The situation and importance of game interface design education in Turkey and a lesson proposal

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Abstract

Digital gaming industry has been an entertainment area that, since the mid 20th century, has come into prominence and distinguished itself in the game industry. Digital games have come a long way and reached large numbers of users since the time they got into the market. As for the digital game industry, the education of game design, along with the game production, is given high importance especially in USA and Europe. In these countries, game interface design with regards to programming and aesthetically designing is given place in the bachelor and master's degree education. It can be said that, in Turkey, the number of researches in this field, lessons and game companies has been increasing in recent years. However, it's clear that as a country, we have to come into prominence more in the international game field. As the necessity of developing more appealing, qualified and unique game interfaces is known, game companies are to act responsibly during the game interface design process. In terms of the creation of scenes, characters, environments, animations and the usage of the game engines, more professional tools and techniques are used and more original game designs are pursued nowadays. With regard to this, it's clear that the need for qualified graphic designers to design aesthetically successful game interfaces has been increasing and will continue to. It's seen that game design lessons have started to be given at bachelor and master's degree programs at Universities in Turkey. Yet, the lessons are mostly on game programming at departments such as computer engineering. Game interface design lessons, on the other hand, are given at certain universities. In this study, the proposal of a game interface design lesson that can take place in the curriculum of Visual Communication Design or Graphic Departments of Fine Arts Faculties at Universities in Turkey is examined.

Keywords: Game interface design education, graphic design education, game design, curricula.

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1. Introduction

Digital games, becoming prevalent on various platforms such as mobiles, PCs and consoles especially in recent years, are now a popular means of entertainment used by people of all ages from all over the world. According to Newzoo statistics, almost 30,8 million people play games in Turkey (https://newzoo.com/insights/countries/turkey/). It is known that in Turkey the interest in game development area is gradually increasing and there are plenty of firms serving in this field. As for the world-wide state, digital games, with a sale that left cinema industry behind, have become an area requiring interdisciplinary cooperation. Supporting government policies and investments in game development enable countries such as U.S.A and South Korea to be at the front in the game industry.

2. Game Design Education in Turkey

In order to keep the promising and developing digital game industry in Turkey as strong as the ones in other countries, there is a serious need for workforce in this field. To enable the training of people to work in game studios, it's necessary to set up qualified substructures in the related departments at universities and increase the number of universities offering education in the game development field. Maintaining presence in the game industry not only as users but also as developers will be achievable when qualified graphic designers, software developers, scriptwriters, sound designers etc. can be trained at universities at the level of bachelor's and post-graduate degree. Therefore, incentive policies and reinforcements are needed in order to become developers in the digital game industry.

As the need for talented and creative graphic designers majored at game interface development gradually increases, it becomes more necessary to give place to game interface development lessons in graphic design curriculums in Turkey. It is highly beneficial for people wishing to major in this field to allow for related lessons in university curricula.

Significant developments can be seen in Turkey's game industry in recent years. Game development lessons are given at the level of bachelor's and postgraduate degree at some universities in Turkey. Some of the universities giving lessons at the level of Bachelor's degree are; Hacettepe University, METU, Bahcesehir University, Eastern Mediterranean University, Istanbul Bilgi University, Isik University, Izmir University of Economics, Marmara University and Maltepe University. Additionally, some of the University curricula at the level of bachelor's and postgraduate degree are; Hacettepe University Institute of Informatics Computer Animation and Game Technologies Master Programme, Bahcesehir University Digital Game Design Undergraduate Programme (Master Bug), Middle East Technical University Graduate School of Informatics Game Technologies Master Programme, Izmir University of Economics M.SC. In Computer Games and Technology and İstanbul Bilgi University Department of Digital Game Design Bachelor's Programme, there is also some game development related programs waiting to be opened at universities. Looking at the situation in Turkey in general, it can be seen that the number of institutions giving education in this field are not adequate with regards to the need of workforce to be trained in the game development field.

3. Interdiciplinarity

Game studios these days run differently than the small game studios of early 1990s. Some independent game developers do work similar with the developer groups of two in the past. Yet, game development companies are to function multi-directionally during the product process. And at times, just one developer may have to cop with various aspects of a game development process. Interdisciplinarity has become the primary structure of the game industry (Zackariasson and Wilson, 2012). The necessity of working interdisciplinary can be seen clearly when looked at the game components.

During a game development process, some components are required to turn a digital game into a product. According to Schell (2008), a game composes of four elements. These are titled as; story, visual design, game mechanics and audio.

According to Schell, the titles are as below: (2008):

1. Mechanics: The ways and rules of a game.
2. Story: The order of events in a game.
3. Aesthetics: How the game looks and appeals to the user.
4. Technology: Technical basis for a game to run.

As it can be seen from the game components, game design requires interdisciplinarity. The absence of even just one of these components results in an incomplete project. As to the issue studied in this paper is game aesthetics and interface development education. In Turkey, what comes to mind when game design education is in question is usually the game software lessons given at computer engineering departments of Universities. It's not only the game software education that is necessary for a game design, but also aesthetics and therefore game interface design education. Yet, the number of higher education institutions giving game interface design education are few in number in Turkey. Therefore, a game interface design lesson and course content is dwelled on.

4. Requirements

Students to take Game Interface Design lessons at Fine arts or Visual Communication Departments of Universities are expected to have reached a certain level of creativity and aesthetic sensitivity and have learnt the basics of Graphic design. This is because game interface design forms from the unity of graphic design's various fields.

5. Game Interface Design Course Subjects

The stages of Game Interface Design education can be listed as; storyboard, concept design, character design, environment design and user interface design.

5.1. Storyboard

Storyboard consists of drawing series that show certain scenes of the game. In a game interface design lesson, students are to draw a storyboard for the created story. To succeed at this stage, students are expected to have taken a good drawing education, have qualified drawing skills, visualize their imaginary world, form analysing and creative images and finally balanced correlate environment-figure-object connection on two-dimensional platform.

5.2. Concept Design

Concept design is a stage that represents all necessary elements of a game world and characters, presenting its distinctive features. In this sense, concept design is a stage of forming a structures that is composed of distinctive styles and features of a game. (Clarke & Mitchell, 2007). What's expected from students during this stage is to determine how the game's overall picture will be and make preliminary character and environment designs using traditional or digital techniques. They are also expected to combine the learnt basic design principles with their pattern, image, colour and composition knowledge and make use of their illustration skills at a high level.

5.3. Character Design

Character design is to design human or humanlike characters of distinctive uniqueness and rich features for all kinds of visual media. A professional character design scheme generally requires the artistic to draft the front, back and side view of his head, as well as various motions such as walking, running and jumping, in addition to different facial expressions. The application area for character design has expanded from story and movie to animation, cartoon, game, mascot, illustrated books, model and other visual domains celebrating creativity (Su & Zhao, 2012).

For students are expected to have a good knowledge of anatomy and use their knowledge and skills of reflecting ratio and proportion, position, view and character features to be able to make creative character designs in the lesson. At this stage, they are to be competent in especially pattern and illustration fields. Student are to be expected to determine who and what their character will be, integrate physical features with the story and therefore reflect the personality correctly.

5.4. Environment Design

An environment illustration is a detailed picture of an area of the game world. It is usually taken from the same view that the player will see the game, but it can also be an overview of the world. In reality, an environment illustration is a painting of the game world (Pardew, 2005).

Students are expected to use all of their imaginative skills and visualize the imaginary environment connecting with the story. Hence, they are to be component at composition, angle, light, perspective arrangements and also be good at observing, commenting and fictionalizing.

5.5. User Interface Design

Each scene the user encounters in the game are called user interface. Interfaces displayed from the installation scene until the ending scene are the elements composing the user interface. (Moore, 2011). A user interface usually consists of design elements and guidance such as loading screens, menu, information screens, settings, toolbars, time and point indicators and intros. Students are to continue the game's integrity on texts, buttons and typographic elements while designing a user interface. In order to form a visual integrity in the game, by looking at the concept design, an easy accessible and clear user interface is to be designed in accordance with the colour, shape, overall atmosphere and limning style. Besides, for students to form a game's corporate identity, they are to have taken typography education and performed typographic analysis.

As clearly stated, for students to take the lessons in question, they are expected to have already taken graphic design basic lessons and therefore to be at the last year of the 4 year undergraduate education. They are expected to have taken basic art education, basic graphic education, typography, pattern, computer graphics and illustration lessons. They are to understand essentials of graphic design, plastic forming and have good visual perception skills. In this sense, it's best graphic design lessons are given by Universities with graphic design /visual communication departments or by professional academicians that have taken art education.

6. The Aim of the Lesson

One of the main objectives of the lesson is to provide students with theoretical information about the game concept, history, genres and platforms in digital game interface design field. Giving students information about up-to-date technology in the digital game world helps them have some knowledge and ideas on the game they plan to design. Besides, to help students develop their own production techniques using game interface design production techniques researches and works is among the other objectives. And the most significant aims are to present highly creative works in the game interface design field, teach game interface design step by step and develop qualified game interface designs consonant with the used software. And another aim is to help students perform concept, character, environment, object and user interface designs suitable for the chosen game platform starting from the sketch stage until the last one.

A person to work at a game development firm as game interface designer, concept artist or character designer etc. must be aware of their responsibilities. Becoming a member of a group, establishing good relationships with other members, creating products perceived and applied as imagined are among the topics to be discussed in lessons. According to Fullerton (2008), the graphic designer's responsibility to imagine how users will react when they first encounter the game scene and visualize every scene in the game. For the visualization of a game, every team needs a graphic designer and every design problem

has more than one solution. These problems can be solved with the cooperation of team members. It's believed to be necessary in the lesson to give information on this matter as well.

7. Lesson Learning Outcomes

Students complete primary stages of the digital game interface design process. Creating a story and scenario for the game, they organize the storyboard and game design document. They finish all stages of concept, character, user interface and environment design. For all character, environment and object drawings to be in accordance with the software, students have knowledge of necessary design methods. To design an appealing and creative game interface, they make their designs considering game design theories and methods. They pay attention to reflecting the game world created in the scenario. Designing the logo and the introductory poster of the created game, they form the corporate identity of the game.

8. Lesson Contents

Within the scope of this lesson, information about game concepts, history and genre is given. Storyboard, character, environment, menu, user interface and object designs, fundamental elements of a Professional game design process, are explained. Design process of some successful game interface designs are examined thoroughly. After determining the topic, genre and concept of the game that will be created, design of the elements like character, environment, object etc. are made. Then the game's corporate identity is formed. Level designs and determination of the difficulty between levels are finished. Cooperation with a game studio or computer engineering department is made to make designs in accordance with the software. And finally, to make designs displayable, all works are turned into presentation. It's beneficial to question the applicability of both student works and lesson topics and for this to cooperate with game software departments or firms. Working with people from different disciplines will help students be a part of a group and cooperate with others at the firms they'll work in the future.

9. Student works

These projects were carried out during Digital Game Interface Design lessons at Hacettepe University Fine Arts Faculty in 2015-2016 spring terms (1). Beginning with the analysis and presentations of digital games' historical development, game genres and successful game samples, they then moved to the stage where students had an application study with regard to the scenario they created and the game platform they chose. Character, environment, object and user interface designs were performed step by step, aiming to raise consciousness of each and every design to be a part of a whole. It was aimed to integrate character and environment designs with game genre dynamics and structure and to establish a high level of creativity, originality and aesthetics in the game interface designs.

Figure 1: Game interface design projects carried out in the lessons, nThe owners of the works from left to the right; Elif Altun, Hilal Özdemir, Nevin Erbulan.

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10. Conclusions and Recommendations

Looking at the current situation of game technologies and how digital games took a place in people's lives, it can be seen that they have become widespread and the number of local development firms has increased. In recent years, Turkey has made significant progress in terms of industrialization. Yet, for the game sector to reach an adequate speed of growth, the necessary labour force is to get trained and supplied. For this to happen, a solid education background is needed in Turkey. In the existing education system, there are few bachelor and postgraduate education programs working with an interdisciplinary approach. Yet the number of these programs is not sufficient at all. It is believed that software based game design education needs to become art-design based and be carried out in graphic design – visual communication design departments of Fine Arts Faculties at Universities.

That there are some game incubation centres, studios and firms at present at University Techno cities is an advantage for our country to remain in the game industry. Yet, the number of these institutions cannot be said to be sufficient. There are some worldwide known examples of games developed in game studios and the increment of these examples is believed to contribute to the country's economy. For that reason, along with giving game design education at universities, 'digital game design' art major and departments including software and design fields are needed as well. Game development certainly requires interdisciplinary studies. Thus, various curricula meeting the needs of different perspectives are required.

In our country, along with game development firms, there also are small independent developer groups taking part in international platforms. As it is now easier and faster to publish and market developed mobile game product, the number of these small independent developer groups increases. These groups also have the chance to incorporate in University Techno cities. With similar incentive policies at Universities, we can raise to a higher position in international digital game platforms. Consequently, it's aimed to provide students with the chance of developing more creative and aesthetic designs with the accumulation of theoretical investigations showed and conveyed in the lessons.

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