**Doi:** 10.30473/IDEJ.2022.64719.1114 **ISSN:** 2588-4476

**Iranian Distance Education Journal**

Vol. 4, No. 1, (New Series) Winter-Spring 2022 (P 48-62), Payame Noor University

**Original Article**

# Study of Information and Communication Technology Acceptance Model in Virtual Education Among Teachers in Exceptional Schools of Guilan Province

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**Received:** 2021/06/22 **Accepted:** 2021/10/22

## Abstract

Davies technology acceptance model is one of the simplest and most powerful acceptance review models. The present research has been carried out with the aim of investigating the acceptance model of information and communication technology (ICT) in virtual education from the point of view of teachers of exceptional schools in Guilan province. The research method is quantitative in terms of general approach and descriptive-survey in terms of data collection. The statistical population is 760 teachers of exceptional schools in Guilan province, of which 260 were selected by simple random. A researcher-made questionnaire was designed to collect data. Cronbach's alpha coefficient of 0.75 shows the reliability of the questionnaire in collecting the required data. In order to determine the structural validity and fit of the designed model, confirmatory factor analysis method and structural equation model were also used. The results showed that there is a positive and significant relationship between individual factors, social factors, organizational factors, innovation characteristics, understanding of usefulness, understanding of ease of use, attitude, willingness to use technology and use of technology. Also, the results of the research showed that the variables used in the research were a suitable model for examining the pattern of acceptance of information and communication technologies based on the Davis model of technology acceptance among teachers of exceptional schools in Guilan province. According to the fit indicators obtained in the research, it is recommended to hold in-service classes with higher quality and more organizational support from information and communication technology.

## Keywords

Virtual education, Davis technology acceptance model, information and communication technology, exceptional schools.

## Introduction

The emergence of information and communication and its influence on all aspects of human life has brought new paradigms to everyone and transformed human life [1]. Therefore, in a world that is moving towards a globalized village, the traditional procedures and methods of knowledge transfer can no longer attract the attention of the audience and students in a sea of media activities. It seems absolutely necessary that educational activities, such as the curriculum, undergo changes and transformations in accordance with such huge and rapid

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evelopments. Therefore, a society that seeks to converge with the globalization process uses information and communication technology (ICT) to accelerate this process [2]. Information and communication technology is influential in various fields. Education is one of the important fields that is affected by information and communication technology. Fawa has had influence in all spheres, and in other words, it has covered all human spheres. The use of Fava in the contemporary world is expanding at an increasing speed and has transformed all aspects of human life, including education in its different forms. Education in the 21st century is facing more and more challenges such as entering the information society and mass communication media and globalization [3]. In order to maintain and improve its role in educating students and raising the level of teachers' knowledge, education is bound to use information and communication technology [4]. Virtual education is one of the most important areas of information and communication technology, which is also very widely used and the situation of Corona has intensified its necessity. Some consider electronic and virtual education as a modeled system for effective teaching and learning [5]. In fact, electronic and virtual education, the use of web technology, network and other electronic tools to teach and create learning experiences is useful and effective[6].

The studies conducted in relation to the investigation of the traditional method of education have shown that in this method, 50% of the learning of the students is lost after completing the lesson, 80% of it is lost after one year and after two years Also, almost most of the content is forgotten [7]. As a result, using new teaching methods and the capabilities of Fava can give a new spirit to the education process. Therefore, it is important to have human resources that know how to use technology as a tool to increase creativity, progress and productivity[8]. Therefore, teachers who have a close relationship with students and are responsible for their education and discipline need a set of knowledge and skill components for the application of information and communication technology [9]. As a result, in the current age, which is the age of information, and one of the ways to deal logically and rationally with the information revolution, is to pay attention to the matter of education and training, which should raise the power of facing man and educate him in such a way that he can adapt its speed to continuous changes and by creating changes and transformations in knowledge, insight, attitude and increasing personal and social skills in people, they can be actively and effectively prepared to face changes and transformations [4].

This issue is of great importance in the case of exceptional school teachers, because on the one hand, exceptional students have a very diverse range of educational needs, and on the other hand, maintaining the concentration of these students due to their less ability to analyze And the analysis of issues is of special importance. Guilan province has 2186 exceptional students, of which 1959 are disabled, 114 are deaf, 10 are physically challenged, 83 are autistic, and 20 are blind [10]. These student groups form a special part of the student society, which faces many educational problems due to different physical and mental problems. The issue of educating students with special needs is very vital and important because of the special and varied educational needs of this group of students. Therefore, in order to attract the attention of students, teachers of exceptional schools need to have a more favorable attitude and higher acceptance in relation to information and communication technology, especially in the virtual education environment, which, due to the lack of direct access to students, the education process Exceptional students are in a special situation.

In the meantime, information and communication technologies (FAVA), which are a combination of software, hardware, multimedia and presentation systems, have entered many aspects of our social and work life with wide applications. And they are influencing. The term information and communication technology is formed from the combination of the two terms information technology and communication technology. Therefore, this term can be

considered to have a central core (technology) and two dependents (information and communication) [11]. In a simple definition, information and communication technology can be called the technology of production, transmission and distribution of information, which has been the center of attention so far. It has been the transfer and distribution of information and telecommunication and communication platforms [12].

After introducing a technology, its adoption is of great importance. But there is always resistance from people to accept new technologies. The reasons for people's resistance to new systems can be listed as lack of trust in the new system, the difficulty of learning new systems from the users' point of view, the system not being useful from the users' point of view, and other factors.

Since the acceptance and acceptance of technology by users significantly increases efficiency, reduces costs and improves the provision of services and goods [13]. Therefore, in order to measure the behavior of technology acceptance tools A variety of theories have been presented, including Ajzen and Fishbein's theories of reasoned action, Davis's technology acceptance model, Ajzen's planned behavior, and Bandura's social cognition publication [14], [15] & [16]. Among all these theories and their tools, the Davies Technology Acceptance Model (TAM) has the most capability and application and has always been used to describe the individual acceptance of information and new systems [17]. Therefore, in the present research, an attempt was made to analyze and analyze the acceptance of information and communication technology in virtual education from the perspective of exceptional teachers in Guilan province, using Davis's technology acceptance model.

To achieve this general goal, specific goals were considered as follows:

- Investigating the demographic characteristics of teachers of exceptional schools in Guilan province
- Determining the appropriateness indicators of the Davis technology acceptance model in relation to information and communication technology in virtual education using confirmatory factor analysis
- Analyzing and measuring information and communication technology in virtual education as a technology in the form of Davis's technology acceptance model

Therefore, according to the specific goals, the important questions of the research are:

1- Does Davis's technology acceptance model have good fit indicators in relation to information and communication technology in virtual education? In other words, can information and communication technology in virtual education be examined and justified in the form of Davis's technology acceptance model?

2- What coefficients does information and communication technology have in virtual education as a technology in the form of Davis's technology acceptance model?

**The theoretical background of the research**

Distance learning has existed in developed countries for about a hundred years. But in underdeveloped countries this history is not so much. In the underdeveloped countries of the world, distance learning provides very important opportunities for education [18]. The term e-learning was first coined by Cross and refers to the types of education that use information and communication technologies and the Internet for learning [19].

E-learning is a type of education that the main part of it is done electronically using electronic and computer platforms and the teacher and the learner are not physically present in the same classroom at the same time. Educational content reaches the learner using electronic methods such as sharing on web pages or educational systems, video conference, internet communication, telephone, etc. [20]. Khan (2005). It has also introduced many different names such as web-based learning, online learning, internet-based education, distributed

learning, advanced distributed learning, open and flexible learning, etc., synonymous with electronic education. In the fourth national conference and the first international conference on e-learning, terms such as distance education, open education, web-based learning, flexible learning and network-based learning were synonymous with e-learning [22]. In inclusive virtual education through the web, it carries out educational activities. In other words, virtual education is an attempt to complete the educational program in traditional education systems in which the potential and wide possibilities of the Internet are used. The goal of this program is to provide equal information to all learners, regardless of their geographical, social and economic location [23]. Sanabrai et al (2018) believe that virtual education refers to any type of training that is done in a way other than traditional face-to-face methods. The contents of the courses may be transmitted through the web or by using video, active and interactive two-way images. Therefore, information and communication technology is one of the main things that should be used in virtual and distance education.

Social psychologists have presented various models and theories to investigate people's behavior in the face of technologies and innovations. Among these models, the technology acceptance model is one of the most fundamental and penetrating theories of human behavior and is used to predict a wide range of behaviors. This model has been used to investigate different technologies in different situations and states with different control factors and diverse statistical population [25]. Davis's technology acceptance model is one of the most valid models available, according to the studies conducted on information technology, which first examines factors at the individual level. Second, it has been used in many researches in various countries, and thirdly, its applicability has been examined in previous studies. Therefore, it seems that it is a suitable model for examining technology acceptance behavior [26]. Davis' technology acceptance model is adapted from Agen and Fishbein's theory of reasoned action and was first proposed by Davis. Based on this model, users' decisions to accept technology are based on: a) Perceptual usefulness, which is defined as users' expectations of improved job performance due to the use of new technology. b) Perceived ease of use, which is defined as the degree to which a person believes that using a system will not require effort [27].

After presenting the Davis model of innovation diffusion theory based on Rogers' theories, he also showed that innovation characteristics such as compatibility, relative advantage, complexity, testability and observability can be effective on the acceptance and application of innovations. After that, in 2000, Venkatesh and Davis also using the technology acceptance model as a starting model, tam2 new theoretical constructs including social effects (mental norm, volunteering and imagination) and cognitive instrumental processes (job communication, output quality , the ability to prove the results and ease of practical use) were added to the model. Wu and Wang (2005) also included the compatibility variable in the model. After them, Adrian et al (2005) also added the variables of trust attitude, understanding of special profit, level of education and farm area to the model, and organized a framework to investigate the willingness of farmers in the southwest region of America to agricultural technologies.

In addition to the factors mentioned above, which are effective on the acceptance of a new technology, demographic factors such as age, income, education, gender, and marital status are also effective on acceptance, which in Orni and Dalberg's study are culture, norms, and work skills. With the mobile phone as an innovation, it was also added to the issue of technology acceptance [30].

**The empirical background of the research**

According to researchers, the integration of information and communication technology in

education can affect educational processes. Information and communication technology has the potential to increase the motivation of the teacher and learner, the transformation of learning and teaching processes from teacher-centered to learner-centered, creating and providing opportunities for learners to develop creativity, problem solving activities, and reasoning skills. Information, communication skills, and abstract thinking skills become abstract [30]. As a result, considering the importance of information and communication technology and the important discussion of its acceptance, various studies in Iran have investigated the issue of acceptance in different fields using the Davis technology acceptance model [31], [32] & [33]. The five main variables of the technology acceptance model include subjective perception of usefulness, subjective perception of ease of use, attitude, intention and behavior. The relationship between these variables has been analyzed in various studies. As an example, the perceived ease of use of technology states how much a user believes that using a particular system or technology can be convenient and easy [34]. Perceived usefulness also indicates how much the user believes that using a technology can improve his job performance [35]. The attitude towards the use of technology is the user's assessment of the desirability of using a technology [36]. There is a direct and meaningful relationship between the perception of usefulness and the attitude towards the application of behavior [32], [33] & [36].

There is also a positive and significant relationship between usefulness and ease of use with attitude [33], [37], [38] & [39]. Usefulness and willingness to use have a significant relationship [32] & [29] and also ease and willingness to use have a positive relationship and have meaning [32] & [33]. There is a significant relationship between the ease and usefulness of a technology [32], [29], [36] & [40].

There is also a relationship between the attitude towards technology and the desire to use that technology [32] & [33]. There is also a positive and significant relationship between the attitude of trust as an external variable and easy understanding of the use of technology [29], [32] & [33]. There is also a significant relationship between observability and attitude [32] & [33]. There is also a significant and positive relationship between testability and observability with the tendency to use [32] & [33].

In a study with the aim of "examining the effect of information and communication technology training on the effective acceptance of technology based on the technology acceptance model (TAM)" among the water and sewage workers of each Arak, the researchers concluded that all the relationships between the variables of the structural model The trained group is positive and meaningful according to the effect of training, and according to the fit indicators, the structural model of Davis's technology acceptance in the trained group has a suitable fit and, accordingly, it has the ability to be used in the target society [41].

Sarvari et al (2020) in "Investigation of the relationship between employees' subjective perception of ease and usefulness of use with the acceptance of information technology in the employees of the Sports and Youth Department of Kermanshah" have reported that between the employees' subjective perception of ease and usefulness Use has a significant relationship with the acceptance of information technology. Therefore, they believe that the type of people's views related to simple learning of technology and the benefits of using it in the work process will lead to higher acceptance.

In the study of Mohammadi and Ghaedi (2020), specific factors such as involvement in sports and commitment to the team have a positive and significant effect on the perceived usefulness, ease and enjoyment of smartphones in sports. Also, these perceptions, in turn, have a significant effect on the attitude towards the use of smartphones in sports. In other words, psychological involvement and commitment through perception about the use of smartphones in sports, in the attitude and ultimately the decision to use these phones in sports. Researchers such as Ha et al (2017) and Jeon et al (2019) also consider the special features of smartphones

to be effective on the attitude and decision to use these technologies in education.

In the study of Ahmadi Deh Ghotbaddini (2021) regarding the "direct and indirect effects of the components of the Davis technology acceptance model on sustainability in the use of technology in the process of teacher training", the researcher came to the conclusion that the behavioral intention and attitude towards the use of technology It has a positive and significant relationship with the teachers' persistence in education with that technology. Also, the chain of behavioral intention and the perceived usefulness of technology use and the chain of behavioral intention and attitude towards technology have the role of positive and significant interfaces in relation to the perceived ease and sustainability of education with technology. Therefore, the behavioral intention and attitude towards the use of technology play an important role in the sustainability of the use of technology in the process of teacher education.

**Conceptual model of research**

In general, according to the review of the previous literature, Davis's technology acceptance model was used in this research as one of the simplest and most powerful models of technology acceptance (Figure 1), the present research aims to investigate Davis' model of information and communication technology acceptance among teachers of exceptional schools in Guilan province was carried out. Determining the appropriateness indicators of the Davis technology acceptance model in relation to information and communication technology using confirmatory factor analysis and analysis and measurement of information and communication technology in the form of the Davis technology acceptance model are among the specialized research goals

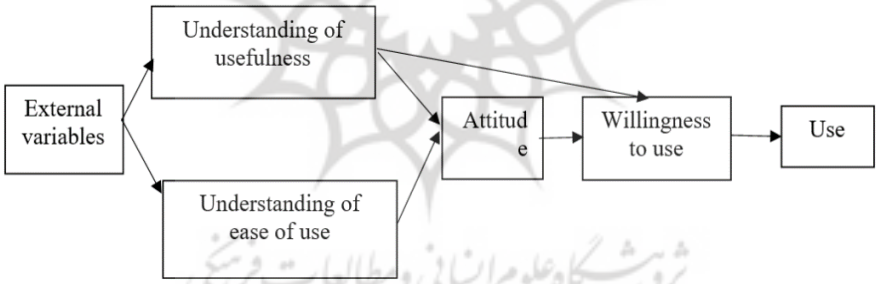



**Figure 1.** Davis's technology acceptance model (1986)

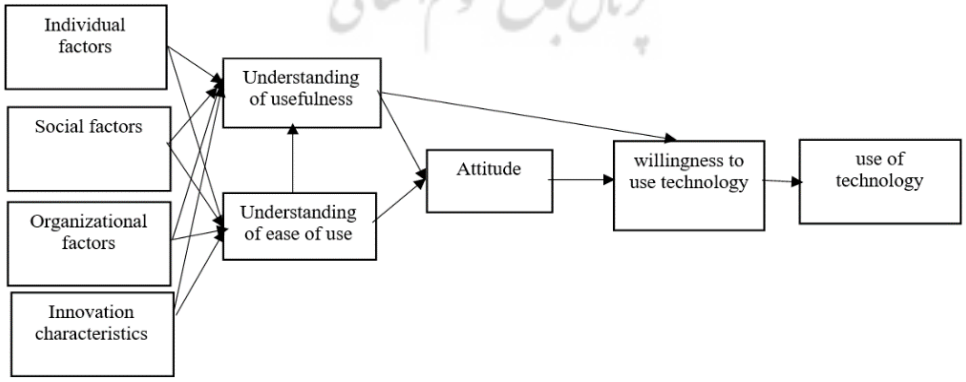



**Figure 2.** conceptual framework of research

**In Research methodology**

The current research is quantitative in terms of general approach and descriptive-survey from the point of view of data collection. The study population of this research includes teachers of exceptional schools in Guilan province (760 people), based on Morgan's table (1970) and with the help of simple random sampling method, 260 people were selected as a sample to conduct the study.

In order to collect data, a researcher-made questionnaire was developed. According to the technology acceptance model of Davis (1986) and the review that was made on the background-writings and considering the conceptual framework of the research, the questionnaire was designed including 9 main sections and one section for examining individual characteristics. The main parts of the questionnaire include examining individual factors (5 items), social factors (3 items), organizational factors (2 main items), innovation characteristics (5 items), understanding the usefulness of the application (4 items), understanding the ease of use. (4 items), attitude towards technology (4 items), willingness to use (4 items) and use of technology (2 items). In order to determine the validity of the questionnaire, several copies of it were given to a group of experts including faculty members. Cronbach's alpha coefficient (α) was obtained on an average of 0.75, which indicates the reliability of the questionnaire (Table 1).

**Table 1.** ID and items and the amount of Cronbach's alpha for each of the nine main sections of the questionnaire studied

| Section | ID | items | Mean of 5 | SD | Cronbach's alpha |
|---|---|---|---|---|---|
| Individual factors | Per | Previous experience in ICT Previous knowledge and awareness in ICT Self Confidence Level of Education Previous skills about ICT | 4.27 | 0.77 | 0.76 |
| Social factors | Social | Mental norms towards ICT Trust in friends Classes held in relation to ICT | 4.2 | 0.74 | 0.73 |
| Organizational factors | Organ | Availability Support | 4.06 | 0.83 | 0.63 |
| Innovation characteristics | Inno | Comparative advantage Compatibility Complexity Observability testability | 4.26 | 0.56 | 0.75 |
| Understanding of ease of use | Easy | Ease of learning how to use ICT Clarity and comprehensibility of ICT Ease of acquiring skills in using ICT Easy to use different types of ICT | 4.05 | 0.62 | 0.6 |
| Understanding of usefulness | Useful | Increasing productivity using ICT Reducing production | 3.99 | 0.74 | 0.80 |

| | | | | | |
|---|---|---|---|---|---|
| | | costs using ICT<br>Better control over activities<br>Assist in performing various tasks using ICT | | | |
| Attitude towards ICT | Atti | Wise use of ICT<br>Pleasantness of using ICT<br>Likeability of using ICT<br>The usefulness of using ICT | 4.24 | 0.66 | 0.83 |
| willingness to use ICT | Inten | Deciding to use ICT to perform tasks<br>Decision to use ICT continuously<br>Deciding to use ICT in the future<br>Generalizing to recommend ICT to others | 4.03 | 0.73 | 0.84 |
| Use of ICT | Use | Frequency of use<br>Duration of use | 3.65 | 0.61 | 0.85 |

After confirming the questionnaire, the research data was collected and coded by completing the questionnaires electronically and then analyzed using spss16 and amos18 statistical software. In addition to descriptive statistics, confirmatory factor analysis and structural equation model were also used to determine the structural validity and fit of the model.

**Research findings**

**A) Examining the demographic characteristics of teachers of exceptional schools in Guilan province**

According to the research results, 183 of the studied teachers are women and the rest (77 people) are men. Also, the average age of teachers is about 37 years. Most of them have been trained in the teacher training course and have an average of 13.6 years of teaching experience in exceptional schools in Guilan province. After collecting the questionnaires, the resulting data were entered into spss25 software to check whether they were normal or not with the Kolmogorov- Smirnov test. The results of checking the normality of the questionnaire data are presented in Table 2.

**Table 2.** result of Kolmogorov- Smirnov test

| variables | Z value | sig |
|---|---|---|
| individual factors | 0.25 | 0.10 |
| social factors | 0.25 | 0.12 |
| organizational factors | 0.30 | 0.10 |
| innovation characteristics | 0.31 | 0.09 |
| understanding of usefulness | 0.28 | 0.09 |
| understanding of ease of use | 0.27 | 0.10 |
| attitude | 0.25 | 0.08 |

| | | |
|---|---|---|
| willingness to use technology | 0.25 | 0.10 |
| Use of technology | 0.30 | 0.10 |

**b) Determining the appropriateness indicators of the Davis technology acceptance model in relation to information and communication technology in virtual education using confirmatory factor analysis**

According to the results presented in Table 2, the distribution of data is normal, therefore, in order to model structural equations and check the validation of the final model of acceptance of information and communication technology in virtual education from the perspective of exceptional teachers in Guilan province, confirmatory factor analysis with Amos software was used. The fit indices of the model are reported in Table 3.

Table 3. fit indices of confirmatory factor analysis model

A) Type of articles: In the studied samples, 84.37% of the articles are from scientific research, and 15.62% of the articles are in the form of conference papers.

**Table 3**. fit indices of confirmatory factor analysis model

| Fit index | The ideal criterion | Reported value |
|---|---|---|
| 2 / dfχ | 3≤ | P= (0/000) 2.64 |
| NFI | 0.90≥ | 0.92 |
| CFI | 0.90≥ | 0.91 |
| IFI | 0.90≥ | 0.96 |
| RMSEA | 0.05< | 0.04 |

Source: [47]

According to the criteria proposed in Table 3 and the results of this research, it can be concluded that the variables used in the research are a suitable model for examining the acceptance pattern of information and communication technologies in virtual education based on Davis' technology acceptance model in He was among the teachers of exceptional schools in Guilan province.

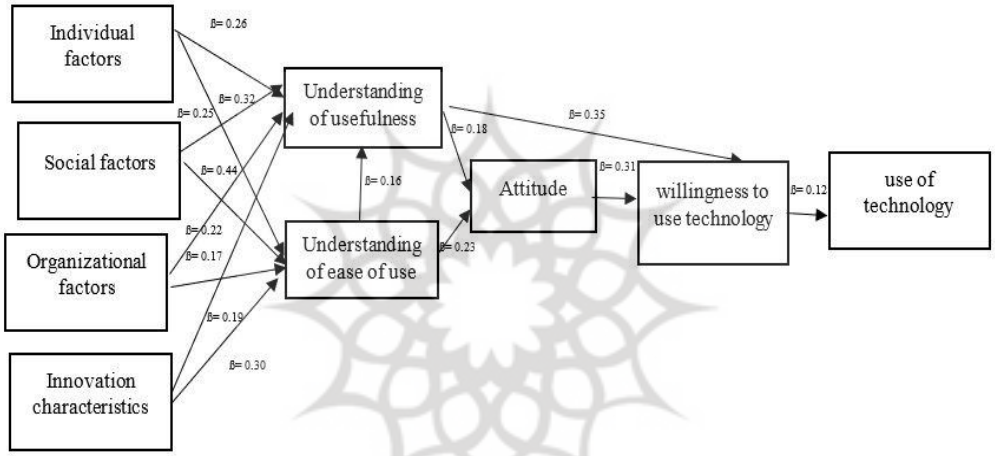
As shown in Table 3, the absolute fitness index (dfχ/2), which should be less than 3 or at least equal to it, was obtained as 2.64 in the present research. The comparative fit indices (adjusted, comparative and incremental) are also closer to one, which indicates a good fit of the model. The results of the research also reported numbers higher than 0.90. The index of root mean square of the estimation error, which is used as one of the most general indicators to be judged, has also reported a suitable value (based on Table 3), so the fit indices show that the measurement tool It is in a good range. That is, information and communication technology can be examined and measured in the form of Davis's technology acceptance model.

**c) Analyzing and measuring information and communication technology in virtual education as a technology in the form of Davis's technology acceptance model**

In order to analyze and measure information and communication technology in virtual education, confirmatory factor analysis was used. The results of the structural equation model and the path coefficients of the research variables are shown in Figure 3.

Based on the results obtained, individual factors, organizational factors, social factors and innovation characteristics have a positive relationship with understanding the usefulness of information and communication technology in virtual and distance education (beta coefficients respectively ß= 0.26, ß=0.25, ß=0.22 and ß=0.19). Also, understanding the ease of using information and communication technology in distance education has a positive relationship with understanding the usefulness of using that technology (ß=0.16). In total, individual, social, organizational factors and the characteristics of innovation and understanding of ease of use are 100% able to explain the changes in understanding the usefulness of technology use. According to the research findings, individual, social and organizational factors and innovation characteristics have a positive relationship with ease of understanding and application (ß=0.32, ß=0.44, ß=0.17, ß=0.30). In total, these factors (external variables) can explain 75% of the changes in ease of understanding of the application.

The understanding of the usefulness of the use of information and communication technologies and its ease of understanding have a positive relationship with the attitude




towards information and communication technology (ß=0.18 and ß=0.23). The value of ß=0.23 is more directly related to the perception of the usefulness of the application with the attitude. In total, the ease of understanding and usefulness of the application explain 78% of the changes in the attitude towards technology in relation to virtual education. Attitude with ß=0.31 and understanding of the usefulness of technology application with ß=0.35 have a direct relationship

**Figure 3.** the result of structural equation model

With the desire to use technology in virtual education, and in total 80% of the changes in the desire to use technology are caused by the attitude towards technology and understanding The usefulness of using information and communication technology is explained. The desire to use technology in virtual education has a positive relationship with the use of technology (ß=0.12) and 74% of the changes in the use of technology are explained by the desire to use it. In total, individual, social, organizational factors and the characteristics of innovation as external variables have an effect on the perception of usefulness and ease of use, and all these variables have an effect on the attitude, willingness to use, and then on the use of information and communication technology in Virtual training will be effective.

**Discussion and conclusion**

As the results of the research show, from the point of view of the teachers of exceptional schools, there is a difference between individual, organizational, social factors (such as mental norms, trust in friends and classes held) and innovation characteristics (such as relative advantage, adaptability and...) there is a positive relationship with the understanding of the usefulness of using technology in virtual education conditions. This means that experience, previous knowledge and self-confidence, organizational support such as financial support can play a positive and important role in teachers' understanding of the usefulness of information and communication technology, especially in distance education conditions. Have virtual training. Based on the obtained results, individual, social, organizational factors and the characteristics of innovation have a positive relationship with ease of understanding of application.

It seems quite logical that one of the factors influencing the decision to use technology is the past pleasant experience with that technology. A pleasant experience is effective as a complete and comprehensive experience when engaging with a technology, and in other words, by creating a sense of pleasure, it helps a person to accept the technology. Prior knowledge about a technology also greatly reduces the uncertainty of accepting a technology. The same point exists in relation to self-confidence and organizational support. Previous knowledge and experience in relation to a technology is also a basis for improving self-confidence in a person, so that people with high experience and knowledge accept a technology with ease. . In other words, when a teacher perceives and feels that he lacks the ability to use technology to face the obstacles and challenges of the new teaching-learning environment, the tendency to avoid the management and use of technology in teaching knowledge. It includes students [48]. The teachers of exceptional schools, who are faced with students with diverse educational needs, often avoid the use of technology in education if they see their ability to use information and communication technology against the physical and mental problems of students. do

The results of the research showed that there is a positive relationship between the perception of usefulness and ease of use with attitude, which is consistent with the results of various studies such as Salehi and Rezaei Moghaddam (2009), Ghanbari and Karimi (2018), Mohammadi and Ghaedi (2020), and Ahmadi Deh Ghotbaddini (2021) and Porter and Donthu (2006), Henseler and Chen (2012) and Nair and Mukunda (2012) are consistent. It is obvious that when the teachers of exceptional schools realize the usefulness of a technology and in applying it, they get acquainted with the ease of using technology and understand it, their attitude towards technology in virtual education will become more positive. As a result, the type of people's views related to simple learning of technology and the benefits of using it in the work process leads to higher acceptance [42].

The results of the research show that when the teachers of exceptional schools consider information and communication technology useful in virtual education, their desire to use technology will increase, which is in agreement with the studies of Adrian et al (2005) and Salehi et al (2008) are completely consistent, which is an expected result. According to researchers, the integration of information and communication technology in education can affect educational processes. Information and communication technology has the potential to increase the motivation of the teacher and learner, the transformation of learning and teaching processes from teacher-centered to learner-centered, creating and providing opportunities for learners to develop creativity, problem solving activities, and reasoning skills. Information, communication skills, and abstract thinking skills become abstract [30].

Based on the results of the research and as predicted, a positive attitude towards information and communication technology in the implementation of virtual education can cause a person's desire to use technology, which has been confirmed by various researchers

[32] & [33] and when there is a desire to use information and communication technology in virtual education, a person will definitely do information and communication technology, i.e. As the results of the study also show this issue. In general, according to the fit indices obtained in the research, it seems that the Davis technology acceptance model was suitable for examining the pattern of information and communication technology acceptance in virtual education among the teachers of exceptional schools in Guilan province.

All in all, according to the research findings and review of existing records, an important point is that the adoption of information technology systems plays an important role in investing in this valuable technology. On the other hand, in addition to the importance of the technology itself, the acceptance of people who use this technology is one of the important and effective factors for the success of the educational organization. Therefore, the effectiveness of technology has a direct relationship with its acceptance. Therefore, if the potential users of technology, who are teachers and lecturers, resist and oppose its adoption, the goals of the educational organization cannot be achieved. Merely introducing and making technology available cannot lead to its acceptance, therefore, it is the examination of views and attitudes that are effective in accepting a technology, which guarantees the future of that technology and its use as much as possible. According to the results obtained, in order to implement information and communication technology in virtual education as best as possible by teachers of exceptional schools in Guilan province, in-service classes with higher quality are suggested in order to familiarize teachers with information and communication technology. be held and therefore more organizational support for information and communication technology.

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