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THE RELATIONSHIP BETWEEN CURIOSITY AND EXPLORATION SKILLS AND REFLECTIVE THINKING SKILLS TOWARDS PROBLEM SOLVING OF SOCIAL NETWORK GAMERS

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Abstract. There is a continuing and massive interest on playing online games. Children and adults can spend several hours to play Internet based games from PCs and mobile smart phones. Internet based games can be categorised in four groups in terms of socialness and compexity. Social platforms like Facebook provide great opportunities social interactions between users like challenge, collaboration ans other domains over the games . But also social games have positive effects on cognitive, motivational, emotional, and social development too, according to literacy. But are there personal characteristics similarities of social game players. In this context the main goal of this research is to determine if there is relationship between Curiosity and Exploration skills and Reflective Thinking Skills towards Problem Solving of social network gamers. Data collected from a social game user database by 2 different scales and personal information survey. Findings and results will be presented in full text paper.

Keywords: online games, computer games.

1. Introduction.

Computer games are very popular among people, independent from age and genre since their invention. Maybe the main reason to play computer games is entertainment and spending funny times. But also learning and traninig issues can be the other aspects of playing computer games.

It is possible to categorise computer games such as action, adventure fighting, puzzle, role-playing, simulation, sports and strategy games (Herz, 1997). With the development of network and the mobile technologies, the way of playing games has changed over time. While the computer human interaction has changed, the parts of the interaction has changed too. People used to play with pre-defined rules based and primitively programmed games at the beginning. But now AI (Artifical Intelligence), social media and wireless mobile technologies provide unpredictible playing platfoms. Human-human, human-AI and AI-AI interacations occurs in games like every branches of life, too.

Social media like Facebook is a common place letting users to get together in many ways. People play social games sometimes for challange, sometimes meeting new people, sometimes for trainning, sometimes for a new language and for other reasons. It is possible to emphasize two theoritical constructs for the reason why people play those games. One of is psychological dimension like self-determination theory. This theory provides an account of very broad based needs for competence, autonomy and relatedness that drive human behaviour and proposes that people enjoy activities more if they meet intrinsic rather than extrinsic needs (Przybylski, Ryan, and Rigby 2006).

Second construct is outcomes of the games including learning skills, cognitive and affective learning (Garris, Ahlers and Driskell, 2002). Boyle, Connolly and Hainey indicate that entertainment games are not explicitly designed to improve visual-perceptual abilities but did so unintentionally.

According to Boot et. al. (2008) video gamers are better scores at tracking objects moving at greater speeds, performing in visual memory test, switching between tasks. They found mixed results, some supportive of previous research and others not, and suggested that more research is required to find out exactly which perceptual and cognitive skills game playing supports. In this context the main goal of this research is to determine if there is relationship between Curiosity and Exploration skills and Reflective Thinking Skills towards Problem Solving of social network gamers. Also are there personal characteristics similarities of social game players.

2. Method.

This research is designed as correlational descriptive model. This research model aims to determine if there is statistical relationship between two variables.

3. Participants.

Participants were 674 social game player who filled voluntarily the survey. They are registered players in that game.

4. Data collection tools.

There are two data collection tools this research. One on them is Curiosity and Exploration Inventory-II (CEI) developed by Kashdan et. al (2009). Turkish Validity and reliability study implemented by Acun et. al. (2013). Other is Reflective Thinking Skill Scale Towards Problem Solving scale developed by Kızılkaya and Aşkar (2009). Ölçeklerle ilgili ek bilgiler verilebilir.

5. Results.

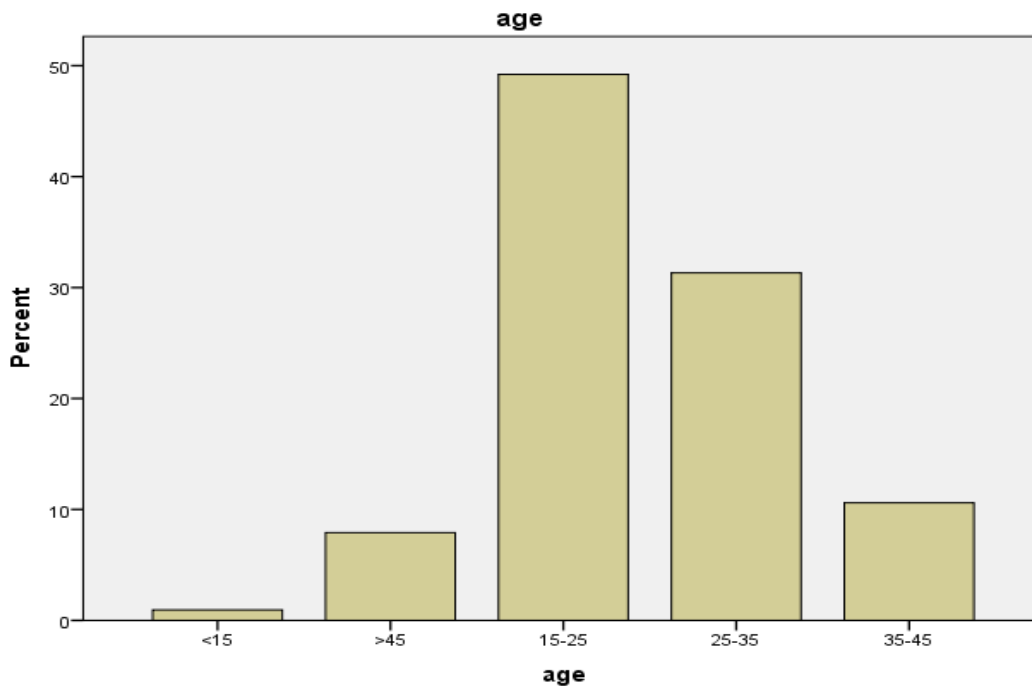Participants age disribution is as in table 1.

Chart 1. Age groups of participants

As seen from the Chart 1., there are game players almost all age groups. But the majority of the players are teens and youngs at the ages of high school and university.

Chart 2. shows the gender distribution.

The majority of the players are males. This is an interesting situation because the subject of this game in this research is not a action game. Users can buy and sell their goods in a virtual trade platform. So the game is a simulation of trade on that sense.
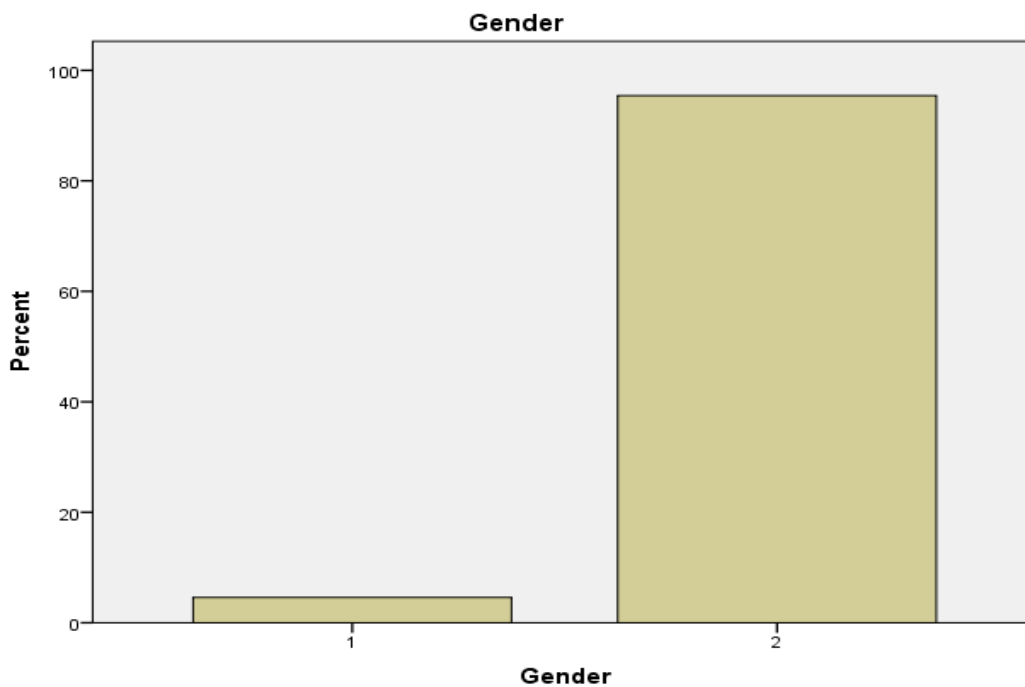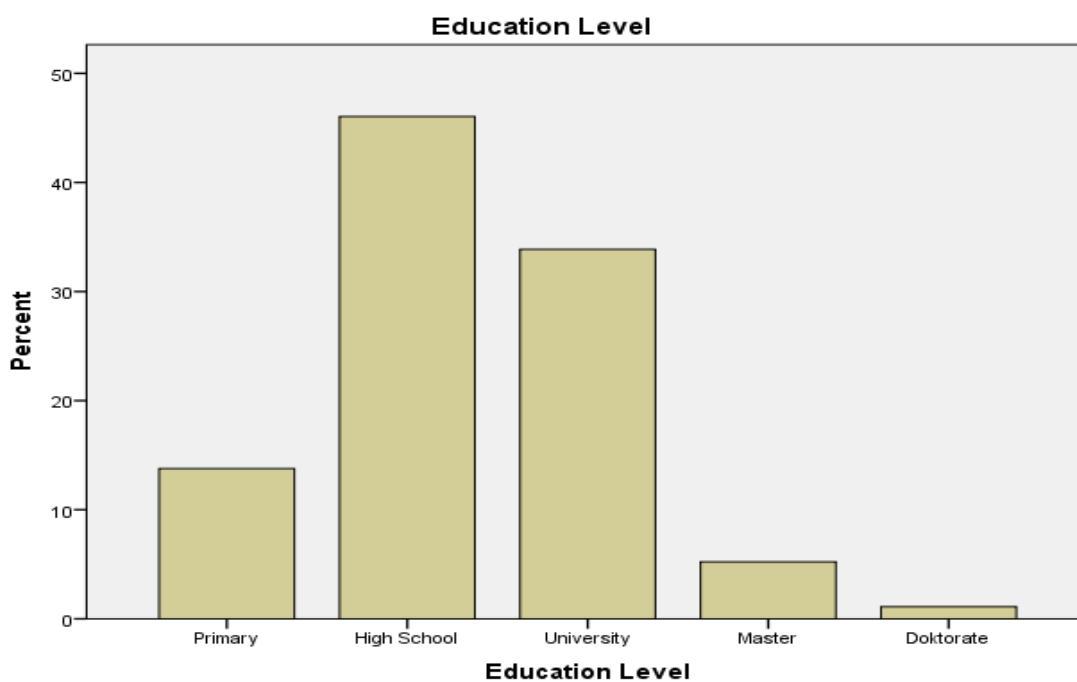
Chart 2. Gender Distribution

Chart 3. Education Levels of Participants

The result of 632 participants Curiosity and Exploration Inventory-II scale score is 3,69. The other score from Reflective Thinking Skill Scale Towards Problem Solving scale is 3,69 too.

Table 1

Desciptive statistics of two scales

Descriptive Statistics

	Mean	Std. Deviation	N
o2ort	3,69399	,758843	632
o1ort	3,6894	,80193	632

Table 2

Correlations of two scales

Correlations

		o2ort	o1ort
o2ort	Pearson Correlation	1	,649**
	Sig. (2-tailed)		,000
	N	632	632
o1ort	Pearson Correlation	,649**	1
	Sig. (2-tailed)	,000	
	N	632	632

**. Correlation is significant at the 0.01 level (2-tailed).

These results show that there is positive and sinificant relationship between two variables. This situation means social game players are curious and they tend to new explorations as their personal characteristic. Also they have systematic problem solving skill as an higher order skill and they can reflect this skill to other situations.

6. Discussion. Curiosity and interest both refer to a positive motivational-emotional state associated with exploration. By this defitinion it is possible to say curiosity belongs to affective domain of being human. But also it has a cognitive state to explore uncertain events (Kashdan and Silvia, 2009). Besides that reflective thinking is a skill which will help reveal the tacit learning habits, develop higher order thinking skills, develop strategy against the problems encountered and develop an improvement process towards the work performed (Kızılkaya, Aşkar, 2009). In this context game players are curious before the beginning of the game and also they feel curiosity at the all stages of the game and every challange. Therefore curiosity can be identified as cause of the knowledge acquisition in terms of specific to playing games, generally all the fields of life. That knowledge is used to solve other problems which means reflective thinking. As mentioned in Bloom's taxonomy, thinking behaviours consists of knowledge, comprehension and application as lowest levels steps. Other highest levels are analysis, synthesis and evaluation. There is a complex organization among those levels according to Bloom (Forehand, 2005). This research is aimed to clarify one of that complex state of interactions by determining in relationship state. As seen in Table 1. participants had the same scores. But Table 2. shows a relationship between 2 variables too. It means that most of participants had close scores in both scales. Notions like learning, thinking, problem solving and productivity of human being has complex relationships as in Bloom's taxonomy. Games provide simulative environments of life. So games are invaluable sources of information as big data to understand the real life situations. The progress of technology allows to analysis that data. Data gathered from any other kinds of games helps humanity progression related with psychology in a systematic way.

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