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Original Article

An Investigating into cultural characteristics of e-education learners: A case study of virtual students of Payam Noor University of Khuzestan

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Abstract

One The issue of culture is very important in the field of e-education. Accordingly, the purpose of present study was to investigate the learners' cultural characteristics of e-education at PNU. The research method was descriptive and the instrument was a researcher-made questionnaire which was designed based on the four dimensions of Hofstede's cultural theory. These four dimensions investigated were power distance, uncertainty avoidance versus uncertainty acceptance, masculinity versus femininity, and collectivism versus individualism. Its content validity was determined by experts and its reliability was estimated using Cronbach alpha (83%). Participants were the students of PNU in Khuzestan province, who were studying in e-education courses in the academic year 2021-2023, and 897 participants responded to the online questionnaire using the available sampling method. Mean, standard deviation and one sample t-test were used for data analysis. The results compared with the test value of number three revealed: the mean of cultural characteristics of learners in PNU students in power distance are higher than that of the society mean, and the mean of the uncertainty avoidance factors is higher than the society mean and the mean of the factors of Uncertainty acceptance is lower than the society mean, in the dimension of masculinity verses femininity in both factors, the mean is higher than the society mean, in the dimension of collectivism verses individualism, mean of the factors related to collectivism is lower than the society mean and the mean of the factors related to Individualism was higher than the society mean. The research results provide guidelines for the design and implementation of e-learning courses.

Keywords

culture; e-education; e-learning; learners' cultural characteristics; Hofstede's theory.

Introduction

In Due to the rapid growth of Internet technology and especially the spread of the Covid-19 around the word, electronic education has become an important tool for the development of higher education in most countries, in the way that many students with diverse cultural, social, religious, linguistic and economic backgrounds uses this type of training.

Therefore, with increasing these users, educators and educational designers are required to be aware of cultural factors that affect the learning experiences and academic performance of students (Allen & Seaman, 2015). Culture is a term related to traditions, patterns, habits, values and common beliefs in a society or a specific group of people (Nsenga, 2018) and gives identity to the distinctive characteristics of the people in a country (Alshare, et al., 2011). Therefore, each country has special learning patterns and behaviors to meet its own criteria (Bozkurt, Yazıcı, &

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Aydin, 2018).), as a result, a strong relationship between learning patterns and culture is established (Yamazaki, 2005). The importance of the cultural characteristics of the learner in e-learning environments has been cited for various reasons, including the relationship between the regulation, design and development of e-learning environments with specific cultures and ensuring the success and acceptance of these systems in diverse cultural environments (Olaniran, Rodriguez, & Williams, 2010) and the relevance of electronic learning with issues such as obedience, honor, respect, attention to the power and mutual relations of friendship based on attitudes and cultural characteristics (Joshua, Nehemiah, & Ernest, 2015), the influence of cultural attitudes on the analysis of the role and duties of the learner and teacher in electronic education environments (Sarı & Yüce, 2020), practical implementation Constructivism based on the analysis of ethnic and racial cultures and acknowledging the traditions and beliefs of these minorities in educational environments(Henderson, 2007) and the importance of cultural models as a guide for designing, producing and evaluating educational products(Young, 2008).

Therefore, it seems that the cultural characteristics of learners can provide cognitive, motivational and behavioral support requirements for electronic education systems. However, despite the fact that these features can be effective on various dimensions such as the type of educational design, dominant educational values, basic preferences of the audience, normative resources and products of electronic education systems can be effective, but still not enough researches has been done in this field in Iran and there is a serious lack of research resources in this area. In addition, the cultural characteristics of learners should be comprehensively investigated and narrated at least once from the learner's view point and not their teachers. On the other hand, since Payam Noor University, as the main deputy of the distance education system, plays a significant role in the development of the country's higher education system, it is necessary to determine the cultural characteristics of the students of the e-learning system of this university, as well as appropriate measures and programs for designing, developing and The ability to use this type of system based on national culture should be adopted and a synergistic and balanced environment should be created to fulfill the mission of electronic education in Iran. Based on aforementioned documents, the research question of the present study is the investigation of cultural characteristics of learners in the electronic education system at Payam Noor university of Khuzestan. Hofstede's cultural theory was used to examine these characteristics. The reason for choosing this theory as the underlying framework of the current research is its importance and numerous references in cultural quantitative researches in different countries. Thus, the regulation of main research questions are as follows:

Q. (1): What is the cultural situation of Iranian learners in terms of power distance in e-learning environments?
Q. (2): What is the cultural situation of the Iranian learner in the dimension of uncertainty avoidance versus uncertainty acceptance in e-learning environments?
Q. (3): What is the cultural situation of the Iranian learner in terms of masculinity versus femininity in e-learning environments?
Q. (4): What is the cultural situation of the Iranian learner in terms of collectivism versus individualism in e-learning environments?

Theoretical Frame work and Literature review

Hofstede's theory has been widely cited as one of the most important theories of learning of the cultural characteristics of learners in e-learning environments. Hofstede has proposed various dimensions to explain the motivations and people's behavior in different cultures, while Hofstede's other cultural dimensions are very useful for understanding the people's culture in societies, but they have not been given much attention in education, and are mostly focused on the four important dimensions in educational researches which are as follows:

Power distance (PD) which is related to different solutions and issues of human inequality (Hofstede, 2011) and measures how subordinates react to authority and power, and how unequal distribution of expected and accepted power in society (Salim, & Isa, 2021). In societies with a low power distance, there are informal relationships between the learner and the teacher, discussion with the instructor, spontaneous participation of the learner, a learner-centered process, a focus on the initiative and the development of independent thinking of the learner, but in societies with a high power distance, there are formal and hierarchical relationships between the learner and the teacher, teacher-centered education, the teacher is seen as the creator of the learner's intellectual paths and the initiator and guide of class communication and not asking questions from the teacher. Therefore, in countries with a low power distance, learning occurs due to the mastery of the learner, and in countries with a high power distance, learning is highly dependent on the ability of the teacher (Alqarni, 2023). In addition, because in societies with a high power distance, the teaching force is considered more powerful and superior than the learner; promoting respect and fear among learners in classroom interactions with the teacher (Barrett, 2013), unwillingness to participate in debating activities in the presence of the teacher (Omidvar, et al., 2012), lack of ability to challenge the teacher's knowledge and consider them as experts (Masoumi, 2006), high dependence on teacher's guidance and training, low independence in learning and low learner's ability to self-regulate is seen (Hanum & Silvana, 2019).

Avoid uncertainty versus Uncertainty acceptance : this characteristic includes society's tolerance and expresses the level of comfort or discomfort of people in unstructured conditions or unknown situations (Hofstede, 2011). This can be done by reacting to a perceived threat in uncertain situations by avoiding or accepting it. In cultures with low uncertainty, the learner feels comfortable in an unstructured learning environment (Alqarni, 2023), yet in cultures with high uncertainty, the learner may be reluctant to participate in activities that expose them to the risk of negative evaluation by teachers or classmates, and feel uncomfortable when using a learning method, such as autonomous learning, which he is not used to it (Shebani, 2018).

Masculinity versus Femininity: the difference between societies in the amount of emphasis on specific gender roles and expected behavior for both sexes is the focus of this characteristic (Salim, & Isa, 2021). Perhaps this amount of emphasis on the separation of expectations from gender-related roles and behaviors has an effect on people's attitudes in the type of elective course (face-to-face/electronic) and people's ideas about limits and boundaries in interactions.

Collectivism verses individualism also means examining the relationships within society and individuals (Hofstede, 2011). The individualism index takes into account self-reliance, competitiveness, aggressive creativity, and insecurity (Ansari & Khan, 2020) and the importance of identity, rights and needs, and individual will. And the collectivism index considers group rights, intra-group harmony, the spirit of cooperation and loyalty among group members (Speece, 2012). While individualists are specifically directed towards personal goals, collectivists tend to make significant contributions to the group, because their success and behavioral motivations are generally guided by group identity (Zhu, 2012). Therefore, individualists do not want to work in groups because teamwork means working together to achieve group goals rather than individual goals, and it may be difficult for individualists to recognize and determine the individual contribution of the final results of group work (Triandis, & Suh, 2002; Popov, et al., 2012). On the other hand, collectivist learners also value receiving academic help in learning if needed due to their commitment to group and family values, and individualistic learners may have values such as a sense of competition, autonomy, and the desire to be the best that can increase the value of learning and have a great impact on their desire to learn and achieve goals (Donohue, 2021). In e-learning environments, collectivist learners tend to be considered as members of student groups, but individual learners need direct communication with the professor (Salim, & Isa, 2021).

According to aforementioned theories many researches have investigated the cultural

characteristics of learners, as indicated in a research by Tlili et al.(2021) because of the teacher-oriented learning culture in Tunisia, where educational environments instead of supporting learners by engaging them in interaction, discussion, feedback, and deep thinking, they often lead learners to passively receive academic content. Even with the shift to online learning, passive learner behavior continues because students mostly engaging in reading/uploading educational materials. In addition, many of them, due to uncertainty about online learning and avoiding a new and uncertain experience, finally changed their opinions about continuing virtual education courses. Because in societies with a high uncertainty avoidance index, people are more disposed to feeling threatened about uncertain or unknown situations, and therefore learners expressed more concern about this experience due to their lack of prior familiarity with distance education, because there is no written law about learning style or learner behavior and they were placed in an unfamiliar and unknown learning environment where the distribution of power was different from traditional educational environments. In addition, the high uncertainty avoidance of the learners was related to the way they participated in the discussions, because they tried to make less mistakes and being sure of correctness of their answers. On the other hand, due to the high power distance and low individualism, the learners had tendency to interact with their peers to understand academic issues, because the high respect for the teacher make them have no dare to ask the teacher questions.

Moreover, there was a relationship between the high level of femininity and the expectation from women not to show the desire and enthusiasm to do tasks like participating in discussions, however, women used discussions to communicate more and get more information about their classmates. Understanding this fact is also linked to the values of Arab culture, because in Arab culture, women in educational or non-educational environments must monitor their social boundaries in relationships with classmates, and for cultural reasons such as preserving traditions and the value of shame and social restrictions, they cannot feel free to discuss with their classmates. Therefore, unlike face-to-face training courses, online learning experience for women was a procedure to eliminate social pressure and engage more easily in discussions and exchange opinions about knowledge and information with peers and played an important role in maintaining face for them. Sundari, Marini, & Nafiah, (2023) also with examining the challenges of teamwork related to the students' culture in international educational context found that there are many differences between individualistic and collectivist students, the goals of individualistic students are specifically designed to realize and pursue personal goals While collectivist students tend to contribute significantly to the group's success, and their behavioral motivations are guided by common group identity, group cohesion, and task interdependence. Furthermore, individualists have a misinterpretation of the ultimate goal of teamwork and the level of commitment to this goal, and have a negative attitude toward intragroup communication. Ale-Yahya, et al., (2023) also found out that there is a relationship between the gender segregation culture of Saudi Arabia and women's use of e-learning (compared to men). Because women had a more positive attitude in terms of access to information and resources, receiving support and motivation, participation and cooperation, evaluation, feedback, critical reflection, knowledge construction and e-learning experience. Because women in Saudi Arabian culture before Covid-19, often interacted with conventional education. They did not have face-to-face access to male professors. Another research by Alasmari (2020) also revealed that despite the culture of gender segregation as a very strong pillar in the socio-cultural society of Saudi students, female students considered mobile learning as a means to fill gender gaps, that is, it is an easy way to access resources and course materials at any time and any place, submit assignments and projects in case of absence or without the need to move to the university, and a way to have a live conversation with male professors and meaningful interaction with them without the need to Physical presence and proximity to them, it means solving the challenges that were limiting them due to social, religious and cultural values. Thus, Saudi Arabian women significantly perceived the potential of mobile learning as a

way to bridge the reported gender gaps in teaching, content, educational opportunities, and participation in academic life. Singh and Al-Shammari (2021) also acknowledge that Saudi learners prefer models, structure and clear documentation in the educational and training system due to high uncertainty avoidance and following specific behavioral codes and encourage such a scenario of educational and training systems to clearly define the evaluation parameters and document the results accurately. Therefore, Saudi students tend to clear questions and do not prefer analytical and argumentative exams. By comparing the cultural characteristics of Spanish and German virtual students, Tinmaz and Lee (2020) have stated that there is a relationship between the collectivism of Spanish learners and their desire to learn through participation and group communication and the preference for group achievements and group actions and the individualism of German learners, and the desire for individual goal-oriented learning, individual achievement and individual comfort of communication. Paniker (2020) has also stated that the high power distance in India makes the teacher appear as the most important source of learning and determines the learning style in the class, and the learner is doubted to question him and respects him even outside the class. In addition, high uncertainty avoidance in India is also related to important indicators such as feeling more comfortable with structured learning environments, the importance of the teacher's praise for the accuracy of the learner's activity, and the uncertainty of the field of study in educational systems. Gaish et al., (2019) also compared the cultural characteristics of virtual learners in Austria and the Czech Republic and stated that Austrian students have a greater desire for clear and structured learning goals than Czech Republic students, this may be due to the need for a high level of confidence and task-centered orientation of Austrian learners. Correspondingly, regarding the preference for a fixed and integrated structure and educational materials as a tool to avoid uncertainty, it was found that Czech students had a higher tolerance for uncertainty, because the integrated form of educational materials was less necessary for Czech students, and this problem may be due to uncertainty and less power distance compared to Austrian students. Also, Austrian learners prefer educational materials produced by highly skilled experts, which in turn seems to highlight a high power distance. Hanum and Silvana (2019) also showed that due to the high power distance in the Indonesian educational system, the items such as lack of interest of the learner in online learning, the belief in the unequal position of the learner and the instructor, the belief that the instructor is more responsible for the success of the student's learning, dependence on the instructor in the learning process, positive view of the instructor's mastery in interactions, lack of belief and the need to participate in discussions as an essential part of the learning process, feeling of need for more face-to-face interaction with the instructor are existed. Also, the level of individualism of the learners was low and their collectivism was high, because a few students agreed with the proposition of acting as an independent person and its importance in personal growth, while a large number of students agreed with the proposition of social growth as the most important aspect in learning, moreover, there were the desire to participate in group exams, request for help from classmates and the positive response of classmates to this request in order to maintain the relationship. On the other hand, learners had high avoid uncertainty, Because the expectation of certainty in learning, avoiding doing activities with uncertain results, high belief in receiving the correct answer till experiencing the thinking process, high usage of books recommended by the instructor, the initiative of a small number of students to search for other supplementary resources, preference to participate in tests Instead of doing other reading assignments, preference for a face-to-face communication style and its effect on low participation in online discussion forums were observed, and because the nature of online discussion forums was asynchronous and there was no certainty whether the learner's questions were answered by the instructor or by others and there was no guarantee whether these questions would be answered immediately or not (need for quick feedback), the participation of the learners was very low. Damary, Markova & Pryadilina, (2017) also investigated the challenges of professors in relation to the individual culture of students in

international educational context found out that some learners do not accept the role of an active learner, as a result feel alienated and frustrated in electronic learning environments and they simply don't learn, and this often happens due to the difference in the understanding of cultural dimensions such as power distance, so that because the students from societies with low power distance are used to learner-centered learning environments, eager to start discussions, express personal opinions and personal disagreement, questioning and challenging the opinions of others and even instructors, but students from societies with a large power distance due to the habit of teacher-centered environments and considering the "Teacher" as the source of all wisdom, refrain from asking questions or expressing disagreement and this polarization of differences in understanding the role of the instructor significantly hinders online interactions and learning in general. Furthermore, because some students, especially students from parts of Asia, often cannot understand that learning is a social process, they face many problems in participating in forums. Because the activity in the associations may be related to their discomfort with the social change of the traditional class structure. Researches in the country also show that the cultural characteristics of Iranian learners in virtual education environments reflect the emphasis on face-to-face communication with the teacher and teacher-centered in these environments (FerasatKhah, 2009) and there is a teacher-centered culture, emphasis on learning through speech, lack of interest in forming research groups in Iranian virtual students (Attaran, et al., 2011). Also, academic professors also acknowledge that the cultural characteristics of Iranian learners in their attitude towards electronic education courses reflect the attribution-oriented culture, uncertainty avoidance, collectivism and high power, in the interaction with the teacher expressing high power and collectivism, in Teaching-learning methods it indicates high uncertainty avoidance and collectivism, and in favorable evaluation methods, it is aligned with the context (Noorani, et al., 2016).

Therefore, based on Hofstede's cultural theory, the aforementioned research backgrounds and as a result of what was said, the perceptual framework of this research presented as follow in Figure (1)

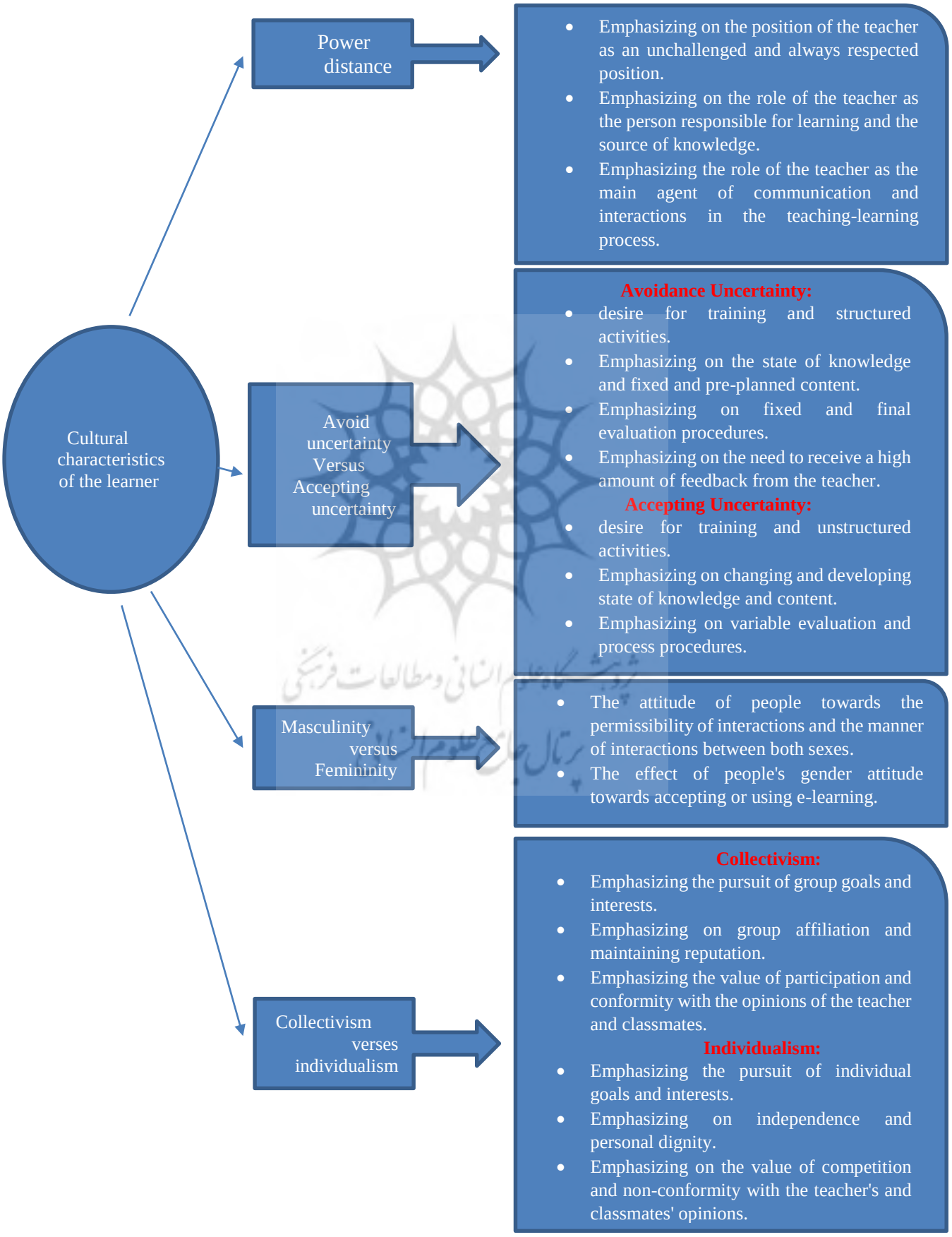
Cultural characteristics of the learner
Power distance
Emphasizing on the position of the teacher as an unchallenged and always respected position.
Emphasizing on the role of the teacher as the person responsible for learning and the source of knowledge.
Emphasizing the role of the teacher as the main agent of communication and interactions in the teaching-learning process.
Avoid uncertainty Versus Accepting uncertainty
Avoidance Uncertainty:
desire for training and structured activities.
Emphasizing on the state of knowledge and fixed and pre-planned content.
Emphasizing on fixed and final evaluation procedures.
Emphasizing on the need to receive a high amount of feedback from the teacher.
Accepting Uncertainty:
desire for training and unstructured activities.
Emphasizing on changing and developing state of knowledge and content.
Emphasizing on variable evaluation and process procedures.
Masculinity versus Femininity
The attitude of people towards the permissibility of interactions and the manner of interactions between both sexes.
The effect of people's gender attitude towards accepting or using e-learning.
Collectivism verses individualism
Collectivism:
Emphasizing the pursuit of group goals and interests.
Emphasizing on group affiliation and maintaining reputation.
Emphasizing the value of participation and conformity with the opinions of the teacher and classmates.
Individualism:
Emphasizing the pursuit of individual goals and interests.
Emphasizing on independence and personal dignity.
Emphasizing on the value of competition and non-conformity with the teacher's and classmates' opinions.

Figure 1. perceptual framework of the research

Methodology

In the present study, the researcher has made a beneficial usage of descriptive method and the research tool was a researcher-made questionnaire whose content validity was confirmed by twelve e-learning specialists and its reliability was estimated by Cronbach alpha with a value of (83%). This questionnaire has investigated the four cultural dimensions of power distance, uncertainty avoidance versus uncertainty acceptance , masculinity versus femininity, and collectivism versus individualism with the number of (18) factors and (100) Items. Dimensions, factors and items are presented in the aforementioned relevant figure and tables in this section (figure 1) and (table 1 to 6). A five-point Likert type scale of strongly agree, agree, no Idea, disagree and strongly disagree was used to determine the cultural characteristics of the learners. Power distance through three factors, emphasis on the position of the teacher as an unchallenged and always respected authority, emphasis on the role of the teacher as the person responsible for learning and source of knowledge, emphasis on the role of the teacher as the main agent of communication and interactions in the teaching-learning process. Uncertainty avoidance verses Uncertainty acceptance through seven factors, collaboration for education and structured activities versus collaboration for education and unstructured activities, emphasis on the state of knowledge and fixed and pre-planned content versus emphasis on the state of knowledge and developing content. Emphasis on fixed and final evaluation procedures against emphasis on variable and process evaluation procedures, and emphasis on the need to receive a high amount of feedback from the teacher. Masculinity verses femininity were scrutinized through two factors such as the attitude of people towards the permissibility of interactions and the manner of interactions between both sexes and the effect of gender attitudes of people towards the acceptance or use of electronic education. and collectivism verses individualism were surveyed through six factors, emphasis on the pursuit of group goals and interests, emphasis on Group affiliation and maintaining reputation, emphasizing the value of participation and conformity with teacher's opinions and classmates as determining factors of collectivism and emphasis on pursuit of goals and individual benefit, emphasis on independence and personal dignity and emphasis on the value of competition and non-conformity with the teacher's opinions and classmates as determining factors of individualism. The statistical population was the students of Payam Noor University in Khuzestan province, who were studying in e-learning courses in the academic year (2021-2023), and using the available sampling method, 897 of them responded to the online questionnaire. The demographic characteristics are listed in Table 7. Mean, standard deviation and one sample t-test were used for data analysis.

Table 1. cultural dimension of power distance, Factors and Items

Dimension	Factors	questions	Items
power distance	Emphasizing on the position of the teacher as an unchallenged and always respected position.	q1	It is necessary for the student to maintain the dignity and respect of the professor under any circumstances.
		q2	The professor should not be challenged or criticized.
		q3	Disagreeing with the professor's opinion is sometimes challenging.
		q4	You should always address the professor with respectful titles
		q5	Regarding the mistakes of the professors, it is better not to raise them with the professors at all.
		q6	If there is a criticism about the professor's behavior or teaching method, it is better to include it in the professor's evaluation than to share it verbally with him.
		q7	Having shame with the teacher helps to maintain a respectful relationship between the teacher and the student.
	Emphasizing on the role of the teacher as the person responsible for learning and the source of knowledge.	q8	When facing a scientific challenge, instead of referring to different sources (based on the web), one should refer to the professor.
		q9	The most important person responsible for student learning is the teacher.
		q10	The professor is responsible for planning the student's academic activities.
		q11	The professor must know all the answers to students' questions.
		q12	The master should always be available to fix the problems.
	Emphasizing the role of the teacher as the main agent of communication and interactions in the teaching-learning process.	q13	The master should always initiate and promote communication in the teaching-learning process.
		q14	The rules and regulations of group interactions must be determined and evaluated by the professor.
		q15	For learning, interacting with the professor is more important than interacting with other students.
		q16	If the professor is not present in the groups, it is useless to attend that group.

Table 2. cultural dimension of uncertainty avoidance, factors and items

Dimension	Factors	Question	Items
uncertainty avoidance	Desire for training and structured activities.	q17	Face-to-face training courses are more effective for me comparing to e-learning courses.
		p18	The method of structured education (that is, education with precise and specific steps in each level and a lot of guidance) is more attractive to me.
		q19	The teacher must be with the student in all stages of education step by step.
		q20	Questions with only one correct answer are better than questions with multiple answers.
		q21	How to do the homework should be explained and informed by the professor in a detailed and complete manner.
		q22	Education that is done through the teacher's explanations and there are conclusions from the topics in the book is valuable
	Emphasizing on the state of knowledge and fixed and pre-planned content.	q23	To answer the questions, you must refer to the sentences in the book
		q29	The source and content of the lesson must be clearly defined in advance
		q30	At the beginning of the course, even the volume and headings of the content should be specified and planned in advance.
		q31	Course content should be presented to the learner piece by piece, and after mastering each course section, new content and activities should be presented.
		q32	The learner should only acquire the fixed knowledge that the teacher deems appropriate
	Emphasizing on fixed and final evaluation procedures.	q45	The professor is the most qualified person to judge the student's learning
		q46	However, only the student's final grade at the end of the course shows his mastery and success in the relevant course
		q47	Tests should be resource-oriented and book-oriented
		q48	Multiple-choice tests are more suitable for student evaluation compared to descriptive questions
		q49	If the format of the tests are similar to the format of the previous tests in the study period, they can better evaluate the student's learning
		q50	To ensure the amount of learning, the student strongly needs the teacher's feedback
	Emphasizing on the need to receive a high amount of feedback from the teacher	q51	The teacher's feedback helps to increase the student's learning motivation.
		q52	The professor should always provide the student with information about the accuracy of his assignments (functional feedback).
		q53	The professor must provide the student with information about his competence (motivational feedback).

		q54	The professor should provide the student with information about whether his strategies are correct in doing the homework (strategic feedback).
		q55	The professor must provide information to the student about what his progress is due to (documentary feedback).

Table 3. cultural dimension of uncertainty acceptance, factors and items

Dimension	Factors	Question	Items
Uncertainty acceptance	Desire for training and unstructured activities.	q24	Unstructured training method (that is, training with general steps and a border lines at each step and little guidance) is more attractive to me, because I can guess the rest and go through the steps based on my own efforts and based on general explanations.
		q25	To complete the learning process, the teacher's presence is not necessarily required
		q26	You can learn by studying various web-based resources that exist in educational websites, and there is no need for the presence of the professor and his explanations.
		q27	The answers to course questions can be found in other ways such as related scientific links and other experts, and there is no need for the presence of the professor in the course.
		q28	I enjoy being in charge of my own learning and I can correct my learning deficiencies myself
	Emphasizing on changing and developing state of knowledge and content.	q33	During the learning process, the professor must adjust the educational resource and content with the help of the students
		q34	During the training course, if the professor and student decide, the topics of the training content can be changed
		q35	During the academic course, it is important to acquire the intellectual ability of the learner, even if the correct answers to the questions in the class and from the teacher are not obtained
		q36	If the course content changes during the course, it will not cause (student) confusion
	Emphasizing on variable evaluation and process procedures.	q37	To determine the student's success, his participation in the group is important
		q38	The opinion of classmates is very important to determine the success rate of a student
		q39	To determine the student's success in each stage of learning, evaluation should be done
		q40	A high quality scientific paper and project that is reviewed by several experts can replace the final exam
		q41	In the academic course, the course objectives should not be clear from the very beginning, later the student can plan important course objectives for himself during the course.
		q42	Learning how to do activities and homework is more important than the knowledge that the learner gets at the end of the course.
		q43	For the exam, I prefer explanatory and descriptive questions over multiple choice questions
		q44	It is better for the professor to use standard and high quality practical assignments instead of tests

Table 4. cultural dimension of masculinity versus femininity, factors and Items

Dimension	Factors	Question	Items
masculinity against femininity	The attitude of people towards the permissibility of interactions and the manner of interactions between both sexes.	q56	There is no problem with academic interactions between men and women (permitted).
		q57	Academic dialogue should only take place during class time, not outside of class time.
		q58	The use of video tools (web cam) is allowed in class communication and interactions between men and women.
		q59	Academic projects and assignments that cause more interaction between boys and girls are contrary to the principles of belief in our society, while I am against this belief.
		q60	The teacher should only give the homework to the group of male or female students, there should not be groups of both sexes, because the amount of learning and the accuracy of the assignments will decrease.
		q61	Assignments that are assigned only to the group of female students or only to the group of male students are completed faster and better.
	The effect of people's gender attitude towards accepting or using e-learning.	q62	Some fields of study in e-learning courses can be specific to a certain gender.
		q63	E-learning courses are more suitable for women than men.
		q64	E-learning courses are more suitable for men than women.
		q65	In our society, it is believed that virtual trainings are more effective for women.

Table 5. cultural dimension of collectivism, factors and Items

Dimension	Factors	Question	Items
Collectivism	Emphasizing the pursuit of group goals and interests.	q66	Doing homework in a group is more beneficial for student learning
		q69	I am more satisfied when I do homework in groups than when I do homework individually
		q70	When the homework is assigned as a group, I try harder to do it than when the assignments are assigned individually.
		q71	The great effort of the individual in the group should be used for the benefit of all
		q73	All members of the group must contribute to the final grade even if they performed less well on their tasks in the group
	Emphasizing on group affiliation and maintaining reputation.	q81	If students need help, they should be helped to do their homework
		q82	Classmates play an essential role in advancing academic goals
		q83	A good classmate is someone who always helps others and is available for guidance
		q84	During the academic period, support groups should be formed from the students of the class so that they can be consulted if needed
		q87	In case of scientific violation, one should try to explain the reason to others
		q88	In case of academic cheating in the exam, the academic

			image of people will be greatly damaged.
		q89	In our society, it is very important to protect the face of the other party, and in case of a student's academic misconduct, this issue should be given a lot of attention.
	Emphasizing the value of participation and conformity with the opinions of the teacher and classmates.	q93	Being useful in the group and spending time with the group members should be part of the main goals of the academic course
		q94	Just being in groups is valuable regardless of activity and competition with others
		q95	During the class discussion, if the opinions of others are contrary to one's opinions, one should refrain from commenting.
		q96	It is better to have only one person representing all the students to raise questions and problems with the professor
		q99	In groups, instead of reading messages and disagreeing with others' opinions, it is better for students to express their own messages and opinions.
		q100	A successful student prefers reading group messages to group messaging.

Table 6. cultural dimension of individualism, factors and objects

Dimension	Factors	Question	Items
Individualism	Emphasizing the pursuit of individual goals and interests.	q67	Doing homework individually is more beneficial for student learning.
		q68	Lessons that are determined individually will be completed faster and better.
		q72	If the professor defines the student's role at the very beginning of the group formation, it will be better known later whether the student has played his role to get the final grade in the group or not.
		q74	The individual's role in the success of group assignments should be clearly defined.
		q75	The teacher should give individual points for the amount of effort of the individual in the group.
		q76	We should not share our success strategies with other study groups in the class.
		q77	We should not share our success strategies with others.
	Emphasizing on independence and personal dignity.	q78	In pursuit of academic goals, a person only has the duty to pursue his goals.
		q79	A person is not responsible for the success of his classmates, everyone is responsible for his own success.
		q80	Everyone should search and follow successful strategies for their success.
		q85	In case of scientific violation, the person should clarify the reason of committing this violation for him/herself, it does not matter what others think about him/her.
		q86	If I commit a scientific violation and even others do not notice this, I will feel bad myself.
		q90	Anyone who commits scientific violation should be publicly reprimanded, no matter what the reason for doing it so.
	Emphasizing on the value of competition and non-conformity with the teacher's and classmates' opinions.	q91	Everyone should be given the same assignments so that it is possible to compare people's performance with others.
		q92	It is important to try to excel in the course.
		q97	It is better for a person to find the answers to his own questions in his own, than others find them for him.
		q98	In class discussions, students should express their own opinions regardless of the opinions of others.

Table 7. demographic characteristics of the participants

Gender	Frequency of respondents	Frequency
Female	786	%86.7
Male	121	%13.3
Total	907	%۱۰۰
Marital status		
Single	527	%40.3
Married	364	%58.4
Divorced	12	%1.1
No response	2	%0.2
Total	903	%۱۰۰
Academic year		
First	63	%7.1
Second	216	%24.4
Third	299	%33.7
Fourth	308	%34.8
Total	866	%۱۰۰
Major		
Humanities	823	%91.5
Science	66	%7.3
Engineering	8	%0.9
Art	2	%0.2
Total	899	%۱۰۰
Ethnic		
Persian	159	%17.6
Arab	378	%41.9
Loor	359	%39.8
Kurd	6	%0.7
Others	0	%۰
Total	902	%۱۰۰
Occupation status		
Student	707	%77.9
Working student	200	%22.1
Total	907	%۱۰۰
Aim of studying		
Just getting a degree	53	%5.9
Working promotion	136	%۱۵
Finding a Job	527	%58.2
Just the motivation of learning	64	%7.1
Just learning a skill	112	%12.4
Just social reputation	13	%1.4
Total	905	%۱۰۰

Findings

In this section, the findings related to the research questions are presented separately. Q.1: What is the cultural situation of Iranian learners in terms of power distance in e-learning environments? The first cultural characteristic was power distance. This cultural distance was measured using the mean of three factors, emphasis on the position of the teacher as an

unchallenged and always respected authority, emphasis on the role of the teacher as the person responsible for learning and source of knowledge, emphasis on the role of the teacher as the main factor of communication and interactions in teaching-learning process. The high mean value (higher than the test value of three) of the three factors indicated a high power distance. According to the results designated in table 8, it can be understood that the mean of all three factors are higher than the test value of the number three, so it should be expected that the distance between the learner and the teacher is high in all three factors. Also, according to the calculated t value of all three factors and the significance is less than (0.01) with 99% confidence, it can be said that the difference in the mean of all factors is also significant and it indicates that the mean score of the factor is higher than the mean of the society. On the other hand, the mean of the dimension in table 9 which is composed of the mean of the factors, indicates the high level of power distance between the learners and the teacher in electronic education environments. Moreover, considering the t value calculated in table 9 for this dimension and the significance is less than (0.01) with 99% confidence, it can be said that the difference between the mean of the power dimension and the mean of the society is also significant.

Table (8) the results of the learner's cultural characteristics in the power distance

Factors	Factors' mean	T	Sig.
Emphasizing the teacher's position as an unchallenged and always respected authority	3.7360	48.83	0.00
Emphasis on the role of the teacher as the person responsible for learning and the source of knowledge	3.5092	17.24	0.00
Emphasizing the role of the teacher as the main agent of communication and interactions in the teaching-learning process	3.7338	34.37	0.00

Table 9. the result of power dimension

Dimension	Mean	standard deviation	T	Sig.
Power Distance	3.66	0.48	39.23	0.00

Q. 2: What is the cultural situation of the Iranian learner in the dimension of uncertainty avoidance versus uncertainty acceptance in e-learning environments?

The second cultural characteristic was the uncertainty avoidance of learners verses their uncertainty acceptance. This cultural characteristic was measured through seven factors, the results of which are given in the following two sections.

A) Cultural Uncertainty avoidance

Uncertainty avoidance of learners through the mean of four factors of desire for education and structured activities, emphasis on the state of knowledge and fixed and pre-planned content, emphasis on fixed and final evaluation procedures and emphasis on the need to receive a high amount of various types of the feedback was measured by the teacher. In this way, the high level of the means (higher than the test value of the number three) of the above mentioned four factors indicated the high uncertainty avoidance of the learners. According to the results showed in table 10, it can be found that the mean of all four factors is higher than the test value of number three. So, it should be said the cultural uncertainty of the learner is high in all four factors in e-learning environments. Similarly, according to the calculated T value and the significance that is less than (0.01) with 99% confidence, it can be said that this difference in the mean of the factors is significant and indicates the mean score of the factors is higher than the mean of the society. On the other hand, the total mean of the dimension of uncertainty avoidance in table 11 which consists of the mean of the above four factors also indicates the high degree of uncertainty avoidance of

the learner in electronic education environments. Furthermore, according to the T value calculated for this dimension and the significance that is less than (0.01), with 99% confidence, it can be claimed that the difference between the mean of the uncertainty avoidance dimension and the mean of the society is also significant.

Table 10. results of the cultural characteristics of the learner in the dimension of uncertainty avoidance

Factor	Factors' mean	T	Sig.
Desire for education and structured activities	4/0363	58/49	0/00
Emphasis on the state of knowledge and fixed and pre-planned content	3/8307	48/84	0/00
Emphasis on fixed and final evaluation procedures	3/7920	37/53	0/00
Emphasis on the need to receive a high amount of feedback from the teacher	3/9920	48/66	0/00

Table 11. the result of the uncertainty avoidance

Dimension	Mean	Standard deviation	T	Sig.
Total Uncertainty Avoidance	3.91	1.03	36.45	0.00

b) Cultural uncertainty acceptance

The cultural uncertainty acceptance of the learner was also investigated through the mean of three factors of willingness to learn and unstructured activities, emphasis on the state of knowledge and variable and evolving content, and emphasis on process and variable evaluation procedures. In this way, the high mean (higher than the test value of three) of the above three factors indicated the high uncertainty acceptance of the learners.

According to the results presented in table 12, it can be found that the mean of all three factors is not higher than the cut point of number three, only the mean of the willingness to education and unstructured activities factor is equal to the mean of the cut point of number three and the mean of other two factors are lower than that, although the calculated T value and the significance level is higher than (0.05) for this factor as can be seen in the table, this difference is not significant. Also, according to the T value calculated in the second and third factors and the significance is less than (0.01) with 99% confidence, it should also be acknowledged that the difference between the mean of the second and third factors is significant and the negativity of the T value indicates that the mean scores of these two factors is lower than the mean of the society. Conversely, the mean of the total uncertainty dimension in table 13 which consists of the mean of the above three factors, also shows that the level of uncertainty acceptance of learners in e-learning environments is lower than the mean of society, and the T value calculated for this dimension and the significance level is less than (0.01) with 99% confidence, it can be said that the difference between the mean of total uncertainty acceptance and society is also significant.

Table 12. the results of the cultural characteristics of the learner in the dimension of uncertainty acceptance

Factors	Factors' mean	T	Sig.
Desire for training and unstructured activities	3/0412	0/20	0/845
Emphasis on the knowledge status and changing and	2/5901	-20/71	0/00

developing of the content			
Emphasis on procedures of process evaluation and variable	2/5992	-14/81	0/00

Table 13. the dimension of uncertainty acceptance

Dimension	Mean	standard deviation	T	Sig.
Total Uncertainty Acceptation	2.74	0.98	-17.21	0.00

Q. 3: What is the cultural situation of the Iranian learner in terms of masculinity versus femininity in electronic learning environments?

The third cultural characteristic of the learners was masculinity verses femininity. This cultural characteristic was investigated through the two factors of people's attitude towards the permissibility of interactions and the way of interactions between both sexes, and the effect of gender attitude towards accepting or using electronic education. In this way, if the mean of permissibility of interactions between the two sexes was higher than the test value of number three, it means that there is no gender value between two sexes, and women and men strongly believe in interactions between both sexes in different forms. But if the factor of individuals' gender attitudes towards the courses has a median above the test value of number three, it means that the values of masculinity are stronger than femininity and the respondents assume that these courses are more suitable for women. the information in table 14 indicated that in the first factor the mean is higher than the test value of number three which is calculated according to the T value and the significance level is less than (0.01) with 99% confidence, it should be said that this difference is significant and the mean score of the factor is higher than the mean of the society. Therefore, there is no expectation of discrimination in this factor in accordance with gender stereotypes in the interactions among the respondents, and most of the respondents believe that educational interactions between both sexes are accepted and allowed in different forms. Moreover, according to the information displayed in Table 15, it can be realized that the mean of the second factor is almost equal to the test value of number three, which according to the calculated T value and the significance level is less than (0.01) with 99 % it should be said that there is a significant difference and the mean score of the factor is higher than the mean of the society, so almost all respondents believe that e-learning courses are more suitable for women.

Table 14. the results of the learner's cultural characteristics in the dimension of masculinity versus femininity (the permissibility of interactions and the manner of interactions between both sexes)

Dimension	Mean	standard deviation	T	Sig.
The permissibility of interactions and the manner of interactions between both sexes	3.2107	1.05	20.13	0.00

Table 15. the results of the learner's cultural characteristics in the dimension of masculinity versus femininity (the effect of gender attitudes of people towards the acceptance or use of electronic education)

Dimension	Mean	standard deviation	T	Sig.
The effect of people's gender attitude towards accepting or using e-learning	3.75	0.87	4.34	0.00

Q. 4: What is the cultural situation of the Iranian learner in terms of collectivism versus

individualism in electronic education environments?

The fourth cultural characteristic of the learners was collectivism versus individualism. This feature was analyzed through the mean of six factors which are presented in the following two sections.

A) Cultural collectivism

This cultural characteristic was investigated through the mean of three factors of emphasis on the pursuit of group goals and interests, emphasis on group affiliation and maintaining reputation, emphasis on the value of participation and conformity with the opinions of teachers and classmates as determining factors of collectivism. Thus, if the mean of these factors was higher compared to the test value of number three, it would indicate high collectivism of the learner. According to Table 16 it can be understood that in all three factors the means are lower than the test value of number three. Also, the calculated T value and the significance that is less than (0.01) with 99% confidence, it can be claimed that the difference in the mean of the factors is significant, and indicates that the mean score of the factor is lower than the mean of the society. On the other hand, the mean of the dimension of collectivism, which is composed of all factors' means, also shows the level of learners' cultural collectivism in e-learning environments is lower than the mean. In addition, according to the calculated T value of this dimension and the significance is less than (0.01), with 99% confidence, it can be said that the difference between the mean of this cultural dimension and the mean of the society is significant.

Table 16. results of the cultural characteristics of the learner in the dimension of collectivism.

Total Uncertainty Avoidance	3.91	1.03	36.45
Emphasis on the pursuit of group goals and interests	2.31	-12.24	0.00
Emphasis on the value of affiliation and reputation	2.64	-16.12	0.00
Emphasis on participation and conformity with the opinions of the teacher and classmates	2.51	-15.14	0.00

Table 17. the result of the dimension of collectivism

Dimension	Mean	standard deviation	T	Sig.
The mean of dimension of collectivism	2.54	0.94	-17.13	0.00

b) Cultural characteristic of individualism

This cultural characteristic was investigated through the mean of three factors of emphasis on pursuit of personal goals and interests, emphasis on independence and personal dignity, and emphasis on the value of competition and non-conformity with the opinions of teachers and classmates. Thus, if the mean of these factors was higher compared to the test value of number three, it would indicate the learners' high individualism. As presented in Table 18 it can be found that in all three factors, the mean is higher than the test value of number three. Likewise, the calculated T value and the significance that is less than 0.01 with 99% confidence, it should be said that the difference in the mean of the factors is significant and indicates that the mean score of the factor is higher than the mean of the society. On the other hand, the information presented in table 19 shows that the dimension's mean which consists of the factors' means indicates the high learners' individualism in electronic learning environments. In addition, according to the calculated T value of this dimension and the significance that is less than (0.01) with 99% confidence, it can be claimed that the difference between the mean of this dimension and the mean of the society is significant.

Table 18. results of the cultural characteristics of the learner in the dimension of individualism

Factor	Mean	T	Sig.
Emphasis on the personal goals and interests	3.43	28.14	0.00
Emphasis on the independence and personal respect	3.41	27.86	0.00
Emphasis on competition and personal points of view	3.78	34.12	0.00

Table 19. the result of the dimension of individualism

Dimension	Mean	standard deviation	T	Sig.
The mean of dimension of individualism	3.51	1.01	35.41	0.00

Discussion

According to the research data in Table 8, it can be concluded that power distance is one of the most important cultural characteristics of learners, because the higher mean of all three factors, it means the amount of emphasis on the position of the teacher as an unchallenged and always respected authority; emphasis on the role of the teacher as the person responsible for learning and the source of knowledge; emphasizes on the role of the teacher as the main agent of communication and interactions in the teaching-learning process from the test value of the number three, indicated that the teacher is still seen at the top of the power hierarchy in the e-learning environment. Therefore, according to the items of the questionnaire and the results, the students in general, tend to maintain respect to the teacher and keep the distance in the interaction with him/her; avoid criticizing the teacher in his/her presence; considering negative challenges in the evaluation of the teacher instead of sharing things with them explicitly; referring to teacher When encounter a scientific challenge instead of referring to other information sources; believing in the greater responsibility of the professor in the teaching-learning process and determining the dos and don'ts and the rules of group interactions by him in the e-learning environment. This finding is supported by the theoretical literature on one side, because as mentioned before, there are circumstances in societies with high power distance such as, formal and hierarchical relationships between the learner and the teacher; the teacher centeredness; the teacher as the initiator and guide of classroom communication; depending the learners' degree of learning on the ability of the teacher (Alqarni, 2023); The strength and superiority of the teaching force towards the learner and the promotion of respect and fear among learners in interactions with the teacher (Barrett, et al., 2013); a reluctance of the learner to participate in discussion activities due to the avoidance of face to face with the professor (Omidvar, et al., 2012); and considering the professor to be an expert and lack of challenge and doubt in the knowledge of professor (Masoumi, 2006). On the other side, it is in line with various research findings that show the students from societies with high power distance have characteristics and beliefs such as being used to teacher-centered environments, passively receiving academic content (Tlili, et al., 2021); Believing in determining the learning style by the teacher, hesitation in asking questions from the professor or expressing intellectual differences with him, Panicker, (2020), believing in the unequal status of the learner and the instructor, believing in the greater responsibility of the teacher in the success of the

learner's learning, depending on the teacher during the Learning process, positive view to the trainer's mastery in interactions, and lack of belief and the need to participate in discussions (Hanoum & Silvana, (2019), depending on resources produced by experts (Gaisch, et al., 2019), considering the "professor" as a source of wisdom and not expressing opinions in his/her presence (33). In addition, the previous researches of FerasatKhah (2009), Attaran et al. (2011) and Noorani et al. (2016) also show that Iranian learners are dependent on the teacher in their e-learning environments and have a high need for communication and non-explicit interactions with the instructor.

The research data regarding the cultural dimension of uncertainty avoidance versus uncertainty acceptance in Tables 9 and 10 also show this, firstly, the mean of the dimension of uncertainty avoidance and the mean of factors related to it, i.e. willingness to learn and structured activities; emphasis on the state of knowledge and fixed and pre-planned content; emphasis on fixed and final evaluation procedures and emphasis on the need to receive a high amount of feedback from the teacher were higher than the test value of number three, and these differences were statistically significant. Especially in the valuing of face-to-face and structured education and the need to receive a high amount of feedback from the teacher, this issue is more interesting and curtail. On the other hand, according to the information indicated in Table 10. That shows the mean of the uncertainty avoidance dimension and its related factors, only in the factor of willingness to learn and unstructured activities such as e-learning, the mean is higher than the test value of the number three, and the mean the factors emphasizing the state of knowledge and variable and evolving content and process and variable evaluation procedures were below the test value of number three. However, the high mean of the first factor was not statistically significant, and the high mean may be related to the use of virtual training during the outbreak of the Corona virus.

Therefore, according to the above results, it should be said that the cultural uncertainty avoidance of learners in e-learning environments is high and their uncertainty acceptance is low. Thus, according to the items of the questionnaire and the results, learners generally prefer face-to-face education to electronic education, receive direct education from the professor instead of being more responsible for studying and searching for knowledge through web pages, tend to avoid challenging issues, tend to ask questions and issues that response in a package proposed, the desire for educational evaluation according to previously experienced formats, source-oriented and book-oriented, the desire to receive and experience the pre-planned program instead of having experience of the gradual process of collecting knowledge themselves, content production and completion during the course and have a high need to receive functional, motivational, documentary and strategic feedback from the lecturers. The theoretical literature also confirms that people with high uncertainty avoidance may have more fear and threat to unknown situations (Hofstede, 2011) consequently, unlike learners with high uncertainty acceptance who feel comfortable in unstructured learning environments (Alqarni, 2023) Learners with high uncertainty-avoidance may avoid situations that have an ambiguous structure or may not be willing to participate in high-risk activities and experience autonomous learning (Shebani, 2018). Therefore, as the results of the research has done by Talili et al. (2021) also revealed, because people in societies with high uncertainty avoidance perceive more threats in unclear or unknown situations, consequently, they may not be confident about online learning due to its novelty, lack of written rules regarding the way of learning or the learner's behavior, and they must be have to novice and uncertain experiences. In addition, to feeling more comfortable with structured learning environments, the need for the instructor to praise the accuracy of the learner's activity, and for people in educational systems with high uncertainty avoidance is more pronounced (Panicker, 2020) and the need for high levels of immediate feedback in online activities are needed for these learners (Hanoum & Silvana, 2019) And there is a greater desire for clear and structured learning objectives and a preference for teaching materials and materials with a fixed and integrated structure (Garish, et al., 2019) and there should be clarity in the

evaluation parameters and the unambiguous questions and there should be no desire to experience analytical and reasoning tests (Singh & Alshammari, 2021). In the research by Noorani et al. (2016) the attitude of Iranian instructors towards Iranian learners indicated the same idea that the high uncertainty avoidance of the Iranian learners towards e-learning courses and the desire to experience teaching-learning and structured evaluation methods.

The research data on the masculinity versus femininity dimension in Table 11 and 12 also demonstrates the mean of two factors related to this dimension, that is, the attitude of people towards the permissibility of interactions and the manner of interactions between both sexes and the effect of gender attitudes towards the adoption or the use of e-learning were different. In this way, in the first factor, the mean was higher than the test value of three, and this difference was statistically significant. Therefore, according to the items in the questionnaire, women and men considered the interactions between both sexes to be accepted and allowed, and they did not have any special prejudice and bias towards the interaction and the way of educational interactions between both sexes, and they believed that not only the interaction between the two sexes is free of problems, even this interaction can be maintained outside the class time and in a visual form, although the majority of the respondents believed, the general belief of the society is against the acceptance of such an issue, and therefore, regarding this cultural characteristic, it should be said that there was no value taking in accordance with the expectations of gender in the student community. In the second factor, the mean was equal to the test value of three and significant.

Therefore, according to the questionnaire items, almost the majority of students believe that electronic education courses are more appropriate for women. But since a large number of respondents were women, it should be considered that the results have been analyzed with limitations related to the gender of the respondents. In fact, the attitude of women towards the above two factors is in line with the results of the research has done by Talili et al. (Tlili, et al., 2021). Because these researchers admitted, women considered the use of e-learning as a factor for expanding social boundaries in the educational and non-academic atmosphere and removing restrictions related to tradition and shame, and therefore, unlike face-to-face training, online learning experience for women can be a way to Eliminate social pressure and make it easier for them to engage in discussion and exchanging ideas about knowledge and information with classmates. In addition, the finding of Al-Asmari's research (2020) also implies this issue, because Iranian society, similar to Saudi society, considers the separation of expectations according to gender as an important socio-cultural value, so it is certain that women use the potential of e-learning as a way to fill gender gaps and Greater access to educational opportunities and participation in university life at any time and in any place, in case of absence, without the need to drive to university and as a tool for meaningful educational interactions with people of opposite sex without the need to be at their presence. And as Ale-Yahya et al. (2023) also presented, if women play a role in the dimensions of access to information and resources, receiving support and motivation, more participation and cooperation, evaluation, feedback, critical reflection, and knowledge creation, they will be more positive in e-learning than the issues that may be considered limiting in face-to-face training due to cultural reasons.

The research data regarding the cultural dimension of collectivism against individualism in Table 13 and 14 also display that on the one hand, the mean of the total dimension of collectivism and its related factors, i.e. emphasizing the pursuit of goals and group interests, emphasizing on the value of group affiliation and maintaining reputation, emphasizing on the value of participation and conformity with the viewpoint of the teacher and others, was lower than the test value of number three, and statistically these differences were significant, as a result, the cultural collectivism of the learner was low. But on the other hand, the total mean of the dimension of individualism and its related factors, i.e. emphasizing on the pursuit of individual goals and interests, emphasizing on independence and personal dignity, and emphasis on the value of competition and non-conformity with the teacher's and classmates' opinions was higher than the

test value of number three that indicates the greater weight of individualistic values against the learner's collectivism values in electronic learning environments. Thus, according to the items of the questionnaire, in general, for the Iranian learner, concepts such as pursuing individual goals and interests, paying attention to the accurate calculation of the contribution of individual efforts to the success of the group, maintaining motivation and personal successes, competing and being compared with others, being distinguished in the course in academic studies, following personal viewpoints is more important than conformity with others' opinions as indicators of individualism.

The theoretical literature also confirms that, in general, for individualists there are things such as much worrying about themselves (Salim, & Isa, 2021), self-reliance, competitiveness, aggressive creativity, adaptation, insecurity (Ansari & Khan, 2020), emphasis on individual identity, rights and personal needs (Speece, 2012), attention to personal goals (Zhu, et al., 2012), unwillingness to work in a group due to the difficulty of recognizing the individual's contribution in evaluating the final result of group work (Triandis, & Suh, 2002; Popov, et al., 2012) and in learning specifically, values such as a sense of competition, autonomy and the desire to be the best (Donohue, 2021), the desire to communicate directly with the teacher instead of being a member of student groups in the e-learning environment (Salim, & Isa, 2021). In addition, the results of this section are in line with the research has done by Sundari, Marini, & Nafiah, (2023) regarding the relationship between individualistic culture and the design of personal goals, misinterpretation of the ultimate goal of teamwork and the level of commitment to this goal, in the similar way, it is in line with the research results of Tinmaz and Lee's (2020) regarding the relationship between individualistic values and the desire to learn individual goal-oriented, individual success and comfort. Perhaps the lack of interest in forming research groups among Iranian virtual students (Attaran, et al., 2011) is a sign that the Iranian learners have no inattention to learning through groups and collectivist values.

Conclusion

According to the above findings, it should be concluded that due to the presence of the high power dimension, interaction with the professor in multiple educational interactions still plays a significant role for the learner, and therefore this cultural characteristic has a high impact on educational interactions. Especially when examining the contribution of cultural values of ethnic minorities such as Bakhtiaris and Arabs, which is more related to the dimension of high power, because regarding the living experience of the first researcher in this study, the main value of these ethnic groups is paying attention to tribal and tribal hierarchical values which are not ineffective in transferring high power dimension coordinates to educational systems. In addition, the cultural characteristic of the learner's high uncertainty avoidance can also predict the desire of the Iranian learner to have a high face-to-face relationship with the teacher, constructing learning communities dependent on the teacher, the need to receive immediate feedback from him and the fear of open-ended questions and problem-oriented activities. Therefore, in this dimension, paying attention to requirements such as the design of feedback-based systems, more access to professors, the formation of scientific groups with the presence of leading professors, emphasis on simultaneous communication methods, the value of self-learning and structured content, gradual desensitization of being used to closed answer (multiple choice) tests should be taken into consideration. In the dimension of masculinity versus femininity, since the respondents believed in interactions with the opposite sex, thus, the importance of using the potential of scientific interactions between both sexes should be considered as important idea, and on the other hand, the suitability of e-learning courses with the Perceived female sexuality roles and ideals such as motherhood responsibility, housekeeping, and having an occupation, which is necessarily rooted in accepting gender-conforming schemas, must be understood. Hence, in this case, the share of women in general, the share of working women in particular, and more particular sample group of education (who were mostly women and the purpose of their education was to find a

job) should not be ignored, as a result, the design of ease-oriented and skill-oriented systems should have basic and crucial priority. Correspondingly, due to the individualism of the Iranian learner and the existence of a cultural gap with the requirements of constructing participation-oriented communities in e-learning environments, the necessity of designing group-oriented strategies in teaching-learning activities is obvious, So that there should be regular desensitization in experience and movement from individualism towards the group-oriented, in addition to the importance of designing digital badges, score and score-boards for individualistic competitiveness should be considered.

In the end, it is necessary to mention this point again because the number of female respondents was more than male, so caution should be taken in to account in the generalization of these findings, especially in the dimension of masculinity versus femininity.

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