

# Virtual education based on emotional intelligence components and E-learning readiness

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## ABSTRACT

In today's world, e-learning exploitation is the choice of many people. Many advantages of this educational method have been combined with the lack of need to change the life style and access to the most up-to-date scientific and so on contents. In this respect some factors that are effective in learning, show their effect much more prominent in e-learning, because face to face communication of professors and students have been reduced compared to the traditional method, while if these influential factors are categorized, some cases can be mentioned whose traces can be found in the emotional intelligence of individuals and their readiness ratio for e-learning. Accordingly, in this research, the components of emotional intelligence and e-learning readiness were studied.

**Keywords:** Emotional Intelligence, E-Learning, Virtual Education.

## Introduction

Today, due to the high volume of scientific information, there are various options for using new sciences and access to scientific contents. In this regard, learning by electronic method seems very attractive and useful, because time and space constraints have been removed to a large extent and it has also led to costs reduction. One of the concepts related to emotions and emotional management is "Emotional Intelligence". Among all the theories related to "emotional intelligence," those proposed by Mayer and Salovey, Bar-On, and Goleman have created the greatest interest in terms of research and application. Every theoretical paradigm itself makes "emotional intelligence" one of the conceptual perspectives<sup>[1]</sup>.

Emotional intelligence has been considered by psychological researches in recent years. Many specialists consider the necessary conditions for progress in the development of

emotional intelligence. Emotional intelligence is all about how to understand one's feelings and the feelings of others and the ability to identify and manage them.

Emotional intelligence is the ability to understand and manage emotions. Many experts believe that emotional intelligence plays a more important role regarding people's success than Intelligence Quotient (IQ). The authors also showed in their studies that emotional intelligence is related to people's decision makings as well as their university education.

The fact is that in e-learning, unlike traditional education, students exploit scientific contents to the extent of their abilities, and in other words, the ratio of exploitation that students get from education through e-learning method to a significant extent is related to his/her the characteristics and abilities. These features are so important that they greatly overshadow the ratio of education; in other words, each student can benefit from it by his/her performance and based on his/her ability.

In fact, e-learning readiness in the desired state is in a way that some features exist in the student that help him/her during this educational course and maximize the efficiency of education; among these characteristics are: self-confidence, responsibility, participation and creativity, skill in information technology as well as an individual's motivation and enthusiasm, but the current conditions indicate that a number of students due to the inability to plan and manage time, do not perform the assignments on

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specified time or due to the lack of communication skills of exchanging information and questions and answers in the forums and discussion, have low presence, that these cases will certainly affect learning; due to the lack or low self-confidence they do not ask questions that are proposed for them during the online class; the accumulation of these questions and assignments that have not been answered on time and the topics that they have not learned will be very effective in the result and can themselves reduce the interest in continuing education. If students ask questions with high confidence, and based on their communication skills and creativity take the responsibility of topics in the forum and perform assignments with high quality, and based on their skills they have in the field of information technology, make the highest exploitation ratio from the electronically produced contents by professors and other educational resources, they are not afraid of cross-sectional failures. According to what has been said in this research, the issues proposed about artificial intelligence and e-learning and performed researches are investigated.

## Emotional Intelligence Components

### Emotional Self-Awareness

One of the components that performs a very important role in emotional intelligence is the component of emotional self-awareness, which is in fact the same as ability to understand and recognize one's emotions. In fact, every person will be able to influence the feelings, behaviors and moods of other people by accurate recognition of his/her feelings. The requirement to have self-awareness is to be able to control his/her emotions and understand it properly. We should have enough recognition about our emotional reactions in various situations and places and distinguish between them. People who are self-aware have the ability to make connection between what they are feeling and how they perceive their behavior performance against this feeling. Self aware people are aware of all their strengths and weaknesses and are constantly looking to learn and gain new information and more experiences so that sometimes they learn from their performance in front of others. Goleman believes that people who are self-aware are humorous, have high self-confidence, and know well the ability to understand those around them. In other words, emotional self-awareness is the ability to recognize and understand one's own feelings. People with this competence are able to make delicate differences in their emotions and know how their emotions affect their behavior, decisions, and performance [2].

### Empathy

Empathy is the capacity to share and understand the mental state or feelings of others. Empathy is often known as the ability to put oneself in the position of others, or in a way to experience the feelings of another available perspective within oneself. Empathy is a powerful communication skill that is often misused. Empathy interaction is a learnable skill.

The effect of empathy and emotional intelligence on psychology was examined by Amorim. This study examines the relationships between psychiatry, emotional intelligence trait, and empathy, using a pictorial work that requires an appropriate empathic response to the emotional displays of others (happy, sad, and neutral). The results showed that primary psychiatry was associated with a positive effect of sad stimuli, while secondary psychiatry was associated with a negative effect experience in response to neutral stimuli, and a contrasting pattern for emotional intelligence was found. Regression analysis showed that secondary psychiatry, emotional intelligence and anxiety are among important factors [3].

A preliminary study of empathy, emotional intelligence, and performance examination in students was investigated by Elizabeth et al. In this research, in addition to the cognitive ability that medical students need for professional success, special attention has been paid on empathy and emotional intelligence (EI) [4].

## Social Skills

### Stress Tolerance

Researchers' observations show that instead of trying to prevent stress reactions, organizations by encouraging awareness of emotional intelligence as a prerequisite for understanding these reactions, use management programs that have focused on stress theory, and its symptoms and reactions. People with greater emotional clarity and recovery experience less negative emotional responses and disturbing thoughts after an acute stressful situation, which makes them to be able to be more adaptable to the experience. Therefore, the relationship between emotional intelligence and stress can be considered useful in trying to help managers develop and manage their stress. Developers of management programs should be encouraged to insert findings related to emotional intelligence and stress management into their curriculum in order that stress in organizations is reduced [5]. In addition, researchers in the researches of theories related to emotional intelligence and its relationship with stress management, could not find many theoretical and empirical studies that are only related to these two structures.

### Optimism

Optimism is the overall feeling of our satisfaction and our overall vision towards the future. Optimism is a mental attitude that reflects a belief or hope that is the result of some of the certain efforts, or the results in general would be positive and desirable. In this regard, Ghanbarloo et al. in 2015 investigated in a research entitled "Relationship between Academic Optimism and Teachers' Emotional Intelligence and Students' Academic Achievement". The results showed that academic optimism and teachers' emotional intelligence have a significant correlation with students' academic achievement, while teachers' academic optimism is a stronger predictor for students' academic achievement. That in the general example teachers' trust in

students and parents plays the highest role in predicting students' academic achievement. Also, among the components of emotional intelligence, only emotional regulation had relationship with students' academic achievement <sup>[6]</sup>.

In 2012, Landa *et al.* investigated in a research entitled "Does Emotional Intelligence and Optimism/Pessimism Predict Psychological Well-Being?" In this study, the relationship between perceived emotional intelligence, optimism/pessimism and psychological well-being has been investigated. In addition to correlation analyses, the authors examined a model using a structural equation model. The results of this research show that positive relationships exist between clarity and emotional regulation and the components of psychological well-being. Regarding the current situation of optimism against pessimism, a positive relationship was observed between optimism and the dimensions of psychological well-being and a negative relationship was observed between pessimism and the dimensions of psychological well-being <sup>[7]</sup>.

## Independence

Independence is to be able to be guided in your thoughts and actions, to have control of yourselves, and to be free from emotional dependence. Independent people have self confidence in important planning and decision makings. Independent people are able to function autonomously. They avoid clinging to others to fulfill their emotional needs.

In a research conducted in 2018 by Saiyan and Karo, the topic of the effect of competition, emotional intelligence and independence on the efficiency of the auditor was considered. From the results of the study it was obtained that the level of competency of the auditor is below average limit, meaning that the auditor does not have a good competence. The level of emotional intelligence higher than average limit means that the auditor has good emotional intelligence. The independence level of auditor is above average limit means that the auditor has good independence. There is no significant effect of the auditor's competence on the auditor's performance up to 0.090, the significant effect of the auditor's emotional intelligence on the auditor's performance is 0.000, the significant effect on the auditor's independence on the auditor's performance is 0.008, and this also has a significant effect. Regarding the auditor's competence, the auditor's emotional intelligence and the auditor's independence were obtained simultaneously on the auditor's performance with a test statistic ratio equal to 0.001 <sup>[8]</sup>.

## Social Responsibility

Emotional intelligence is all things about how to understand one's feelings and the feelings of others and the ability to recognize and manage them. Social responsibility is the ability to show oneself as a participatory member, participant and builder of a social group that includes the responsible and the member of the cooperative group. Social responsibility is highly correlated with empathy and indicates that they share a very similar conceptual area. Based on the studies that have examined this factor, it was

specified that social responsibility, in addition to awareness of emotions, is related to identifying and understanding emotions. A research has been conducted in 2014 entitled "Emotional Intelligence and Social Responsibility of Male Students in Middle School" and with the aim of comparing the relationship between emotional intelligence and social responsibility of male students in middle school using correlation. Findings show that there is a significant and positive relationship between students' emotional intelligence and social responsibility. Similarly, there is a positive and significant correlation between interpersonal relationships and students' social responsibility. Finally, based on the findings, interpretation and some recommendations have been provided by the researcher <sup>[9]</sup>.

## E-Learning Readiness

Today, global innovations of technology and the widespread use of information and communication technologies have led to changes in every part of life, from business to educational environments. In order to meet quality standards and expectations, assessing the readiness of online learning seems to be one of the best ways to depict the image before implementing and doing the next measures in the right direction during the process. In addition, it is argued that although several online learning platforms or applications have been technically well designed, most of them have not considered the needs of language learners <sup>[10]</sup>. In order to address this issue and, accordingly, to make the optimal use of technology, online learning readiness is the main part of the online learning acceptance process.

Online learning readiness generally refers to all the stakeholders' readiness for an online learning process mentally and physically. In this regard, several issues, including technical, content, organizational, human and financial resources affect the online learning readiness. In addition, there are some important factors in the success of the online learning process. These success factors are as follows: goals, leadership, learning aspect empowerment, technology infrastructures, blended learning, meticulous designing, evaluation and feedback, time and place for learning, learning motivation, usability and full knowledge of learners' characteristics <sup>[11]</sup>.

## Learner Control

Learner control refers to educational strategies through which learners can implement some of their controls over education events. This means that language learners make their own decisions about the order, speed, flow, ratio and the investigation of instructions. On the other hand, learner control in knowledge transfer settings and e-learning systems was converted to an important issue. The inputs for designing and evaluating those systems stem from a variety of disciplines, including major areas like educational psychology, occupational psychology, usability engineering, and knowledge management <sup>[12]</sup>.

In 2012, Hansen *et al.* examined in a research entitled "Investigating the Relationship between Learner Control and

Self-Efficacy in an Online Learning Environment". Research findings have shown that learner control embedded in online modules can enhance learning, improve attitude and increase self-efficacy. However, little research has been done to investigate the self-efficacy of online learners with various levels of learner control in a real online classroom. Therefore, this article describes current researches that focus on this gap in researches and uses a quantitative research plan to examine the relationship between learner control and learner self-efficacy <sup>[13]</sup>.

## Motivation for Learning

Motivation refers to the force that creates, sustains and directs behavior. Motivation is in the form of a desire or special that causes motivation. Intrinsic motivation has also been recognized as an important feature of online learners <sup>[14]</sup>. Findings obtained from comparative studies between online students and students in university <sup>[15]</sup> indicate that online learner has more intrinsic motivation than individuals. But, as they argue, online language learners often need more intrinsic motivation. Because the learning environment typically relies on intrinsic motivation and characteristics related to curiosity and self-regulation to engage language learners to itself. In fact, this technology itself is seen by some people as inherently motivation because it provides a number of characteristics that in strengthening intrinsic motivation, that is challenge, curiosity, and novelty are known to be important <sup>[16]</sup>.

## Individual Skills in Online Communication

The Internet and the recent expansion of online social media operating systems provide many opportunities for communication that most of us use them on a regular basis these days. A large part of what we have learned about online communication through creating email, web chat rooms, and learning forums are also true about social media exchange through Facebook, Twitter, and other channels that support online interaction between the members of organizations and communities. There are two main ways for online communication, which can be defined as follows: simultaneous communication means occurring in "Real Time", for example through messaging. Asynchronous communication is established when participants communicate in their own time, for example, by replying to messages sent in an online society. If you participate in social networks, you know that these terms may apply to them as well. Whether you use the internet to study or in person, it is important to remember that you are communicating with real people. Special attention should be paid to avoid misunderstanding.

## Conducted Studies

In a study conducted by Ms. Yasamin Abedini and Ms. Negin Barat Dastjerdi in 2015, entitled "Predicting Students' Academic Performance in E-Courses Based on Their Meta-Cognitive Skills and Emotional Intelligence", its aim was to investigate the impact of emotional intelligence and meta-cognitive abilities in the

higher education system. The results indicate that these components are significant predictors for students' academic performance and show the importance of developing emotional intelligence and meta-cognitive abilities in the higher education system that seeks to prepare learners to face small and large challenges of the future world <sup>[17]</sup>.

Another case also in a study conducted by Mr. Mehdi Jafari and Ms. Forough Ahmadzadeh in 2014 entitled: "Investigating the Relationship between the Components of Emotional Intelligence and Students' Academic Achievement", its purpose is to investigate the relationship between emotional intelligence and academic achievement, that the results showed that there is a significant relationship between emotional intelligence and academic achievement. Therefore, in order to achieve a high level of academic skills, in addition to general cognitive abilities, one must achieve proper development in aspects such as controlling emotions and feelings. In other words, students will not be able to learn properly and, more importantly, make optimal use of subjects without achieving these components that make up emotional intelligence <sup>[18]</sup>.

In another study conducted by Ms. Marzieh Hashemi in 2014, entitled "Investigating the Relationship between the Emotional Intelligence and Academic Achievement of the Students of Faculty of Health, Bandar Abbas", its purpose was to investigate the relationship between emotional intelligence and academic achievement in higher education centers, the results showed that there is a direct and positive relationship between students' consecutive GPA and the score obtained from the Emotional Intelligence Assessment Questionnaire, so there is a significant relationship between academic achievement and students' emotional intelligence, meaning that students with higher GPAs in consecutive semesters also have higher emotional intelligence scores <sup>[19]</sup>.

In another study conducted in 2015 by Mr. Esmail Mehraien and Ms. Atefeh Nouri at Zabol University entitled "Investigating the Readiness Ratio of Students to Use E-Learning Technology", its purpose was to examine the prerequisites and readiness ratio of learners for active presence in the e-learning environment, the results showed that based on the findings of the present research, the lack of appropriate technology infrastructures for the use of e-learning caused only 32.3% of students to be well prepared to use the e-learning system. Therefore, it can be concluded that in order to effectively implement and apply e-learning, various dimensions investigated in this research should first be improved and promoted <sup>[20]</sup>.

In another study conducted by Malih and Anjin, in 2017, entitled "Analysis of Students' Online Learning Readiness Based on Their Emotional Intelligence Level" the following results were generally obtained from this research:

- There is a significant relationship between students' online learning readiness and their emotional intelligence dimensions; and the study also showed
- People with higher level of social skills of the subsets of emotional intelligence, have higher levels of online readiness <sup>[21]</sup>.

In 2015, Dewey et al. used the Quotient Emotional BarOn (EQ-i) questionnaire to develop and adapt psychometrics in Bahasa, Indonesia. The authors believe that the concept of traditional EI in the West, which has been well developed and indicates the extroverted characteristics, narcissism and appropriateness of individuals in a modern neo-capitalist society, may be the end result in Indonesian society<sup>[22]</sup>.

Students' performance in online learning environments is associated with their readiness to adopt a digital learning method. The traditional concept of readiness for online learning is related to students' competence in using technology for learning purposes. In 2020, Bazdar et al. presented a research entitled "Emotional Intelligence as a Determinant Factor of Readiness for Online Education". In this research the psychometric aspects of students' readiness for online learning has been investigated. An important question of the research was how the students' emotional intelligence existing in this sample predicts their readiness for online learning. The Wong and Law Emotional Intelligence Scale (WLEIS) measures four aspects of emotional intelligence. Pearson correlation coefficients show that students' readiness for online learning has a significant and direct relationship with emotional intelligence and its four indicators (including self emotions assessment, others' emotions assessment, use of emotions, and emotions regulation). Through multiple regression analysis it was concluded that emotional intelligence has a considerable effect on students' readiness for online learning. The students' emotional intelligence existing in the sample explains a large part of the variance (29.1%) of their readiness for online learning. This research enhances the possibility of adopting educational strategies that strengthens students' emotional intelligence and other psychometric abilities in order to improve their readiness for online learning<sup>[23]</sup>.

## Conclusion

E-learning readiness means the ability and capability that e-learning users must have in order to be able to feel comfortable using e-learning environment as an alternative environment (basic knowledge and skills that e-learning students must have in order to be able to feel comfortable in using this learning environment).

E-learning, as well as increasing its attractiveness for learners has caused the creation of concerns about the quality of this type of learning. But one of the cases that alleviates this concern is the student's performance in e-learning. Accordingly, if we can examine the relationship between people's emotional intelligence and their readiness ratio for e-learning, we hope to be able to reduce some part of the concerns.

The components of emotional intelligence include self-awareness, self-regulation, self-motivation, empathy, and social skills. People with high self-awareness always welcome new information and experiences in a way that they even learn from their reactions to others. Therefore in respect of the acquisition of skills such as skill in information technology, scientific

methods of search, and so on they will be more capable. Moreover, when the characteristic of self-awareness is at a high level, in addition to the mentioned results, it will lead to more participation and learning and acquiring new knowledge in the form of classmate groups, that these cases include desirable characteristics in e-learning readiness; self-awareness includes self-confidence which is one of the important factors in e-learning. The second dimension: Self-Regulation: The second dimension of emotional intelligence is self-regulation, that people with high self-regulation, are flexible people who adapt themselves quickly to changes and have a high ability to participate, these people in group activities and like what exists as scientific discussions in the forums and also in sharing their ideas and opinions and cooperation act very successfully. High self-awareness is completely related to the topic of self-directed and person-centered learning, and also has a role in time management; in addition it has an important role in build-oriented learning and about the exchange of collective opinions, all of which are important cases in e-learning readiness. The third dimension in emotional intelligence is self motivation that people with high and strong motivation are usually very active and determine great goals for themselves and are always looking for ways to do tasks better in order to achieve their goals and have a high sense of responsibility and commitment and try to end the tasks before the deadline, so they will act more successfully in features such as time management, responsibility, motivation and passion. The fourth dimension in emotional intelligence is empathy. People with high empathy are able to understand the ratio of their influence in relationships with others and realize the effect of the force of behavior and mutual emotions with others. By interpreting the various conditions of these forces, they achieve the best result. Having this feature, they act more successfully in group activities, in discussions in the halls, and also in carrying out joint scientific projects, and it is necessary for scientific exchanges with other students and group activities to be able to accept others' opinions, and having an empathetic approach in e-learning has a significant role. The fifth dimension: Social Skills: The ability to interact with others that can help improve verbal and nonverbal skills of leadership and management, including effective listening skills, and its application especially shows itself when the student takes the leadership of a discussion in the hall and can manage the ratio of contributions and increase the efficiency of the collection through specific feedback to the opinions of individual students based on their opinions and the ratio of their cooperation. Therefore, emotional intelligence is considered as a strong predicting factor to investigate performance. It is hoped that this research can be helpful, useful and effective.

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