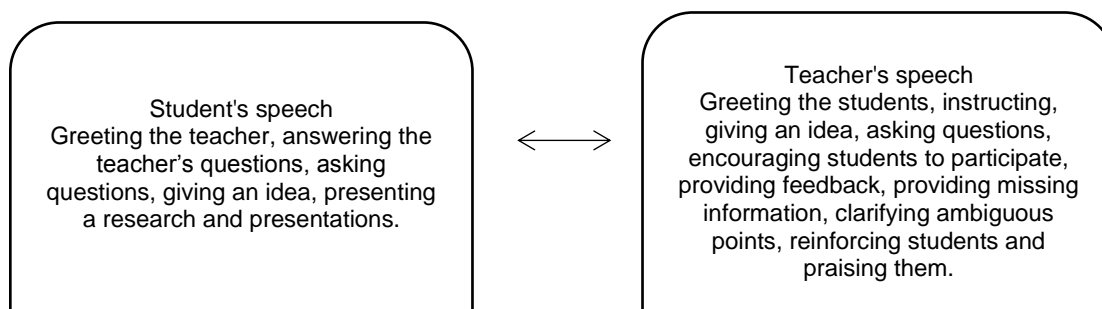


Figure (1) Some forms of verbal interaction between learner and instructor

This type of interaction is intended to foster students' understanding of content. It also has a social function that may sometime go beyond its academic function.

To reduce the spatial and psychological gap between the instructor and learners, the teacher is advised to call students by their names, use examples relevant to their lives, change the tone of voice, and use humor (Xiao,2017), in addition to that the use of facial expressions such as smiling, moving the head or hand and using Emoji and clapping.

Interaction Among Students

Goh, Tan & Rasli, 2019; Cowan, Irvine & Williams (2020) point out that interaction between distance learning learners supports interaction with content, enhances the learning experience, improves the learning achievements of learners and provides them with social and emotional support.

Learner-learner interaction can be achieved through group activities, discussion forums, exchange of resources and peer assessment.

Interaction with graphical Interface

The graphical Interface constitutes an important part in distance learning, and Its design is extremely important as it is highly related to the occurrence of learning (Guralnick, 2007).

A good design helps in the creation of meaning, guidance of concentration, facilitation of interactions and creation of motivating atmospheres for learning. the following are some of the desired features in the interfaces with educational programs:

- It has a strong design that is governed by a specific system that is easy to use by the instructor and the learners.
- Attractive, evokes self-motivation and uses significant visual metaphors.
- Interactive that enables direct feedback, providing appropriate notifications, and provides the ability to undo wrong steps.
- supports many options, with the capability of individual and group video communication (Metros & Hedberg, 2002).

Interaction with the Technology System

The interaction of learners with technology is the basic method of their learning in a distance learning environment, where learners need to interact with the technology in order to interact with the content, teacher and other learners (Bouhnik & Marcus, 2006).

Distance learning employs technology with all its types and developments beginning with the technologies that depend on transmission such as: educational T.V, radio and ending with web – based technologies such as computers, smart devices (iPad) and mobiles which role is not limited to information delivery, but they rather act as intelligent tools stimulating thinking, planning and building knowledge among learners.

Learners' interaction with technology is affected by a number of factors including: (1) their knowledge of technology and acquisition of basic skills such as: using computer programs and applications and internet research. (2) the degree of confidence and ability to use them. (3) the amount of technical support they get to address the technical problems they encounter.

Interaction with the Staff of University Units and Administrations

Distance learning students face several problems during their studies. Some of these problems are technical, such as the inability to sign into the platform because the password is wrong. Other problems are related to the personal characteristics of the learner such as severe anxiety, feeling isolated, despair,

lack of motivation, weak learning skills and lack of experience in distance learning and others (Musingafi, Mapuranga, Chiwanza & Zebron, 2015; Ajmal & Ahmad, 2019)

These problems impede the learner's ability to learn and negatively affect the interaction processes, so the learner needs support and guidance to address such challenges.

The university provides learners with the support required to address such problems through its various administrations and units including: Academic Counseling Unit, Technical Support Unit, Admission and Registration Unit, The Deanship of Student Affairs, and others. The role of such units is not limited to solving students' problems, as they have an important role in the development and improvement of student skills through training courses, extra-curricular activities, religious seminars, health awareness and edification, community activities, and holding interactive meetings with the university heads and employers and other influential figures. There are more and more activities and events that these units can implement remotely, which have a positive impact on learners, and which ultimately lead to higher academic achievement (Eom, 2009; Jamal, 2012).

Therefore, interaction with the staff of university units and administrations is no less important than other interactions. Its influence exceeds other interactions in supporting to learners spiritually, socially, emotionally and physically, in addition to cognitive development. To achieve this, integrated plans must be drawn up, and the staff should adhere to such plans and exert efforts to implement them.

Interaction with learners may begin from staff, for example, sending a notification from the Admission and Registration unit to the student in the event of a specific trouble such as a decline in their GPA, or a drop out of study may stimulate the learner to correct his situation. Likewise, sending a letter of commendation to learners with a high GPA encourage them towards more academic achievement.

On the other hand, sending messages about physical damage caused by technology, such as eyestrain, back pain and how to avoid it, helps learners to take care of themselves and makes them feel the quality of academic life and encourages them towards learning. Learners may initiate communication with the university staff when they need specific services or information.

The six interactions and their role in learning

The interaction between the learner and content is seen as the most important for cognitive development to happen. All other interactions seek to achieve this interaction through which the cognitive structures change in the learner's mind. The interaction between the content and the learner may occur without more interactions with teachers or peers and without the need to interact with the instructors or peers and without the need to communicate with the university staff, especially among learners who is fully independent and have self-competence perhaps this was indicated by some studies which have shown that there is no statistically significant difference in the acquisition of knowledge between distance learners in an interactive web-based way, and their distance peers who have learned using CDs

(Rakototiana, Rajabo & Gottot, 2017). Other studies have shown the effectiveness of the educational T.V educational programs (Akhter,2011). On the other hand, the learner's interaction with the instructor, learners, and staff of the university units and administrations supports the cognitive, social, emotional, physical and spiritual growth of learners, especially when designing and implementing effective activities to support that growth, so interest in interactions of all types is hoped to achieve balance and integration in the learner's personality.

Relationship Between Interactions

Based on the foregoing, interaction in a distance learning context is seen as a system consisting of inputs consisting of six elements (teacher, learner, content, technology system, interface, and staff of university's units and administration) and its operations include several forms such as support, guidance, service provision and content negotiation and it's outputs consisting of the learner, the knowledge acquired and the skills developed.

In this system, learners interact with other inputs to form six types of interaction: learner interaction with content, learner interaction with instructor, learner interaction with learners, learner interaction with the technological system, learner interaction with the graphical interface, learner interaction with the staff of the university units and administration.

Each of these interactions is unique in its nature and has a role in learning and education. Nevertheless, these interactions do not work independently, but rather intertwine with each other. For example, learners interact with the content through their interaction with the instructor who is interpreting and explaining it, and through their interaction with their peers, listening to their ideas and propositions about it. All of this is done through interaction with the technology system, with the graphical interface being an integral part of it, and with the support, supervision and guidance from the staff of the university units and administrations. Another example, the instructor motivates the learners to interact with each other by designing Group educational activities, and the teacher asks learners to communicate with the employees of the university units and administrations to participate in the extracurricular activities held by the university, and the more the teacher activates the role and capabilities of technology in distance learning, the more that motivates learners to interact with the technological system and the graphic interface.

This means that interaction also occurs between the different types of interactions, so one type of interaction stimulates the occurrence of another type, and the loss of one type of interaction may weaken another type. For example, when a learner encounters a technical problem, and can't interact with the employees of the Technical Support Unit at the university to solve it. The learner may get unable to sign in to the platform, nor interact with the graphical interface, content nor other parties.

For example, the lack of the ability to interact with the instructor may completely impair the learner's ability to understand the content and interact with, and the occurrence of a technical problem with the learner and his loss of interaction with the staff of the technical support unit at the university may lose the ability to enter the platform and interact with the graphic interface, content and other parties.

Figure 2 shows the relationship between the six interactions.

In this figure, the different types of interaction were represented in the form of crossed rings to indicate the overlap between interaction types and the dependence of each one on other partly. Arrows are placed between the rings to indicate the interaction between the different types of interactions. All rings (representing interaction types) are surrounded by a larger ring representing the technological system and the technologies it contains and its graphic interfaces, as it is the incubator for all parties and interactions.

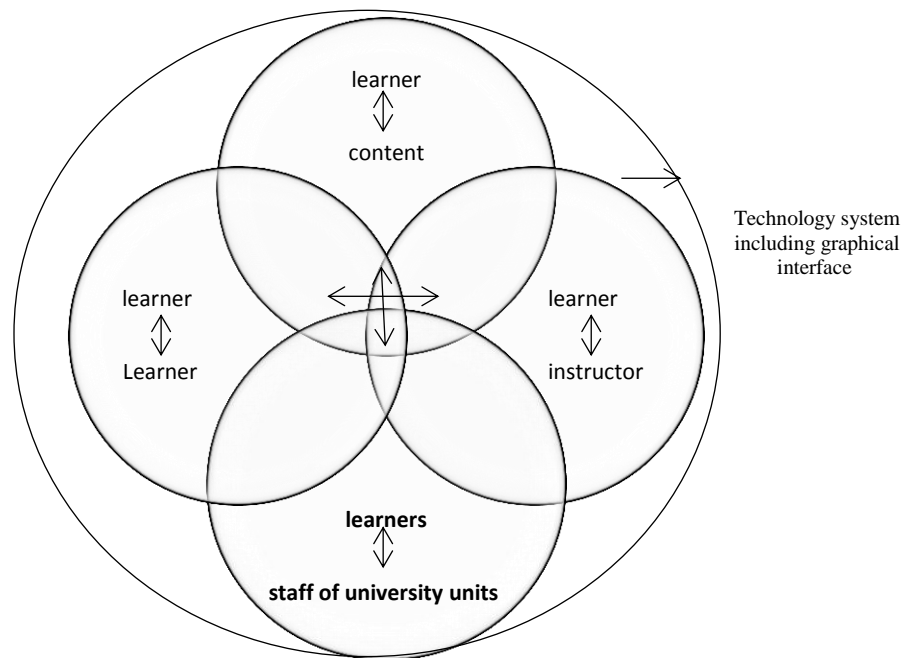


Figure (2) Relationship Between Interactions

Conclusion

Many universities provide distance education to their students, but the recent coronavirus outbreak (Covid-19) has forced traditional universities, schools and kindergartens also to provide their services to learners who study by distance learning learners. Therefore, the need to understand the factors that contribute to the success of distance learning emerged, among which are the most important: interaction. The literature indicated that interaction in distance learning occurs between the learner and many parties to form five types of interaction, which are: learner interaction with content, learner interaction with teacher, learner interaction with learner, learner interaction with graphical interface and learner interaction with technological system.

This paper provided a simple explanation of the different types of interaction in terms of: the researcher who described them, and their importance and role in the learning and teaching process. It added a sixth type of interaction: the learner's interaction with employees of the university's units and departments. It showed the importance of this type of interaction and its role in the learning and teaching process, and linking it to other interactions through a model that illustrates the relationship between them, which helps those interested and working in the field of distance learning to design an interactive distance learning that supports the growth of learners spiritually, physically, emotionally, socially and cognitively.

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