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Research Article

Development of Three Dimensional Virtual Court for Legal Education[1]

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Abstract

The aim of this study was to develop a three-dimensional virtual court for legal education. The study was carried out as qualitative research, and design-based research method was used in the study. The participants were composed of 4 lawyers, 6 legal practitioners and 5 researchers. Study data were collected by using document analysis, focus group discussions and unstructured interviews. Two focus group discussions were held throughout the study implementation In the first discussion, the participants were informed about potential beneficiaries and purposes of using of virtual courts. The other discussion became the venue for negotiations on how to transfer the structure and functioning of real courts to the virtual environment. In addition, document analysis was conducted on functioning and physical

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properties of the real courts in Turkey. In the light of the findings from the focus group discussions in combination with document analysis, the qualities were determined which are expected to be featured in a virtual court to be developed for legal education. In the following stage, a three-dimensional virtual courthouse was modelled where hearings can be held. Then it was revised in accordance with opinions of both experienced and legal practitioners by using unstructured interview forms. The court was finally finished as a result of a two-step evaluation process.

Keywords: *Virtual court, virtual reality, legal training, three-dimensional modelling*

Introduction

The use of up-to-date information and communication technologies in class has always been worth investigating for educators. Virtual reality technology is one of them. Virtual reality refers to the real-like virtual environments created based on the laws of physics (Winn & Bricken, 1992). With virtual reality applications in which various senses are actuated, users can not only watch the screen from the screen but also live as if the reality is in that world (Çavaş, Huyugüzel Çavaş, & Taşkın Can 2004; Spence, 2008; Uzun, 2011). Virtual reality environments allow real-time movement, navigation and touching of objects to users (Chen, Yang, Shen, & Jeng, 2007). Sound and image sensitive heads, motion sensitive clothes, gloves and cabinets are some of the technologies used to create virtual reality (Dede, 2010).

Virtual reality has created its own virtual cultures and communities. Virtual worlds are communities where virtual reality is revealed. Damer (2008) defines the virtual world as *"reflection of dreams created in space with pictures or words and the places that give enough sense of that world"*. In virtual worlds, users are represented by virtual characters that can move. These characters, called avatars, can interact with each other and with virtual objects in the environment. There are virtual worlds developed by different companies. Active Worlds (AW), Kaneva and Second Life are examples of these (Kamalı, 2012).

Recently, there have been studies investigating the use of virtual reality and virtual worlds in learning and teaching processes. The studies comparing traditional classroom environment with virtual one (Edirisingha, Nie, Pluciennik, & Young, 2009; Omale, Hung, Luetkehans, & Cooke-Plagwitz, 2009; Salmon, 2009; Warburton, 2009) suggest that the feeling of existence and belonging in the virtual environment is higher than that of the traditional classroom environment. Simultaneous communication in the virtual environment has a motivating effect on students (Holmberg & Huvila, 2008; Omale et al., 2009). According to Arıcı (2013), the academic achievement of students studying in the virtual world is higher than in traditional classrooms, and the information gained is more permanent. There are studies that show that students are more comfortable in virtual classrooms than traditional classroom environments (Singh & Lee, 2009; Wang, Song, Xia, & Yan, 2009). According to Winn (1995), the use of learning environments in which virtual reality is supported is now a necessity. Such environments are said to provide positive contributions to the students such

as playing active roles in the process, promoting productivity, imagining, learning with fun and developing positive attitudes towards the lesson (Winn, 1995).

Although the use is increasing day by day, there are some limitations of the three-dimensional learning environments created by virtual worlds. The number of educators to develop a qualified virtual learning environment is low and the platforms to be used in this process require high cost (Kluge & Riley; 2008). It is also known that designing content and objects for use in three-dimensional learning environments is not easy ((Smelik, Tutenel, de Kraker, & Bidarra 2011). Considering users, students have the potential to share inappropriate content, as well as technical problems such as internet access and hardware shortcomings (Inman, Wright & Hartman, 2010; Liou 2012; Nash, 2009). According to Hinrichs, Hill, & Patterson (2011) it is possible that virtual worlds can be transformed into a genuine community by solving the mentioned problems.

Legal Education and Virtual Learning Environment

Demirağ and Çiftçi (2010) state that legal education in Turkey has been a subject of debate for many years and that it is considered inadequate against international standards. In particular, there are debates about the duration of basic legal education. Öztürk (2010) points out that over seven years have been spent to train lawyers in many developed countries. Criticism about basic legal education in Turkey is not limited to the duration of education. In most of the law faculties there are inadequacies in service building, classrooms, library, technical equipment, and academic and administrative staff (State Planning Organization Undersecretariat, 2014). Kılıç (2009) concluded that importance is given to the application as well as the transfer of theoretical knowledge within the legal education system abroad, that the internship periods are equal to or longer than the university education; whereas in our country, mainly theoretical education is applied and the internship training period is shorter in Turkey. According to Başözen and İyiler (2010), in the center of the criticisms about the law faculties in Turkey is the classical methods used in the lessons. Öztürk (2010) states that the primary purpose of the faculties is to transfer the legal information personally to the students. Despite the fact that the curriculum is very loaded, the duration of the curriculum is not sufficient and an education system based on memorization is carried out (Karayalçın, 2008). Şimşek (2010) points out that students should be introduced to different disciplines beyond the closed methods of education and

therefore current methods should be used in legal education order to solve the problems in this context.

Departing from the basic problem that law school students cannot convert the theoretical knowledge into application, questions such as *"Is it possible to create an alternative learning environment for legal education?"* and "*How to take advantage of educational technology in this process?"* come to mind. Considering the idea that virtual reality technologies can be used to create something if the truth is real (Kayabaşı, 2005), the development of a virtual court that reflects the structure and functioning of the courts in Turkey seems worth investigating. The fact that the lawyers who are trained in law faculties and the lawyers who have just started their profession cannot experience the hearing experience at the desired place, time and frequency under the current conditions can be evaluated as factors that increase the potential of educational purpose of the virtual courtroom to be developed. Yenipınar (2013) states that lawyers must be able to get over the unexpected situations that arise during the proceedings so that they can manage the court process well. A virtual court that will allow the trial experience by assuming of different roles, such as attorneys, judges and prosecutors, may be useful for law school students and inexperienced lawyers in this process. The fact that virtual courts have been developed in different countries of the world (Barnett & McKeown, 2012; Sanson, İreland, & Rogers, 2009; Ulicki, 2012) and the prospect that the trend in this direction will continue to increase (Rogers, 2016) makes it necessary to carry out interdisciplinary studies about the use of virtual learning environments in legal education in Turkey in order to keep up with the times. For using the virtual learning environments in legal education and presenting its results, it is necessary to design and develop these environments first. Thus, present study was planned to develop a three-dimensional virtual court to be used in the context of legal education. The questions to be answered in the research are as follows:

1. How can the actual court's function be transferred to the virtual environment?
2. What should a three-dimensional court be like?

Method

In this research, Design Based Research (DBR) method, which is shown as a suitable method for technology-supported or technology-based education applications, was used. DBR is a method that requires systematic, functional and product development that allows mutual

cooperation between researchers and practitioners. Focusing on the design process and the examination of the innovations designed, DBR is composed of the stages such as analysis, design/development, implementation and evaluation. The results obtained by evaluating the data obtained at each step are used for the improvement of the design pavement (Enkenberg, 2001; Wang & Hannafin, 2005). The activities carried out and the data collection tools used in this research process, which was intended to develop a virtual courtroom for use in legal education, are shown in Figure 1.

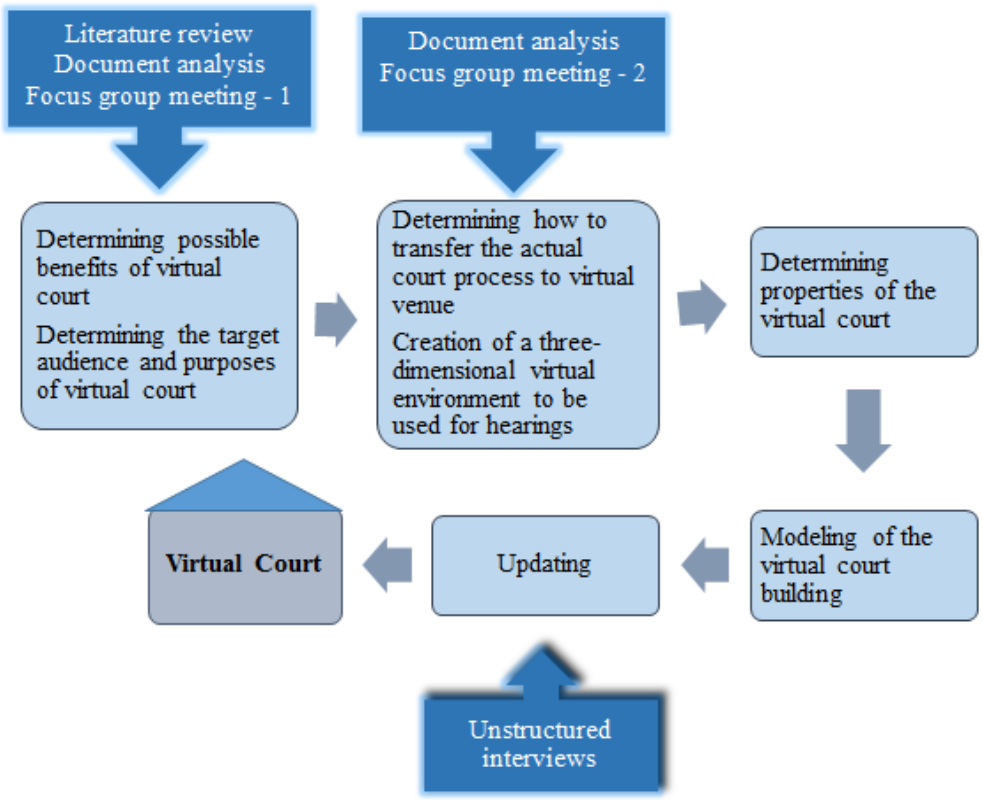

*Figure 1.*Activities carried out during research process

In the first stage of the research, review of literature was conducted and the usability of the three-dimensional virtual environments in legal education was revealed. In addition, a document review was made on the duties of judicial institutions in Turkey, the structure of the courtrooms, the types of courts and who should be present in these courts. The obtained data were used to plan the focus group meetings and to support the findings revealed by these meetings. In the first focus group meeting, discussions were made about the necessity of the virtual court, target audience and usage purposes. The second focus group meeting was devoted to how to transfer the functioning and physical characteristics of real courts to the

virtual atmosphere. The activities conducted up to this stage made it possible to determine the qualifications of the virtual court. At the next stage, a three-dimensional virtual court building, where the hearings can be held, was modelled. The opinions of the experienced lawyers on the developed virtual court building were taken and necessary updates were made accordingly. Finally, interviews with legal practitioners were made to obtain their views regarding the virtual output, and the findings were used to update the virtual court. Consequently, the virtual court was given its final shape.

Participants

The participants consist of 4 lawyers, 6 legal practitioners and 5 researchers. The expertise areas of the research team and their role in the research process are given in Table 1.

Table 1

Information about Researchers

Researcher / Title	Study Area	Role in Research
Researcher 1 Assist. Prof. Dr. (CEIT)*	Distance education Multimedia design	-Coordinating team work -Technical advice in design and development of virtual court -Data collection, analysis and interpretation
Researcher 2 Prof. Dr. (CEIT)*	Distance education Multimedia design Augmented reality	-Technical advice in design and development of virtual court -Data interpretation
Researcher 3 Assoc. Prof. Dr. (Law)	Commercial law Intellectual property	-Legal advice in design and development of virtual court -Data interpretation
Researcher 4 Expert (Distance Education Centre)	Distance education Augmented reality Virtual worlds	-Design and development of virtual court
Researcher 5 Master Student (CEIT)*	Multimedia design Virtual worlds	-Design and development of virtual court -Data collection and analysis

*Computer Education and Instructional Technologies

As shown in Table 1, the research team includes multiple researchers specialized in multimedia design, augmented reality and distance education. There is a specialist in the field of law. The judicial decisions were based on the data obtained from the lawyer and legal

practitioners in the design team on the initiative of this researcher. The lawyers are registered with the Trabzon Bar Association and each has at least ten years of professional experience. One of them is the president of the bar, and one of them is the chief of the internship commission. All of the legal practitioners are continuing their internship training in the same bar.

Data Collection and Analysis

Data collection was completed with document review, focus group interviews, and an unstructured interview. The fact that different data collection methods are used has a positive effect on the reliability of the obtained data (Streubert & Carpenter, 2011). At least two researchers served in each of the processes of collecting, analyzing and interpreting data in order to avoid prejudicial disputes arising from researchers.

Document examination requires access to written and printed documents and examining of the obtained data in a certain discipline (Yıldırım & Şimşek, 2006). In this research, academic publications about the legal system in Turkey, the structure and functioning of the courts, the contents of the corporate web sites in the field of law and video records of real courts were examined. The obtained data were first presented to the legal counsel of the research team then to the three lawyers whose professional experience was over five years for the examination. In this way, verified information was obtained and used for the purpose of establishing questions about group meetings. About technical suitability of these questions, a specialist in computer education and instructional technology (CEIT) was consulted, and views of a lawyer with fifteen years of experience was seen about legal suitability of the same questions.

Within the scope of the study, two separate focus group meetings were attended by 4 lawyers, 6 legal practitioners and research team. At the first focus group meeting, discussions were held on the subjects of how the virtual court would be developed and for what purposes it could serve. At the second focus group meeting, discussions were held on what should be done to ensure that the virtual court can mirror the actual court structure and functioning. At both meetings, all of the people in the design team were involved in the interactive decision-making process. At meetings, care was taken to create a friendly chat environment. This seems to be important in terms of finding correct and complete answers

to the questions (Streubert & Carpenter, 2011). Figure 2 contains images of the second focus group meeting.

Figure 2. Images from the second focus group meeting of the design team

Voice recordings were taken at both meetings and notes were kept during the meeting by a researcher. Voice recordings and notes were evaluated together by two different researchers and content analyzes were conducted after interviews were transcribed. The obtained data were compared with each other and their accuracy was checked. In addition, the data obtained after the meetings of both focus groups were summarized and shared with attorneys attending the meeting, and opinions were taken on whether the information was correct or not. In this way, necessary additions and removals were made to give the final shape to the findings.

At the last stage of the research, unstructured talks were held with three lawyers and three legal practitioners outside the design team concerned with the reflection of the reality of the developed virtual court. The data obtained from the interviews made by the voice recording was transcribed and analyzed by the researcher using a word processor program. Verification was achieved by comparing the data against each other.

Results

In this section, the results are presented under two headings in relation to the research questions.

Results related to transferability of real courts to virtual media

At the first focus group meeting, a presentation was made by the research team on the educational purposes of virtual worlds and virtual worlds. Then, the following questions were posed to the group by the researcher in charge of the meeting: *"Do you think the virtual court would contribute to legal training?", "Who should virtual court be developed for?", "For what purposes can virtual court be used?", "Should virtual court reflect exactly the real court process?"* In the discussions, the accepted views on the virtual court audience and purpose were as follows:

Virtual court can be used;

- As part of teaching methods and techniques in the process of transforming theoretical knowledge into practice in law faculties,
- as a lifelong learning environment whereby experienced lawyers (lawyer, judge, prosecutor) can share their experience with younger collagues and legal students,
- for training of legal practitioners,
- and as a chatting forum where lawyers in different cities of the country can communicate and interact with each other.

All of the lawyers in the team reported favourable opinion regarding the transferability of real courts to virtual courts. It was stated that the virtual court must reflect the functioning of the actual courts in every aspect and courtrooms must be equivalent to real ones. It was added that a legal person would benefit from experiencing the position of a prosecutor, judge, lawyer, or even a clerk in a virtual court. It is also thought that the education to be given in the virtual court will allow the use of different teaching methods and techniques, can provide a flexible and independent learning environment and can help correct procedural mistakes made in the legal system. During the meeting, one of the most frequent questions asked by legal practitioners to the research was how to use virtual worlds. One of the practitioners said: *"I downloaded the SL from the internet logged in. Suppose that we made the virtual court. All trainees got membership and got connected. How are we going to the virtual court?"*

In the second focus group meeting, following questions were addressed to guide the group: *"What is the functioning of the judicial system like in Turkey?","How is a lawsuit started,*

how is it continued and ended?","What is the structure of courtrooms like?","Are there different types of courtrooms?","What officials are in the room?","Who should speak when in the courtroom?","Can anyone enter hearings?" After the details were set out regarding details of the structure and functioning of the legal system in Turkey, debate was held during the rest of the meeting on how to transfer the actual court to virtual venues. In this context, the following findings were obtained:

- In the first instance, the virtual court should be developed to cover one or two court cases, it should be opened to use and the scope of the virtual court should be expanded in the direction of the findings.
- The clerk position in the virtual court should not be neglected and they should be able to keep records as in the actual courts. Otherwise, there will be a serious shortage of legal education and procedural mistakes
- Avatars must be able to be used with the body language (hand and arm movements and mimics) to compromise and to ensure the interactions between the parties in the new legal system. Opinion of one of the lawyers about the matter was as follows: *"Sound tone and mimics are important when deciding in real courts, and the same must be true in the virtual environment"*. Another lawyer said *"It is important how to ensure compromise and reconciliation in the virtual environment"*.
- In the virtual court, the process of requesting documents from other institutions should be operated. One of the lawyers said *"The documents to be investigated remain in the prosecutor's office. There are 8-10 prosecution types. For example, IT prosecution is interested in IT crimes. If the prosecutor needs the testimony of the person, he will write to the police or gendarmerie station and ask for it. If it is required to demand a document from the university or criminal justice department, a letter is written the document is requested from that institution. All this needs to be moved to virtual venue."*
- Information and document safety should be able to be maintained in the virtual court.
- The files must be stored according to the year and number basis as in reality.
- The postponement process of the cases should be designed to reflect the reality.

When both focus group meetings and the data from the document analysis were evaluated together, the following findings were obtained regarding the qualities that should be relevant to the design and use of the virtual court:

- The virtual court should include two hearing rooms, one of which is for civil law and the other for heavy criminal, as well as the units that are needed in the process of the operation of these courts.
- The virtual court should have basic roles of judges, prosecutors, lawyers, clerks, bailiffs, witnesses and defendants avatars. The user must be able to participate in the process by choosing from within these roles. It should also be possible to participate in the role of audience in order to facilitate the use of the virtual court in educational activities.
- The entrance to the virtual court must be encrypted. File and document access for avatars should be organized according to roles (judge, prosecutor, lawyer).
- The avatar in the clerk's role must use the writing tools in the virtual world where the virtual court will be integrated to keep records. Besides this, the interviews should be archived by video recording.
- A database should be created to hold the trial files by year and number basis and be included in the virtual court.
- The authority to postpone cases should belong to the avatars in the role of judge. This postponement can be done in a different day, as it really is, or after a much shorter period of time.

Results from the Virtual Court

A three-dimensional virtual court was planned in the direction of discoveries about how physical properties of real courts can be transferred to virtual ones. There are two hearing rooms on the first floor of the building. One of these halls is law school, the other is a heavy criminal courtroom. A large number of chairs were placed in corridors along trial halls, and this section was converted into a waiting room. In addition, there are three units (rooms) to be used for different purposes. One of them is an upper rank office downstairs for judges and prosecutors. The other two rooms upstairs are the clerks' offices where correspondence is carried out.

The drawn plans were presented for the examination of the lawyers in the design team and the opinions were taken through unstructured interviews. Lawyers stated that separate rooms should be allocated for judges and the prosecutors, and that there should be one archive room in the building. Moreover, it was suggested that the exterior of the building be similar to the Trabzon Bar Association. In this context, three rooms were added to the upper part of the hearing rooms with high ceilings, creating an archive room with two separate rooms for judges and prosecutors. In this way, the plan of the virtual court building was finalized by updating and the drawings were transferred to the computer environment. Figure 3 shows the plans for the courtrooms.

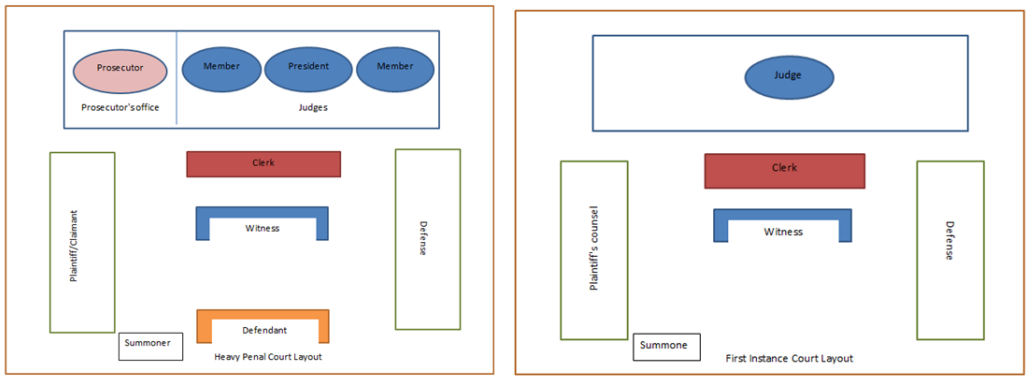

Figure 3. Layouts of the rooms in the court

Three-dimensional modelling of the virtual court building was done using SketchUp and 3D Max programs. Figure 4 shows the screen images of the works performed by these programs during the modelling process.

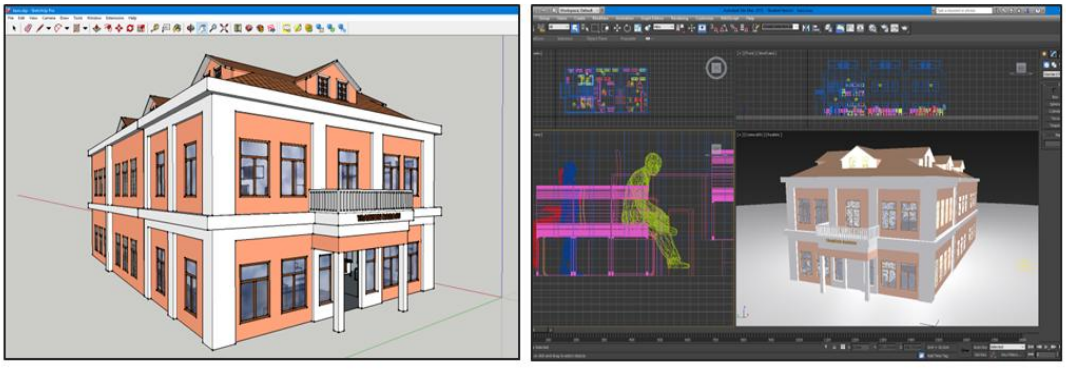

Figure 4. Activities carried out in the process of modelling of virtual courthouse

In the process of modelling the virtual court, initially, the external and internal elements of the building were created using the SketchUp program according to the outlays. Texturing processes were then performed on these documents transferred to 3D Max program.

Unstructured negotiations were held with three lawyers outside the design group to find out if the three-dimensional virtual court building covers the sections and units needed in the judicial process, and how relevant they are. In the light of the suggestions, some amendments were made on the building. These amendments focus on the settlement of the objects in the courtrooms, the size of the units in the building and on which floor each unit should be. At the next stage, the virtual court building was presented for the examination of three legal practitioners who were not in the design team, and the views were taken through unstructured interviews. The legal practitioners did not bring any criticism or recommendation that would require a change in the virtual court. The external appearance of the developed virtual court was created by analogy to the Trabzon Bar, as seen in Figure 5.

*Figure 5.*Virtual court and appearance of Trabzon Bar Association

Various images belonging to the virtual court building are given in Figure 6.

Figure 6. Images of the inside of the virtual courthouse

When the data obtained in the course of the design improvement are evaluated as a whole, in order to avoid technical problems in the use of the virtual court and to increase the educational efficiency, the following conditions should be taken into consideration:

- The virtual court will work smoothly when transferred to the virtual world of SL. Interaction can be carried to the upper levels thanks to the written and verbal communication tools provided by SL virtual world.
- One technical expert must be in charge to perform the tasks such as creating case files, adding to the system, updating them, recording hearings, or helping users in these matters.
- The participants are responsible for their appropriate behaviours in the courtroom. The dynamic nature of SL provides a significant advantage in this respect. For example, an avatar in the prosecutor role will be alerted by the judge when he wears the avatars of the judge. Similarly, an avatar will be warned if it takes a seat that does not belong to its own role.
- The flexibility of the SL environment, the ability to move in and out when requested, and the ability to resume where it is needed, will be a great convenience for practitioners in situations such as delays in actual courts, supply of missing documents, or breaks in hearings.
- The ability to run pre-recorded audio and video files in SL virtual world and presentation on slides facilitates sharing of information and documents in the jurisdiction process.
- In order to solve technical problems originating from SL virtual world or troubles due to unfamiliar users, training videos about the use of SL should be placed in the virtual courtroom. In addition, participants' computer literacy levels and internet use skills should be determined and training should be arranged for the SL and virtual court use if necessary.

Discussion and Conclusion

The fact that a large number of studies on different disciplines related to three-dimensional learning environments have been made and the positive results obtained from these studies show that three-dimensional virtual learning environments can be developed in order to

reduce or eliminate existing problems related to basic legal education and professional development in Turkey. As a matter of fact, studies are available which suggest that virtual learning environment has positive effects on the professional development of students and facilitate the transformation of theoretical knowledge into practice in legal education.

In a study by Sanson, et al., (2009), a virtual environment was designed in which law faculty students could conduct negotiations and interviews, and applications were made with the participation of volunteer students. The results of the research revealed that the virtual world offers an independent learning environment in which law school students can use for the development of professional skills, and offers great advantages compared to face-to-face education. According to the results of a survey in Australia on virtual learning environments used in legal education (Yule, McNamara, & Thomas, 2009), it was shown that technologies such as video conferencing and the virtual world can be used to improve the debate skills of law students and gain professional experience. Barnett and McKeown (2012) developed a courtroom in the virtual world for the use of students as part of the 'Criminal Law' course within the Southern Queensland University. As a result of the research, it seems that the virtual court has succeeded in the process of transforming the theoretical knowledge of law students into practice.

One of the best examples of the use of virtual worlds in legal education is the Democracy Island, founded by the New York Law School. A Supreme Court building and miniature models of urban neighbourhoods were constructed on this island in the SL virtual world. There are also simulations in the system where written and verbal communication tools and web conferences are used effectively. Students have the opportunity to learn the legal process in many ways, such as acquaintance with the managers, acquiring by sales, renting, building and using the property through the role of the students (Ulicki, 2012). Since the functioning on this land is in compliance with the American legal system, it may not be able to provide the necessary level of benefit for Turkish law students and lawyers to translate theoretical knowledge into practice. Besides, in order to be effective, participants need to be above a certain level of English speaking and understanding skills. Therefore, the virtual court developed in this study carries unique value for holding meetings in accordance with the Turkish legal system.

In a study on the views of legal students participating in a virtual court created in the virtual world SL (Ireland, Sanson, & Rogers, 2010), attention is drawn to the fact that students are much more concentrated in conversation than in real life. The virtual court developed in this study will provide opportunity for participants to experience trial experience at any time and at any desired time. In connection with this, participants may be part of an active learning environment in a legal context where they need to use the legal language.

Virtual worlds have tools to enrich communication and interaction between avatars. General and personal correspondences can be made with the text-based communication tools in SL virtual world; voice communication tools can be used to chat with other avatars, and various mimics and animations such as laughing, shouting and hand waving can be used. Beside these, the mimics needed can be designed and uploaded to SL (Dinçer, 2008). When the virtual court is transferred into SL and implemented, mimics and animations related to the human reactions in real courts can be programmed and used by avatars.

Law faculty students will be able to participate in the out-of-school meeting via internet from the place they want outside the school, which will save time and cost. This result seems to be supported by the study carried out by Ireland, et al., (2010). It becomes important that students who participated in the virtual court application created in the virtual world of SL have to experience a trial without having to travel within the positive opinions of the process. In the same study, it is emphasized that students should be able to participate in distance and international hearings. In the fall of 2006, a course called 'CyberOne: Law in the Court of Public Opinion' was opened by the Harvard University Law School. Students access the materials, the videos related to the lesson and the fictional courtroom through the media designed for them in the virtual world. Students who complete the course in which instructors and students are represented by avatars are entitled to receive credit. This course is organized not only for Harvard students, but also for accessibility of computer users around the world (Lamb, 2006).

The tendency towards the movement of education to the digital medium in developed countries of the world also manifests itself in the field of law. Rogers (2016) notes that in many countries of the world, there are virtual courts and the number of them will increase; anticipates that fictional trial contests will be held in the virtual world of SL in the future. Although the use of three-dimensional virtual learning environments for legal

education in Turkey has not been widespread, the use of electronic media in the legal system is increasingly available. The Turkish Bar Association and bar associations affiliated to this association actively use the web sites and carry out informative and announcement works in this way. In the scope of The National Judicial Network Project (UYAP, http://www.uyap.gov.tr/), legal employees can improve themselves and be aware of developments by means of the e-tracking module and SMS system. The study by Kılıç (2009) shows that lawyers believe in the benefits of vocational education through electronic learning environments. Therefore, it is considered that the virtual court will contribute to the spread of the use of virtual learning environments in legal education by going beyond the teaching methods and techniques in Turkey.

As a result of this study; it could be suggested that the court rooms of the actual courts and the related judicial units can be physically transferred to the virtual medium, and the functioning can be made close to reality by removing some of the limitations. In order for the roles of the virtual court to be constructed in such a way as to overlap the reality, the media must be integrated into a virtual world and the means of interaction must be made available. For archiving and recording, databases should be created and integrated into the system using connection items. The virtual court can serve as a part of lifelong learning in legal education as well as in the context of pre-service and in-service professional development activities.

Recommendations

The developed virtual court can be used by transferring it to the virtual world environment. In this process, the designated virtual court qualities will guide the process. Research can be done on the effectiveness of the virtual court in legal education. Other working groups may be composed of law school students, legal practitioners, law faculty members and experienced lawyers separately or together. Further research on issues such as the virtual court's contribution to interaction among users, usability with different teaching methods and techniques; and evaluation of it from attorneys, teaching staff and students' points of view, and results can be discussed.

References

Arıcı, V. A. (2013). *A study on 3D-virtual reality in science education programs: "Solar system and beyond: Space puzzle" unit sample* (Unpublished Master's Thesis). Adnan Menderes University, Aydın.

Barnett, E., & McKeown, L. (2012). The student behind the avatar: Using Second Life (virtual world) for legal advocacy skills development and assessment for external students: a critical evaluation. *Journal of Commonwealth Law and Legal Education, 8*(2), 41-63.

Başözen, A., & İyiler, M. (2009). Türk hukuk eğitiminde klinik eğitimin bir türü olarak yeni bir uygulama: "Lisans aşamasında öğrenci stajı*". Dokuz Eylül Üniversitesi Hukuk Fakültesi Dergisi, 11*, 1481-1492.

Chen, C. H., Yang, J. C., Shen, S., & Jeng, M. C. (2007). A desktop virtual reality earth motion system in astronomy education. *Educational Technology and Society*, *10*, 289-304.

Çavaş, B., Huyugüzel Çavaş, P., & Taşkın Can, B. (2004). Eğitimde sanal gerçeklik. *The Turkish Online Journal of Educational Technology, 3*, 110 – 116.

Damer, B. (2008). Meeting in the ether: A brief history of virtual worlds as a medium for user-created events. *Artifact, 2*(2), 94-107.

Dede, C. (2010). Introduction to virtual reality in education. *Themes in Science and Technology Education*, *2*(1-2), 7-9.

Demirağ, F., & Çiftçi, H. (2010). Türkiye'de hukuk fakülteleri ve hukuk eğitimi. *Türkiye Barolar Birliği Dergisi, 91,* 257-290.

Dinçer, G. D. (*2008). The use of virtual worlds in the distance education consulting services: Second life sample* (Unpublished Master's Thesis). Anadolu University, Eskişehir.

Edirisingha, P., Nie, M., Pluciennik, M., & Young, R. (2009). Socialisation for learning at a distance in a 3-D multi-user virtual environment. *British Journal of Educational Technology*, *40*(3), 458–479. doi: 10.1111/j.1467-8535.2009.00962.x

Enkenberg, J. (2001). Instructional design and emerging teaching models in higher education. *Computers in Human Behavior, 17*(5-6), 495-506. doi: 10.1016/S0747-5632(01)00021-8

Hinrichs, R., Hill, V., & Patterson, D. (2011). Higher education in virtual worlds: Teaching and learning in Second Life. *Information Processing & Management*, *47*(1), 143-146.

Holmberg, K., & Huvila, I. (2008). Learning together apart: Distance education in a virtual world. *First Monday, 13*(10). doi: 10.5210/fm.v13i10.2178

Inman, C., Wright, V.H., & Hartman, J.A. (2010). Use of Second Life in K-12 and higher education: A review of research. *Journal of Interactive Online Learning, 9*(1), 44-63.

Ireland, J., Sanson, M., & Rogers, P. (2010). Virtual moot court: A Pilot study. *Journal of the Australasian Law Teachers Association 3*(1), 1-10.

Kamalı, T. (2012). *Student' experiences and perceptions of anxiety, motivation, and self-confidence in speaking English during task-based language learning activities in Second Life: The case of METU* (Unpublished Master's Thesis). Middle East Technical University, Ankara.

Karayalçın, Y. (2008). *Hukukta öğretim – kaynaklar - method problem çözme* (7th ed.). Ankara: Banka ve Ticaret Hukuku Araştırma Enstitüsü (T. İş Bankası AŞ Vakfı).

Kayabaşı, Y. (2005). Sanal gerçeklik ve eğitim amaçlı kullanılması. *TOJET: The Turkish Online Journal of Educational Technology, 4*(3).

Kılıç, S. (2009). *Determination of the advocates' usage of information and communication technologies and their opinions towards e-learning* (Unpublished Master's Thesis). Bahçeşehir University, İstanbul.

Kluge, S., & Riley, L. (2008). Teaching in virtual worlds: Opportunities and challenges. *Issues in Informing Science and Information Technology, 48*(5), 127-135.

Lamb, G. M. (2006). At colleges, real learning in a virtual world. USA Today. Retrieved from http://usatoday30.usatoday.com/tech/gaming/2006-10-05-second-life-class_x.htm

Liou, H.C. (2012). The roles of Second Life in a college computer-assisted language learning (CALL) course in Taiwan, ROC. *Computer Assisted Language Learning, 25*(4), 365-382. doi: 10.1080/09588221.2011.597766

Nash, S.S. (2009). Libraries in Second Life: New approaches to education, information sharing, learning object implementation, user interactions and collaborations. *Systemics, Cybernetics nnd Informatics, 7*(5), 25-28.

Omale, N., Hung, W-C., Luetkehans, L., & Cooke-Plagwitz, J. (2009). Learning in 3-D multi-user environments: Exploring the use of unique 3-D attributes for online problem-based learning. *British Journal of Educational Technology, 40*(3), 480–495. doi: 10.1111/j.1467-8535.2009.00941.x

Öztürk, H. (2010). Hukukçuların Eğitimi. *Türkiye Adalet Adakemisi Dergisi, 1*, 167-194.

Rogers, P. (2016). Virtual world - Practical legal skills. Retrieved from http://eshare.edgehill.ac.uk/1712/1/Day_1_Session_14_Virtual_World_Practical_Legal_Skills_Paper.pdf, on 13 December 2016.

Salmon, G. (2009). The future for (second) life and learning. *British Journal of Educational Technology, 40*(3), 526–538. doi: 10.1111/j.1467-8535.2009.00967.x

Sanson, M., Ireland J., & Rogers, P. (2009). 'Fake it till you make it': Using Second Life to teach Practical legal skills. *Journal of Australasian Law Teachers Association* 245-255.

Singh, N., & Lee, M. J. (2009). Exploring perceptions toward education in 3D virtual environments: An Introduction to "Second Life". *Journal of Teaching in Travel & Tourism, 8*(4), 315-327. doi: 10.1080/15313220903047896

Smelik, R. M., Tutenel, T., de Kraker, K. J., & Bidarra, R. (2011). A declarative approach to procedural modeling of virtual worlds. *Computers & Graphics, 35*(2), 352-363.

State Planning Organization Undersecretariat (2014). Ninth Development Plan (2007–2013). 13 December 2016, http://plan9.dpt.gov.tr/plan9.htm

Streubert, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing.* (5th ed.). Philadelphia: Lippincott Williams ve Wilkins.

Şimşek, A. A. (2010). Hukuk eğitim ve öğretiminde bir olanak olarak lisans araştırma projeleri. *İz Dergisi, 20.*

Ulucki, J. (2012). Transforming legal education: Teaching law in a virtual world environment. Retrieved from https://works.bepress.com/jalae-ulicki/12/

Uzun, K. (2011). *Determining the self-presentation behaviours in second life* (Unpublished Doctoral Thesis). Anadolu University, Eskişehir.

Wang, C., Song, H., Xia, F., & Yan, Q. (2009). Integrating Second Life into an EFL program: Students' perspectives. *Journal of Educational Technology Development and Exchange, 2*(1), 1-16.

Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational Technology Research and Development, 53*(4), 5-23. doi: 10.1007/BF02504682

Warburton, S. (2009). Second in higher education: Assessing potential for and the barriers to deploying virtual worlds in learning and teaching. *British Journal of Educational Technology, 40*(3), 414–426. doi: 10.1111/j.1467-8535.2009.00952.x

Winn, W. (1995). The virtual reality roving vehicle project. *T.H.E Journal, 23,* 70- 75.

Winn, W., & Bricken, W. (1992). Designing virtual worlds for use in mathematics education: The example of experimental algebra. *Educational Technology, 32,* 12-19.

Yenipınar, F. (2013). *Social and legal perspective: Advocacy* (Unpublished Master's Thesis). Gaziantep University, Gaziantep.

Yıldırım, A., & Şimşek, H. (2006). *Sosyal bilimlerde nitel araştırma yöntemleri* (6th ed.). Ankara: Seçkin Yayıncılık.

Yule, J. M., McNamara, J., & Thomas, M. N. (2009). Virtual mooting: Using technology to enhance the mooting experience. *Journal of the Australasian Law Teachers Association, 2*(1 & 2), 231-243.