



## **A survey of English teachers' attitudes toward the interactions of educational components in conventional, virtual and hybrid learning**

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### **Abstract**

The purpose of this study was to investigate English teachers' attitudes toward the interactions of educational components in conventional, virtual, and hybrid learning. Therefore, this study is a quantitative, descriptive, and survey study. The statistical population of the present study includes language teachers in Tehran during the academic year 2021-2022. Using the method of random sampling, 150 of them were selected as the sample for this study, and the questionnaire of Karimi et al. (2020) was used to collect data. The content validity of the questionnaire was assessed by experts in the field, and its reliability was evaluated using Cronbach's alpha test. The research data were analyzed using the t-test to compare the mean scores and the Friedman test to rank the teaching methods. The results indicate that teachers' attitudes toward the interaction of educational components with a variety of conventional, virtual, and hybrid teaching methods are desirable ( $p < 0.05$ ). In addition, the ranking of the three teaching methods showed that the hybrid, virtual, and conventional methods ranked first to third, respectively. Based on the research results, it is recommended for the administrators of the education system to be more cautious when teaching languages using e-learning methods.

**Keywords:** Interactions of educational components, conventional learning, e-learning, hybrid learning



## Introduction

Learning is the most basic process according to which a helpless being interacts with its environment and over time becomes a changed human being and its cognitive abilities and thinking capacity become limitless, which has led to the formation of various educational institutions with the aim of learning, which try to create effective educational interactions by designing various environments. Nowadays, with the changes in educational methods and the emergence of different and numerous educational methods in the field of education and learning, interaction has also undergone changes, intentionally or unintentionally, which are sometimes constructive and positive and sometimes negative and undesirable (Allouch, G., & Alshanbari, 2022). Interaction is a very important factor in the learning-teaching process, and various forms of interaction are one of the basic features of formal and non-formal education. Interaction means connection or relationship (Molayan, 2102; adapted from Ebrahimzadeh and Masoumi Fard, 2017). In 1916, John Dewey introduced a practical concept of action-based education that illustrates educational experiences as interaction between a person and what shapes his or her environment at a given time. He considers interaction to be the main element of the educational process and believes that this interaction occurs when learners make a series of changes to the information given to them by others and use individual functions and values to create their own knowledge. Paloff and Pratt (1999) also believe that the interaction between students themselves, the interaction between teachers and students, and the involvement in learning resulting from these interactions are key to the learning process (Bakhtiari, 2008). According to Moore (1989) and Grayson Anderson (2003), the interaction of educational elements is divided into six types of interaction. Teacher-teacher interaction, which is the most important basis of society and teachers' work. From a constructivist point of view, the presence of such interaction is essential to create the multiple perspectives necessary for the development of education in complex areas, especially in multicultural areas specific to e-learning (Garrison, D. R., Terry Anderson, 2003; after Zarei Zavaraki and Safaei Movahed, 2005). The second category of interactions is student-learner or learner-learner interactions. Interaction with classmates is a very important element of learning; The ability and opportunity to effectively participate in groups and communicate with classmates leads to the development of communication skills that have a great impact on individual success (Kamal Kharazi et al., 2016). Students not only learn from their teacher, but they also learn the issues, beliefs, and expectations by discussing them with other students (Zoofan, 2004). Adults, and especially professional learners, also benefit greatly from communication and interaction with people who share common professional concerns. Today's technology enables social and group learning through computer conferencing. Participation in group and hands-on activities that learners engage in to learn leads to the formation of a human and collective effort for conceptualization and a genuine learning. (Zamani and Azimi, 2008). As for the interaction between teachers and learners or between teachers and learners, we know that the teacher is at the center of teaching and conveys the subject matter to learners in the best possible and understandable way. It is clear that he must be able to lead the class and create the desired behavior, relationship and interaction to deliver this content, because the right



relationship can make the class climate attractive and lovable for the students. Needless to say, one of the most important tasks is the ability to lead the class and create the desired behavior and good and effective relationship with students. In order to lead a class, effective and appropriate communication must first be established between the teacher and the student, and in order for this relationship to be established, the teacher must possess a number of skills and abilities. A competent teacher can use a variety of methods to establish and strengthen communication between him or her and a student. Skills and abilities such as: Avoiding harsh and repeated punishments, avoiding jokes, avoiding unfair judgments, expressing interest and attention to the student, respecting the students, being kind and loving, paying attention to their opinions, etc. The most important thing is the role of the students themselves in building a good relationship with the teacher. If students can communicate with their teacher, they can greatly reduce their educational, learning and behavioral problems, and the classroom environment becomes more desirable and popular for teaching and learning (Maleki, 2018). Among the other types of interaction is the teacher's interaction with content. This is because content is one of the bridges between teachers and students, and one of the most important roles of teachers in e-learning and traditional teaching is to develop and use content (Aziz et al., 2022). This useful network provides teachers with the opportunity to search for, use, and sometimes even create learning materials. These learning materials are automatically updated by other content factors of innovative and new data and environmental sensors and research results (Garrison, D. R. & Terry Anderson, 2003; after Zarei Zavaraki and Safaei Movahed 2007). On the other hand, working with the Internet can prevent researchers from spending too much time collecting material and allows them to read their preferred material frequently and search for and save previous editions of publications at any time in a very short time. This capability of the Internet in terms of e-learning shows that with the help of this network, teachers and learners are able to deliver distance education live, with audio and video anywhere in the world, without any restrictions in terms of location and geography, politics and society (Afzalnia, 2005). Interaction between students and content also takes up a large portion of students' time in all types of education. Content is the factor through which a student learns. In conventional classroom-based education, student interaction with content means studying texts and library resources. However, in web-based e-learning structures, content may be presented on screens or on paper. In these structures, however, content is often accompanied by a rich array of computer-based learning, simulations, microdata, and creative presentation tools so that teachers and students have access to a variety of content (Garrison, D. R. & Terry Anderson, 2003). However, access to information does not automatically increase learners' knowledge. In order for learners to effectively use e-learning methods, it is important and essential to train and practice information use skills. (Sarkararani and Moghaddam, 2003). The next interaction is the interaction of content with content, which is actually a new and developing type of interaction in e-learning, where content is programmed to interact with other computer information sources and is constantly updated through the acquisition of new skills. (Holmberg, 1985). Access to such content, which is in line with the latest scientific and technological achievements, is itself one of the factors that



increase the quality of learning in e-courses. (Georgieva, Todorov, Smrikarov, Mohanty, 2009). The interaction of content with content determines the ability to relate different topics to each other and find similarities and differences between them, and in this way, comparing and considering different types of content and topics becomes an easy task for us. Imagine a time when content automatically captures different senses, updates itself, and notifies teachers and students when changes have been made at an acceptable level. The most obvious example of this is Internet search engines that constantly search various networks and send their results to central databases. So these six interactions have always taken place in various forms in the classroom. Nowadays, with the changes in educational methods and the emergence of different and rich educational methods in the field of education and learning, interaction has changed, intentionally or unintentionally; and these changes can be constructive and positive or negative and useless. Among the factors that change the scope, form, and process of interaction is the type of teaching methods used in the classroom. Therefore, we need to pay enough attention to the factors that influence these interactions and be able to control and manage them to improve the teaching-learning process. One of the teaching methods is web-based or virtual learning, which is the use of the Internet and other related technologies to transmit, support, and enhance education, learning, and assessment (Popovik et al., 2005). The terms e-learning, e-instruction, distance learning, open learning, e-learning, and multimedia learning are also used to describe this type of education. Virtual or e-learning differs from other methods in the role of teachers and learners, communication, interaction, and flexibility. This type of education can be delivered through virtual technologies such as the Internet, audio, videotape, satellite broadcast, interactive TV and CD-ROMs (Imel, 2002: 3). Another type of teaching method is conventional teaching. In conventional teaching, the teacher is present in the classroom and teaches the material immediately and live. In this type of teaching, the teacher faces the students directly, sees their reactions, and responds to their answers through face, words, and body language. The teacher can also simultaneously review students' assignments and projects and monitor their work. Another method is blended instruction. In this type of teaching, it sometimes happens that teachers teach in the classroom and conduct half of their lessons through virtual media or the Internet. For example, a teacher may give students homework and a project over the Internet before the class begins, and then he or she may teach the subject in person in class using that homework and project and ask students to complete the homework and exercises again over the Internet. The teacher can provide students with an audio or video tutorial and ask them to do hands-on work and related projects in the traditional classroom. As it seems, different forms of instruction have different effects on other dimensions of instruction and related interactions due to their content characteristics and different structural contexts. Thus, the present study attempts to examine the effects of these three educational methods, namely virtual, conventional, and hybrid, on the interactions of the educational components. A review of previous research in this area shows that few studies have investigated the effects of these three conventional, virtual, and hybrid teaching methods on the interactions of educational components among language school students simultaneously. Accordingly, it is necessary to investigate the role of each of the



variables of conventional, combined, and virtual teaching methods on the interaction of educational components, including learner-learner, learner-teacher, learner-content, teacher-content, teacher-teacher, content-content, on language learners of language schools. The reasoned results of this research have helped educators and teachers to create, plan and guide desirable pedagogical interactions, and will be a step towards improving multiple interactions in various pedagogical methods to enhance the teaching-learning process. On the other hand, language teaching in the field of interaction of pedagogical component has been neglected and the extent of the influence of pedagogical methods on these interactions. The teaching methods of this course are also implemented by the change of living conditions and necessities of the current century in the form of distance education, virtual and web-based teaching, and also in the form of face-to-face and conventional or hybrid teaching. Therefore, it is necessary to carefully analyze the experiences of English teachers in relation to the interaction of educational elements. Based on the above, this study attempts to answer the following research questions:

1. What are the attitudes of English teachers towards the interaction of educational elements in e-learning?
2. What is the attitude of English teachers towards the interaction of educational components in conventional teaching?
3. What is the attitude of English teachers toward the interaction of educational components in combined instruction?
4. Which teaching methods do English teachers think are better for promoting interaction among the components of instruction?

### **Research methodology**

Each research uses a specific method according to the objectives it pursues. The purpose of this study is to investigate English teachers' attitudes toward the interactions of educational elements in conventional, virtual, and hybrid learning. For this reason, this study uses a quantitative method, a descriptive survey, both in terms of objectives and data collection. The statistical population of this study includes English teachers in Tehran. 150 teachers were selected as the sample size for this study using random sampling method. Karimi et al. (2020) questionnaire was used to collect the results. Content-based validity was used to evaluate the validity. The questionnaire along with the objectives was provided to the experts in the field and after reviewing, their corrective opinions were taken into consideration. To measure the reliability of this study, Cronbach's alpha coefficient was used in SPSS software. After confirming the validity of the questionnaires in a pilot study, the questionnaires were distributed to 20 people from the statistical community and analysed, and the reliability of the questionnaire items was calculated



as 0.89. The results of this study were analysed using the t-test, and the Friedman test in SPSS software version 20 was used for ranking.

## Research Findings

**Table 1- Descriptive statistics of research variables**

Component	Number	Range	Minimum	Maximum	Average	Standard deviation	Variance
Electronic learning	150	1.67	1.33	3	2.2	0.45799	0.21
Conventional learning	150	1.4	1.6	3	2.04	0.43423	0.189
Hybrid learning	150	1.5	1.5	3	2.38	0.41723	0.174

The data in Table 1 shows that the range of e-learning scores for instructors is 1.67, the minimum score is 1.33, and the maximum score is 3. The average score for e-learning is 2.2. The standard deviation and variance of e-learning scores are 0.45799 and 0.21, respectively. To test the research hypotheses, Student's t-test for one sample is used. This compares the average score of each component to the midpoint of its 3-choice spectrum (i.e., 2). If the average of a hypothesis is above 2, it means that the average score of this component is above the average and therefore the hypothesis is confirmed, i.e., the component is at the desired level. However, before applying this test, we need to make sure that the average scores of each component are normal. Since the sample size for the teachers (50 subjects) is more than 30, the assumption that the average values of the teachers' components are normal cannot be rejected. Therefore, Student's t-test can be used to test the average value. We now turn to the research hypotheses.

First question: what is the attitude of English teachers towards the interaction of educational components in e-learning?

**Table 2- Descriptive statistics of the component of e-learning of teachers**

Component	Sample size	Average	Standard deviation	Mean deviation
e-learning	150	2.2	0.45799	0.06477



Table 2 shows that the average score of e-learning of trainers (2.2) is higher than average. We will now examine this using a statistical test.

**Table 3- t test results related to the first hypothesis**

Component	Value of test statistic	Degree of freedom	The significance level	Mean difference	95% confidence interval for mean difference	
					Lower limit	upper limit
					e-learning	3.088

Table 3 shows that the null hypothesis is rejected with an error of five percent because the significance level of the test, i.e., 0.003, is smaller than the test error, i.e., the value of 0.5. Now, considering the positive upper limit and the lower limit of the confidence interval for the mean difference, we find that the average score of the first hypothesis is greater than 2. (Of course, this conclusion is also possible because of the mean difference of this component (0.2), which is positive.) Therefore, the first question, namely, the attitude of English teachers towards the interaction of educational components in e-learning, was considered desirable.

Second question: What is the attitude of English teachers towards the interaction of educational components in conventional teaching?



**Table 4- Descriptive statistics of the component of conventional learning of teachers**

Component	Sample size	Average	Standard deviation	Mean deviation
Conventional learning	150	2.204	0.43423	0.06141

According to the above table, the average score of conventional learning of teachers (2.204) is higher than the average of 2.

**Table 5- t test results related to the second question**

Variable	Test value=2					
	Value of test statistic	Degree of freedom	The significance level	Mean difference	95% confidence interval for mean difference	
					Lower limit	upper limit
Conventional learning	3.322	149	0.002	0.204	0.0806	0.3274

According to Table 5, because the significance level of the test is less than the 0.05 error, the zero hypothesis is rejected with a 5% error. As a result, the average score of conventional learning of teachers is significantly different from 2. Therefore, due to the positive upper and lower limits of the confidence interval for mean difference or the mean difference which is positive, the second question of the research that was the attitude of English teachers towards the interaction of educational components in conventional education, was considered desirable.

Third question: What is the attitude of English teachers toward the interaction of educational components in combined instruction?

**Table 6- Descriptive statistics of the component of hybrid learning of teachers**

Component	Sample size	Average	Standard deviation	Mean deviation
Hybrid learning	149	2.38	0.41723	0.05901

According to the above table, the average score of hybrid learning of teachers (2.38) is higher than the average of 2.





**Table 7- t test results related to the third question**

Variable	Value of test statistic	Degree of freedom	The significance level	Mean difference	95% confidence interval for mean difference	
					Lower limit	upper limit
					<b>Test value=2</b>	
Conventional learning	6.44	149	0.001	0.38	0.2614	0.4986

According to Table 7, because the significance level of the test is less than the 0.05 error, the zero hypothesis is rejected with a 5% error. As a result, the average score of e-learning of teachers is significantly different from 2. Therefore, due to the positive upper and lower limits of the confidence interval for mean difference or the mean difference which is positive, the third question of the research that was the attitude of English teachers towards the interaction of educational components in hybrid education, was considered desirable.

Fourth question: Which teaching methods do English teachers think are better for promoting interaction among the components of instruction?

Finally, in order to investigate the importance of the components of the questionnaire and to rank the types of education from the perspective of teachers, the non-parametric Friedman test was used.

**Table 8- Summary of non-parametric Friedman test results**

Number	150
Pearson test statistics	7.959
Degrees of freedom	2
The significance level	0.019

Significance level of the table (8) shows that the order of importance of the components of the trainers' questionnaire are significantly different.

**Table 9- Ranking of types of education**

Components	Average rating
Virtual learning	2
Conventional learning	1.72
Hybrid learning	2.28



Table 9 based on Friedman non-parametric test, indicates that among the types of education, hybrid learning is in the first place with an average rank of 2.28; In the second place of importance e-learning with an average rank of 2 and finally in the third place of importance is conventional education with an average rank of 1.72.

### Discussion and conclusion

The purpose of this study was to investigate English teachers' attitudes toward the interactions of educational elements in conventional, virtual, and hybrid learning. For this purpose, a sample of 150 English teachers in Tehran was selected using the random sampling method. Of these, 89 were men and 61 were women, 38 had less than 10 years, 96 had between 10 and 20 years, and 16 had more than 20 years of professional experience, 41 had a bachelor's degree, 69 had a master's degree, and 40 had a doctorate. The t-test and Friedman test were used to analyze the research results. The research results show that considering the positive upper limit and lower limit of the confidence interval of the mean difference, the average score of the first hypothesis is greater than 2. (Of course, this conclusion is also possible due to the average difference of this component (0.2), which is positive. (Therefore, the attitude of English teachers towards the interaction of educational components in e-learning was considered desirable. According to Friedman test, the order of importance of e-learning indicators for teachers is not significantly different. The results of this hypothesis are consistent with the research findings of Tabasi and Seyedi Nazarlou (2019) and Ebrahimzadeh and Masoumi Fard (2017) and Shahidi and Sanayei (2013). The results of the second research question show that the null hypothesis is rejected with an error of 5% because the significance level of the test is less than 0.05. As a result, the mean score of teachers' conventional learning is significantly different from 2. Due to the positive upper and lower bounds of the confidence interval for the mean difference or the mean difference being positive, the second research question, English teachers' attitudes toward the interaction of educational components in conventional teaching, was considered desirable. According to Friedman test, the order of importance of conventional learning indicators is not significantly different for teachers. The results of this hypothesis are consistent with the research findings of Niko Bakht et al. (2019) and Muramatsu and Wangmo, (2020). The results for the third research question show that the null hypothesis is rejected with an error of 5%, as the significance level of the test is below the 0.05 value. As a result, the mean score of teachers for e-learning is significantly different from 2. Based on the positive upper and lower bounds of the confidence interval for the mean difference or the mean difference, which is positive, the attitude of English teachers toward the interaction of educational components in combined instruction was considered desirable. According to Friedman test, the order of importance of hybrid learning indicators for teachers is also not significantly different. The results of this hypothesis are consistent with the results of the research conducted by Moradi Mokhles et al. (2017) and Reem et al. (2018). The Friedman test was used to evaluate the priority and importance of the type of education and its interaction with the educational components. The results show that hybrid learning ranks first with an average rank of 2.28; second in importance is e-learning with an



average rank of 2; and finally, third in importance is conventional education with an average rank of 1.72. The results of this hypothesis are consistent with the results of the research conducted by Armin (2017) and Mahdiun et al. (2016). Based on the comparison of the research results on the three methods of conventional, virtual, and hybrid learning, e-learning is a virtual learning environment in which the learner interacts with the content, other learners, or instructors using information and communication technologies. Thus, virtual interaction is a different type of interaction than in traditional teaching. In the e-learning environment, the teacher and the learner are separated in time and space, and the learner interacts with the teacher, classmates, and other people or resources to perform individual and group learning activities using computer facilities. Since interaction is the most important type of activity in the teaching-learning process and learning is the result of interaction between educational elements, in e-learning environments, if learners are expected to reach a level beyond knowledge, their experiences must be included and they must have the opportunity to interact with information and other learning elements such as other learners and teachers. E-learning allows extensive interactions, both simultaneous and asynchronous, to access extensive information and communication, using new technologies such as the Internet, e-mail, blogging, webcams, audio and video conferencing, chat rooms, etc.; possibilities that were very limited and insignificant in conventional education. Therefore, in order to achieve effective teaching and learning, professors, teachers, and educators in e-environments need to be familiar with the types, forms, and tools of two-way communication and interaction among the elements of education with each other, and through the selection and use of appropriate and diverse tools for interaction in different educational situations, achieve the ultimate goal of education, which is effective learning. According to the findings of this research, it is suggested that education authorities should try to make the government aware of the importance of English teaching as an educational tool and fully explain the conditions and facilities required to achieve the desired level of English teaching.

Educational policy centers, especially the Ministry of Education, in their policies use the up-to-date standards of reputable university centers (Cambridge, Westminster, etc.), valid international standards have more compatibility with language learning courses in schools and colleges, and use them to meet the needs and motivate educators and language learners, and should also include these standards in the curriculum. Taking into account their ideas, needs, interests and motivations in education, whether in conventional, hybrid or virtual, will greatly help to refine the program and implement properly.



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