



T. C.
YEDITEPE UNIVERSITY
INSTITUTE OF EDUCATIONAL SCIENCES
MASTER'S PROGRAM IN INFORMATION TECHNOLOGIES AND
SOCIAL MEDIA EDUCATION

INVESTIGATION OF UNIVERSITY STUDENTS' NEW MEDIA LITERACY
LEVELS

BY
KADER YAVUZ

İSTANBUL, 2018



YEDİTEPE UNIVERSITY
INSTITUTE OF EDUCATIONAL SCIENCES DIRECTORATE

THESIS SUBMISSION and APPROVAL FORM

SUBJECT: Investigation of University Students' New Media
Literacy Levels

APPROVAL:

Doç. Dr. Gonca KIBUKAYA CUMADİLLİ
(Advisor)

(Signature)

Prof. Dr. Servet BAYRAM
(Member)

(Signature)

Dr. Öğr. Üyesi Serife Gonca ZEREN
(Member)

(Signature)

SUBMITTED BY : Kader YANUZ
DATE OF THESIS DEFENSE : 05.06.2018
DATE OF THESIS APPROVAL : 05.06.2018

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material.



Name, Last name: Kader Yavuz

Signature:

ABSTRACT**INVESTIGATION OF UNIVERSITY STUDENTS' NEW MEDIA LITERACY
LEVELS**

Kader YAVUZ

Supervisor: Assoc. Prof. Dr. Gonca Kızılkaya Cumaođlu

This study aims to investigate the level of New Media Literacy (NML) of university students and validate recent new media literacy in Turkish version. The data were collected from 486 university students at Yeditepe University in Turkey. The language equivalence, validity and reliability of scale were established. The results show that university students had differences about NML level in terms of their gender and spending time on online games. The result also shows that the Turkish version of this scale can be used in Turkey.

Key words: New media literacy levels, new media literacy scale, university students, online games

ÖZET

ÜNİVERSİTE ÖĞRENCİLERİNİN YENİ MEDYA OKURYAZARLIK DÜZEYLERİNİN İNCELENMESİ

Kader YAVUZ

Tez Danışmanı: Doç. Dr. Gonca Kızılkaya Cumaoğlu

Bu çalışmanın amacı üniversite öğrencilerinin Yeni Medya Okuryazarlık düzeylerini incelemek ve güncel yeni medya okuryazarlığı ölçeğinin Türkçe versiyonunun geçerliliğini sağlamaktır. Veriler, Yeditepe Üniversitesinde okuyan 486 öğrenciden toplanmıştır. Ölçeğin dilsel eşdeğerlik, geçerlilik ve güvenilirlik çalışmaları yapılmıştır. Sonuçlara göre, üniversite öğrencilerinin Yeni Medya Okuryazarlık düzeyleri cinsiyet ve çevrimiçi oyun oynama saatlerine göre farklılık göstermektedir. Ayrıca, Türkçeye adapte edilen ölçek geçerlilik ve güvenilirlik açısından Türkiye’de kullanılabilir.

Anahtar Kelimeler: Yeni medya okuryazarlığı düzeyi, yeni medya okuryazarlığı ölçeği, üniversite öğrencileri, çevrimiçi oyun

ACKNOWLEDGEMENTS

First of all, I want to thank to my supervisor Assoc. Prof. Dr. Gonca Kızılkaya Cumaođlu for motivating guidance towards this dissertation.

I want to tell my debt of gratitude to all academics of CEIT Department in Yeditepe University for their close interest and support towards this dissertation.

I would like to thank to the students who participated in this study in Yeditepe University. I want to especially thank to my friends Pınar Alkan, Ali Burak Aşçı and Duygu Akdođan to their kind help and sincere motivation.

Finally, I have my greatest gratitude for the invaluable support that my family has given for all my decisions in my life.

TABLE OF CONTENT

APPROVAL	ii
PLAGIARISM.....	iii
ABSTRACT.....	iv
ÖZET	v
ACKNOWLEDGEMENTS.....	vi
TABLE OF CONTENT	vii
LIST OF TABLES AND FIGURES.....	ix
INTRODUCTION	1
1.1 Problem Statement	3
1.2 Purpose of the Study	4
1.2.1 Research Problems	4
1.3 Limitation	5
1.4 Literature	5
1.4.1 Literacy.....	5
1.4.2 Media Literacy.....	6
1.4.3 New Media Literacy	7
1.4.4 Review of the Literature	10
METHOD	13
2.1 Sample.....	13
2.2 Data Collection Tools.....	13
2.2.1 Demographic Information and Variables	13
2.2.2 New Media Literacy Scale	14
2.2.3 Adaptation	14
RESULTS	21
3.1 Research Question 1	21
3.2 Research Question 2.....	23
3.3 Research Question 3.....	26
3.4 Research Question 4.....	31
3.5 Research Question 5.....	34
3.5.1 Research Question 5.1	34
3.5.2 Research Question 5.2	38
DISCUSSION AND CONCLUSION	40

REFERENCES45
APPENDIX A.....48
APPENDIX B49



LIST OF TABLES AND FIGURES

Table 1. Students who participated in language equivalency study	15
Table 2. Result of correlation.....	15
Table 3. Result of KMO and Bartlett's Test	17
Table 4. Rotated Component Matrix	17
Table 5. Reliability of scale	20
Table 6. Descriptive statistics of NML for university students	21
Table 7. Demographic information of university students	22
Table 8. Result of descriptive statistics of NML in sub dimensions for sample	23
Table 9. Result of descriptive statistic and t Test the new media literacy in terms of gender.....	24
Table 10. Result of descriptive statistic the new media literacy in sub dimensions in terms of gender	25
Table 11. Result of descriptive statistic the new media literacy in terms of faculties .	26
Table 12. Result of ANOVA for new media literacy levels in terms of faculties	27
Table 13. Result of descriptive statistic the new media literacy in sub dimensions in terms of faculties.....	28
Table 14. Result of descriptive statistic and t-Test the new media literacy in terms of taking courses.....	31
Table 15. Result of descriptive statistic the new media literacy in sub dimensions in terms of taking courses	33
Table 16. Result of descriptive statistic the new media literacy levels in terms of spending time on online games.....	35
Table 17. Result of ANOVA for the new media literacy levels in terms of spending time on online games	35

Table 18. Result of Post Hoc for the new media literacy levels in terms of spending time on online games	36
Table 19. Result of descriptive statistic the new media literacy in sub dimensions in terms of spending time on online games.....	37
Table 20. Result of descriptive statistic the new media literacy levels in terms of spending time on the internet	38
Table 21. Result of ANOVA for the new media literacy levels in terms of spending time on the internet	38



ABBREVIATIONS

ARCH: Architecture

BME: Biomedical Engineering

CE: Civil Engineering

CSE: Computer Engineering

CEIT: Computer Education and Instructional Technologies

ECON: Economy

EDEM: Mathematics Education

EDEN: English Language Teaching

EE: Electrical & Electronics Engineering

ELIT: English Language and Literature

MATH: Mathematics

NML: New Media Literacy

NMLS: New Media Literacy Scale

NUT: Nutrition and Dietetics

PCG: Psychology Counseling Guidance

PSY: Psychology

SOC: Sociology

TKL: The Turkish Language and Literature Teaching

INTRODUCTION

Internet has a big role in people's life. It provides a lot of benefits such as reaching information, sharing news, connection between people etc. Information is increasing day by day with the growing up using of the Internet. The most important developments start to evaluation of web from Web 1.0 to Web 2.0. Web 2.0 is the second part of development of the web and web-based applications to information services (O'Reilly, 2005). The basic characteristic of Web 2.0 tools, is providing to users to be active in the process of content production (Usluela & Mazmana, 2009). As information is increasing, new technologies are constantly emerging. New products are being developed and solutions are sought to solve problems in society by young entrepreneurs. These products can be a tool or program. All new things spread into the society and starts to be used. Thus, production has taken the place of consumption with Web 2.0. Widespread of using new devices such as mobile devices, smart phones, laptops lead to the people to be consumer and producer about multimedia contents. Contents of multimedia are produced with using the Web 2.0 tools as texts, photographs, images or videos, (Humanante-Ramos, García-Peñalvo, & Conde-González, 2017). For example, there are a lot of social platforms such as Facebook, Instagram, and Twitter. These applications come into people life with Web 2.0 and they have been affecting everything such as way of working and communicating style with each other (Kellner, 2002).

Besides, these applications usually provide to users being more powerful to choose, filter, share, and subedit information and join the creation of resources (Tredinnick, 2006). New technologies support the people to make something new. Especially, social media tools increased the productivity of multimedia contents. It had been supposed that

who are still using Web 2.0 technologies willingly in their social life they would be alike motivated to use them in an academic contents and already dominate the certain level of technical skills (Dohn, 2009)

Sometimes may require skills to use new things. In this case people are faced with the concept of literacy. In this situation, many researchers start to study on this concept to define and understand what happen in the world. The internet has played remarkable role in the creation of this stage and it affects immediately literacy skills (Erişti & Erdem, 2017). Developments in the media surrounding modify our concept of literacy and need new things like habits, method of processing culture and interact with the environment and world around us (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006). Everything has been changing since Web 1.0 evolved to Web 2.0. For example, education systems had changed from traditional to online or distance education. It leads to change the daily life activities, habits, working style etc. And also, the developments with Web 2.0 influence on emergence of new concepts of literacy such as social media literacy and new media literacy (Walsh, 2010). New terms are emerged, so many researchers have been working on studies to define and understand them.

1.1 Problem Statement

Today it is an obligation to use and include new technologies with Web 2.0 in business and social life. New information and contents are being produced and spreading in every second. It requires skills to understand, criticize and interpret the information that is shared. Using new technologies requires skill at a certain level to produce or consume. Besides, the level of the having skills provide to people to be qualified and adapted in the society. Therefore, people should be literate about new developments. Actually, education system has a big role on having skills to adapt them into to the life. These skills must be specified in a specific frame that called literacy skills to understand the level of people literacy. According to the related literature, literacy had been separated in itself in terms of periodical innovations. For instance, as it mentioned by Walsh (2010) that new concepts of literacy are social media literacy and media literacy. Literacy skills have some effects on students in their life. According to Kellner (2002) media literacy skills teaches students that how they resist manipulation of media and practice media ingredients in constructive methods. Furthermore, it helps to student to be good citizens in the society and be eligible and encouraged participants in their social life (Kellner, 2002). Therefore, skills of literacy should be change with periodical innovations and it should be define and investigate. The problem of the present study is that literacy has effects on students and their adaptation to the society. The existing literacy skills are not enough to define the new concept. Therefore, the actual concepts of literacy is new media literacy, so skills of frame should be shaped to present to students the chance of being qualified and strong against new world.

1.2 Purpose of the Study

The aim of this study is to answer following question:

What is the level of university students' New Media Literacy (NML) and how these levels differ according to age, gender, faculties, taking courses and spending time on using internet, and playing game?

1.2.1 Research Problems

In this study, the main research question is “What are the New Media Literacy levels of university students and how these levels vary according to several variables (age, gender, faculties, taking courses and spending time on using internet, and playing game)?”.

The sub problems are listed below:

1. What are the New Media Literacy levels of university students?
2. Do the New Media Literacy levels of students differ according to their gender?
3. Do the New Media Literacy levels of students differ according to their faculties?
4. Do the students' New Media Literacy levels vary depending on whether they take computer or communication courses or not?
5. Do the New Media Literacy levels of students differ according to spending time on internet in a day?
 - 5.1 Do the New Media Literacy levels of students differ according to spending time on online games in a day?
 - 5.2 Do the New Media Literacy levels of students differ according to spending time on mobile phones or computer in a day?

1.3 Limitation

The sample of present study is limited to the students who study at Yeditepe University during 2017 – 2018 academic year. In the process of data collection, reaching only nine faculties is the limitation of this study. Besides, in this study the Ioana Literat's NML scale was adapted and used, so the result could be different if another scale was used.

1.4 Literature

1.4.1 Literacy

Literacy is a learning process to intercommunicate in a meaningful, direct and engaging method. The character of literacy is quick modification as new data and communication technologies (Leu D. , 2008). Hence, literacy is a concept which is constantly changes over time and it is difficult to define a certain definition. However, some definitions were accepted and used.

Literacy generally defines as the ability to read and write at an appropriate level (Blake & Hanley, 1995). The definition of the literacy has been changing with new communication tools by day by. New communication tools have increased in people's lives and living or working with them has become essential part of human's life. Therefore, it is necessary to know how they use. All technology or something new brings their literacy with together to consume or produce. And also defining only with reading and writing is insufficient for now. In ancient time it is acceptable because there are not technological devices or internet. Actually, Donald and his friends used a term for define the literacy. The character of literacy is deictic that means related to the time which people live. Deistic is an adjective that means of this term come from time. For instance, the mean of "yesterday" become "today" every last 24 hours. Therefore, literacy is a

deictic term because of the time that everything has changed rapidly like communication technologies (Leu, Kinzer, Coiro, Castek, & Henry, 2017).

In the literature, there are many terms about literacy such as media literacy, digital literacy, computer literacy, social media literacy etc. All terms emerged with an innovation or development. People assimilate the new terms and start to use willingly.

1.4.2 Media Literacy

For definition of the Media Literacy, the mean of media should be understood primarily.

The mean of “Media” is mentioned in The Oxford Online Dictionaries (2012) that it is a medium which provides people to communicate indirectly instead of face to face contact. The term “media” is the plural version of “medium”. Therefore, the media provide people a connection with representations, writings and images to communicate each other. The term “media” represent the modern communication media such as television, video, radio, cinema, photography, internet and newspapers (Yördem, 2012).

Media Literacy is a type of literacy on technological literacies. Media literacy is an umbrella term which covers media and technology tools (Erişti & Erdem, 2017). In the literature, there is not only one definition about media literacy because there is not a consensus about it (Erişti & Erdem, 2017). Therefore, more than one definitions accepted in the literature. Basically, media literacy has been mentioned that is the ability to access, analyze, evaluate, and communicate messages in a wide diversity of forms (Hobbs, 1998). It can be seen that new actions are added over the definition of literacy that are analyzing, reaching information, investigation. And also, it has evolved to doing something actively. Besides, Taylor defines the media literacy in

three important sights: media accession and meaning, the skill to solve the media messages, and imaginative components (Taylor, 2016). According to these sights productivity is more important in media literacy. That means reading and writing is not enough to define in period of media tools are emerged.

Fedorov (2003) also defined the Media Literacy in a line. Media literacy is related to all media tools such as television, radio, print media, and internet and communication technologies. Therefore, the purpose of Media Literacy is to improve the awareness of the media entered in everyday life (Fedorov, 2003).

Media literacy consists of skills, information and understanding that allow people who consume the media tools to use media more effectively and safely.

In addition, media literacy has been evolving to new media literacy. Therefore, all definitions and terms had to be evolved (Commission of the European Communities, 2007).

1.4.3 New Media Literacy

Evolving of the technology led to change type of people's communication platforms from traditional to online platforms, so for all new communication technology we will use the "new media". The literacy associates with new technological stuff and the types of attributes and incorporated with the notion of Web 2.0.(Lankshear & Knobel, 2011). New media has replaced the meaning of literacy to require new routines, new ways of processing culture with the world (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006). Utilizing the definition of the new media and skills allow for the restructuring of media literacy for the 21st century or new media literatures (Young, 2015). In the literature, there are some definition about new media literacy. For instance, NML consists main process abilities, including access, analysis,

measurement, critique and comment, production and/or participation with media content (Lee, 2015). News media literacy is a part of media literacy (Mihailidis, 2011). The new media literacy should include social skills, as method of interacting with in a larger society and not simply a personalized ability to be uses for individual expression (New Media Consortium, 2005). The probability of new media is in the prospect of attendance, association and coactions between individuals (Arsenijevic & Milica, 2015). The importance of the new technological stuff related to with how it makes possible people building and join in literacy exercises that involve diverse types of values, understandings, standards and processes from characterize traditional literacies (Lankshear & Knobel, 2011). New media literacy contains the traditional literacy that developed with the print culture and new literacy in digital media (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006).

Skills of old literacy are not enough to define new literacy, therefore Jenkins et al (2006) define the “New Media Literacy” in their framework include 12 NML skills. The skills are:

- “Play– the capacity to experiment with one’s surroundings as a form of problem-solving
- Performance – the ability to adopt alternative identities for the purpose of improvisation and discovery
- Simulation– the ability to interpret and construct dynamic models of real-world processes
- Appropriation– the ability to meaningfully sample and remix media content
- Multitasking – the ability to scan one’s environment and shift focus as needed to salient details

- Distributed Cognition – the ability to interact meaningfully with tools that expand mental capacities
- Collective Intelligence – the ability to pool knowledge and compare notes with others toward a common goal
- Judgment – the ability to evaluate the reliability and credibility of different information sources
- Transmedia Navigation– the ability to follow the flow of stories and information across multiple modalities
- Networking – the ability to search for, synthesize, and disseminate information
- Negotiation– the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms
- Visualization– the ability to create and understand visual representations of information”

According to these skills a NML scale was developed to investigate. In this study, it will be investigate the level of NML of university students after it adapt to Turkish version.

1.4.4 Review of the Literature

In the literature, there are many studies about literacy and their sub terms such as media literacy, digital literacy, social media literacy and new media literacy. In media literacy studies, Karaman and Karataş (2009) has a study about media literacy levels of the teacher candidates in Turkey. The aim of their study is to evaluate the media literacy levels of teacher candidates and examine that which variables are effective on being media literate. According to their results, teacher candidates have high media literacy levels and the variable such as having a computer, Internet access, watching TV and Internet usage are important effects on being media literate (Karaman & Karataş, 2009). Besides, in Turkey Kurt and Som (2012) have another study about media literacy levels between students who study in the department of Computer Education and Instructional Technologies (CEIT). Their aim is to determine CEIT students' levels of media literacy (Som & Kurt, 2012). Except university students, Görmez (2014) studied with secondary students about media literacy. The aim of the study is to compare the level of media literacy of the secondary students. The result of the study is the media literacy level of students who join the media literacy lessons are higher than students who do not join the media literacy lessons (Görmez, 2014).

New media literacy is important in terms of educational goals because of effectiveness on consumption and production ratio about content creation and communication. Therefore, scales had developed to investigate the NML level of students to improve the educational solutions. Ashley (2013) and his friends developed a news media literacy scale to assess the efficacy of media literacy education in public. Purpose of their study is to improve an instrument to assess media literacy, as it is relative with comprehension of news producing and consuming (Ashley, Maksl, & Craft, 2013).

In the literature, there are two main NML scale. First one is NML scale that belongs to Lee (2015) and second one belongs to Literat (2011). The framework of these scales is different from each other. Lee(2015) was used the framework of Tzu Bin(2013) and Literat (2011) was used the Jenkins' framework.

Literat (2011) developed the NML scale which based on Jenkins' theoretical framework about 12 NML skills. The scale was used with the other question parts like demographic information and digital participation by Literat (2011). The meaning of the scale can also be developed for future usage after test the validity, reliability and usability of the questionnaire. The result of this scale showed that subscales was established to be satisfying. There are several studies with this scale in Turkey and abroad. Young (2015) used the NML scale to evaluate the validity and reliability of NML skills among social work students and educators. The one of the main purpose of the study is to compare the NML level of social work students and educators. According to the study, level of students is higher than educators in many areas such as networking, multitasking, appropriation and simulation. Besides, Balaban (2012) has a work about this scale in Turkey. It was examined between communication students at university to assess the level of NML. In the study, there are some findings about NML levels of communication students and their spending time on TV, internet, games, social media and blogging. According to the study, there are some significant differences between NML levels and variables. For example, there are significant differences between play score of sample and gender and also between performance scores and students' age. Lastly, Arsenijevic (2015) used the NML scale to investigate differences in new media literacy competences in terms of social-demographic characteristic of sample in Serbia. Gender, age and amount of income are the main significant variables of the study. The results of this study showed that gender, age and income have an effect on NML levels. And also

Arsenijevic (2015) compared all dimensions to each other. Therefore, there are differences between dimensions.

In literature, there is another an explorative theoretical framework which developed by Lin (2008). It is different from Jenkins' framework. It has four main types of subtitle these are critical consuming, functional consuming, critical prosuming and functional prosuming. This framework actually focused on two actions that are consumption and production. All subtitles separated into ratio of using. According to this framework Lee developed a measuring instrument. It had detailed with new titles and it was reported the validity of youth's NML. Reliability and validity of Lee's NML scale were established and it has been using in the literature. There are also studies in Turkey about Lee's instrument. First one the development and validation of NML for university students was studied by Koç (2016). It was adapted to the Turkish version from Koç (2016) to establish the validity and reliability. Result of the analysis showed that it is utilizable. Second one belong to Kara (2017) who studied with preservice teachers about investigation their NML (Kara M. , ve diğerleri, 2017).

There is another study belongs to Leu (2017) and his friend. They tried to define new literacy in a framework with their principles and then according to these principles, an assessment was developed to adapt into the education system and classroom (Leu, Kinzer, Coiro, Castek, & Henry, 2017).

METHOD

2.1 Sample

The study took place in Turkey at Yeditepe University during the 2017- 2018 academic year. The sample of this research includes 486 university students, 289 (59, 47 %) of whom are female and 197 (40, 53 %) of whom are male. The range of ages is from 18 to 40 years, with a mean of 21, 35. The students were selected randomly and they study in different departments.

Departments are divided in terms of their faculties. Distribution of faculties is as follow, 165 (34, 0 %) of Education, 44 (9, 1 %) of Architecture, 26 (5, 3 %) of Law, 55 (11, 3 %) of Economic Administration, 37 (7, 6 %) of Arts and Sciences, 14 (2, 9 %) of Commerce, 10 (2, 1 %) of Health Sciences, 50 (10, 3 %) of Communication, 82 (16, 9 %) of Engineering and 3 (0, 6 %) of Fine Arts.

2.2 Data Collection Tools

In this study, we used two data collection tools. First one consists of demographic and using internet questions. Second tool is New Media Literacy Scale which adapted from Literat (2011). The permission was obtained from Ioana Literat (2011) to adapt to Turkish version via e-mail.

2.2.1 Demographic Information and Variables

In this part, 6 questions asked to students. Demographic information consisted of age, gender and department. The other questions are about taking courses about computer or communication, time spending on internet and online games. The questions list was showed in Appendix A.

2.2.2 New Media Literacy Scale

The original NML scale developed by Literat (2011) was adapted. The scale consists 60 items and 12 sub-dimensions. The scale aims to assess participants' new media literacy skills with 60 items which are about media consumption and production, learning styles, interaction, their personality and social and cultural types of engagement. (Literat, 2011) She developed the NML scale which based on Jenkins' theoretical framework about 12 NML skills. For each skills, 5 items were developed. In this survey, 2 of the NML skills failed in the factor analysis. (Literat, 2011) The two skills which failed are Simulation and Collective Intelligence. The questions were asked on a 5-point likert-type scale (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree). The scale was adapted the Turkish version in a procedure.

2.2.3 Adaptation

2.2.3.1 Language Equivalency

For the validity and reliability, the language equivalency was performed. There are the processes about this step. In the first step, the scale was translated from English to Turkish by author. In the second step, two English language experts' opinions were received for the correctness of this translation. In the third step, according to the English language experts' opinions, the items of the scale in Turkish were improved by author. Finally, the scale is applied to 74 university students in two forms English and Turkish version for two weeks to search correlation of versions. The students who showed in the Table 2 were selected in terms of having good English level, so the university students, 38 (% 51, 36) of whom study at English Language Teaching department and 36 (% 48, 64) of whom study at Translation and Interpreting Studies

department. The students were selected randomly in these departments. The original version of NML scale was applied and after two weeks the Turkish version was used for same sample. The result of correlation between Turkish and English scale is 0,66. Therefore, it was decided to analyze for validity because result can be used if they above 0,50. According to the result of correlation percentage, some of the substances were edited. The new version of scale was consulted to a Turkish Language expert.

Table 1.

Students who participated in language equivalency study

Departments	Numbers
English Language Teaching	38
Translation and Interpreting Studies	36
Total	74

Table 2.

Result of correlation

		Total of Version in English NML Scale	Total of Version in Turkish NML Scale
Total of Version in English NML Scale	Pearson Correlation	1	,660**
	Sig. (2-tailed)		0
	N	74	74
Total of Version in Turkish NML Scale	Pearson Correlation	,660**	1
	Sig. (2-tailed)	0	
	N	74	74
**. Correlation is significant at the 0.01 level (2-tailed).			

2.2.3.2 Exploratory Factor Analyze

For the construct validity of scale, exploratory factor analyze was applied. New version of Turkish scale was applied totally 268 university students, 175 (% 65, 30) of whom are female and 93 (% 34, 70) of whom are male in Yeditepe University. The scale applied to 268 university students, 49 (% 18,28) of whom study at English Language Teaching department, 46 (% 17,16) of whom study at Computer Education and Instructional Technologies (CEIT) department, 27 (% 10,07) of whom study at Psychology Counseling Guidance (PCG) department, 25 (% 9,33) of whom study at Nutrition and Dietetics (NUT) department, 25 (% 9,33) of whom study at Computer Engineering (CSE) department, 20 (% 7,46) of whom study at The Turkish Language and Literature Teaching (TKL) department, 19 (% 7,09) of whom study at Psychology (PSY) department, 18 (% 6,72) of whom study at Sociology (SOC) department, 16 (% 5,97) of whom study at Architecture (ARCH) department, 11 (% 4,10) of whom study at Electrical & Electronics Engineering (EE) department, 5 (% 1,87) of whom study at Mathematics Education (EDEM) department, 2 (% 0,75) of whom study at Civil Engineering (CE) department, 2 (% 0,75) of whom study at Mathematics (MATH) department, 1 (% 0,37) of whom study at Economy (ECON) department, 1 (% 0,37) of whom study at Biomedical Engineering (BME) department, and 1 (% 0,37) of whom study at English Language and Literature (ELIT) department.

According to the answer of 268 university students KMO and Bartlett's Test was examined and found as, 880 and Bartlett's Test was found as 7654,732. The results show that the sample of this study was adequate for factor analysis. The result of KMO and Bartlett's Test was shown in Table 3.

Table 3.

Result of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,880
Bartlett's Test of Sphericity	Approx. Chi-Square	7654,732
	df	1770
	Sig.	,000

Table 4.

Rotated Component Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
s1	,115	,203	,215	-,005	,235	,168	,214	,593	-,094	,110	,126	,068	-,021	-,039
s2	,091	,002	,176	,041	,326	-,044	,191	,270	-,049	,524	,107	,081	,093	,183
s3	-,130	,065	,172	-,048	-,049	,282	,375	,112	,056	-,069	,221	,145	,115	,365
s4	,220	,111	,143	-,081	,231	,020	,151	,613	,113	,273	,059	,033	,182	,010
s5	-,021	,218	,142	,054	,128	,271	,123	,690	,114	-,094	,022	-,088	,050	,028
s6	,487	,133	,160	-,037	,114	-,225	,033	,245	,252	,240	-,172	,065	,061	,081
s7	,504	,087	,202	,073	,120	-,218	,012	,194	,127	,250	-,164	,360	-,068	,023
s8	,088	,155	,112	,008	,109	-,012	,164	-,060	,017	,127	,080	,707	,011	,173
s9	,082	,137	-,076	,236	-,005	,258	-,043	,041	,043	,090	,127	,270	-,003	,518
s10	,301	,258	,025	,077	,027	-,233	,000	,465	,012	,071	,044	,378	,109	,167
s11	,022	,238	,162	-,047	,027	,508	,092	,118	,116	-,051	,291	,398	-,083	,021
s12	,004	,315	,161	-,169	,117	,221	,167	,109	,085	-,068	,246	,516	,104	-,153
s13	-,043	,111	-,012	,092	-,036	,376	,098	-,026	,059	-,141	,697	,049	,053	,105
s14	,109	,026	,014	,015	-,026	,001	-,003	,105	-,068	,143	,772	,108	-,013	,025
s15	,410	,339	,016	,168	,113	,033	,006	-,093	-,011	,256	,270	,215	,082	,071
s16	,005	,157	,006	,201	,060	,715	-,091	,146	-,013	,197	,026	,021	,161	,092
s17	,024	,049	-,067	,237	-,114	,747	,109	,047	,126	,057	,144	-,065	,105	,034
s18	,117	,320	,024	,040	,121	,111	-,199	,150	,147	,487	,317	-,025	-,001	-,170
s19	,212	,076	,208	,079	-,019	,200	,064	-,059	,110	,713	-,026	,110	-,125	,045
s20	,423	,098	,235	,038	,068	,027	,149	,131	,124	,453	-,127	,062	-,021	-,154
s21	,138	,066	,006	,093	,138	,332	,140	,100	,032	-,081	,080	-,036	,660	-,023
s22	,690	,020	,174	-,120	,152	,201	,047	,024	-,073	,024	,062	-,083	,184	,212
s23	,716	,065	,140	,031	,115	,099	,105	-,045	-,042	,111	,100	,038	,093	,037
s24	,524	,096	,348	,109	,230	,126	,219	,076	-,038	,100	-,050	-,012	-,124	,097
s25	,563	,168	,173	,037	,223	-,055	-,037	,083	,203	-,003	,066	,069	,066	-,165

s26	,192	,062	,022	,091	,108	-,016	,714	,119	,003	,014	-,089	,232	,116	,014
s27	,086	,036	,110	,068	-,009	,106	,801	-,005	-,024	,006	-,041	,119	-,040	,002
s28	-,057	,227	,148	-,014	,025	-,062	,654	,158	,018	,062	,211	-,116	,024	,020
s29	,200	,156	-,007	,222	,025	,030	,422	,166	,289	,244	,023	-,073	-,071	-,096
s30	,422	,102	,212	,366	,024	,047	-,011	,115	-,077	,185	,196	-,016	-,067	-,309
s31	,069	,087	,313	,227	-,076	-,039	-,104	,217	,189	,063	-,103	,233	,491	,103
s32	,472	,224	,447	,237	,114	-,228	,100	,090	,111	,118	,061	,070	,143	-,001
s33	,205	,341	,465	,071	-,041	,050	,092	,069	,228	-,048	,153	,026	,195	,010
s34	,213	,181	,551	,091	,042	-,107	,036	,118	,294	,221	,135	-,122	,110	,249
s35	,199	,230	,532	,000	,193	-,170	-,057	,097	,107	,347	,062	-,089	,142	,206
s36	,160	,063	,705	,020	,130	,295	,142	-,019	-,063	,075	-,049	,097	,041	-,027
s37	,356	,018	,611	,173	,151	-,102	,081	,231	,053	,064	,014	,178	-,097	-,129
s38	,239	,166	,731	,119	,137	,009	,132	,113	,078	,117	-,056	,143	,002	-,056
s39	,398	,129	,449	,037	,306	-,092	,129	,190	,189	,102	,017	,160	-,097	-,159
s40	,485	,178	,344	,149	,298	-,093	,044	,164	,139	-,014	-,002	,080	-,167	-,155
s41	,086	,062	,092	,307	,304	,001	-,052	,070	,649	,184	,011	,113	,042	,004
s42	,283	,329	,150	-,106	,228	,196	,161	-,050	,519	-,006	-,054	,090	,004	-,038
s43	-,071	-,036	,102	,332	-,140	,166	,010	,040	,650	,017	-,026	,019	,098	,072
s44	,339	,204	,289	,142	,390	-,118	-,027	,152	,373	,124	,016	-,033	-,230	,086
s45	,430	,257	,304	,114	,377	-,183	-,011	,178	,296	,129	-,005	-,022	-,281	,089
s46	,234	,330	-,066	,204	,383	-,064	,140	,236	-,057	,086	-,013	-,021	-,144	,197
s47	,215	,153	,045	,680	-,027	,181	,086	,063	,084	-,072	-,073	-,020	-,029	,116
s48	,065	,001	,014	,792	,015	,106	,012	,138	,109	-,078	-,066	,050	-,019	,073
s49	-,175	,164	,106	,618	,096	,230	,089	-,137	,063	,241	,156	,068	,155	,009
s50	-,026	,168	,189	,653	,292	-,024	,055	-,079	,062	,078	,117	-,057	,114	-,126
s51	-,013	,633	,069	,181	,054	,257	,110	,058	,172	,129	,041	,238	,099	,111
s52	,214	,658	,318	,050	,179	,094	,004	,023	,018	,093	,037	,005	-,107	,033
s53	,126	,622	,233	,147	,239	-,011	-,010	,193	,075	,081	,107	,055	-,009	,090
s54	,058	,786	,041	-,021	,032	,066	,132	,190	,039	,051	,052	,091	,111	,056
s55	,170	,728	,084	,172	,106	,032	,172	,076	-,018	,000	-,026	,107	-,017	-,099
s56	,339	,265	,202	,094	,549	-,054	,025	,202	,017	,129	-,075	,087	-,174	,075
s57	,269	,064	,165	,177	,709	,092	-,055	,101	,060	,050	,040	,039	,099	-,104
s58	,163	,169	,111	,064	,733	,006	,086	,122	,069	,062	-,073	,133	,189	-,030
s59	,068	,019	,101	,605	,277	-,033	,056	-,113	,368	,150	,095	-,084	,052	,048
s60	,333	,164	,121	,058	,451	-,122	,114	,117	,231	-,041	,021	,013	-,204	,358

14 factors were extracted. On the other hand, items loaded remarkable on the 11 factors. All items loaded importantly on the 11 factors except items (s2, s3, s6, s9, s11, s12, s15, s16, s17, s21, s30, s31, s32, s33, s34, s35, s40,s45,s46,s59) because their factor loading were below ,30. According to the Büyüköztürk (2002) ,30 or higher

score is acceptable for factor loading. (Büyüköztürk, 2002) Thus, according to the answer of 268 university students 20 sub items were eliminated in 60 items. According to the Rotated Component Matrix, the factor loading which are 6, 13 and 14 removed from scale because their value is below 0,3.

Therefore, 11 sub- dimensions were found in the scale and one sub-dimension was eliminated in 12 sub-dimensions as regard to the original framework of New Media Literacy Scale belongs to Literat (2011). Dimension that “Collective Intelligence” was removed with their sub items. This dimension also was removed in Literat’s (2011) study. The other dimensions that are Play, Simulation, Performance, Appropriation, Distributed Cognition, Multitasking, Judgment, Transmedia Navigation, Networking, Negotiation and Visualization used. Each dimension has at least two sub-items. Besides, matrix was showed for each item in Table 5. The items (s2, s3, s6, s9, s11, s12, s15, s16, s17, s21, s30, s31, s32, s33, s34, s35, s40, s45, s46, s59) were eliminated.

The last version of Turkish NML Scale was showed in Appendix B.

2.2.3.3 Reliability

For reliability of items the analysis was performed to examine Cronbach's alpha values. For all item the Cronbach's alpha is 0,911 and it was shown in Table 6.

According to the literature, an alpha should be, 70 or higher.(Carmines & Zeller, 1979)

Besides, the values of Cronbach's alpha for all dimensions were showed in tables.

Table 5.

Reliability of scale

Dimension	Cronbach's Alpha	N of Items
Play	,726	3
Simulation	,596	3
Performance	,578	2
Appropriation	,623	3
Distributed Cognition	,745	4
MultiTasking	,699	4
Judgment	,826	4
Transmedia Navigation	,650	4
Networking	,766	4
Negotiation	,832	5
Visualization	,782	4
Total	,911	40

RESULTS

This part presents the outcomes of the data analysis to examine and answer the research questions of the research.

3.1 Research Question 1

First research question of this study was specified as “What are the New Media Literacy levels of university students?”.

In the output showed below, the information was requested for each of the variables is summarized. For instance, about the variable age, the study has information from 486 participations; the range of ages is from 18 to 40 years, with a mean of 21, 35 and standard deviation of 2,305. Besides, the participations consist 289 female and 197 male.

The minimum score of scale can be 40 and maximum score can be 200. The average of scale is 120. According to the 486 university students, the average students' level of NML is 146, 26. Therefore, the university students' performances are above average on NML.

Table 6.

Descriptive statistics of NML for university students

	Mean	Std. Deviation	N
NML Total	146,3601	21,41692	486

Table 7.

Demographic information of university students

Gender			Age		Total
			<25	25<	
Male	Department	Education	50	1	51
		Architecture	11	1	12
		Law	9	0	9
		Economic Administration	26	2	28
		Arts and Sciences	11	1	12
		Fine Arts	1	0	1
		Commerce	10	0	10
		Health	1	0	1
		Communication	15	0	15
		Engineering	56	2	58
Total			190	7	197
Female	Department	Education	110	4	114
		Architecture	27	5	32
		Law	17	0	17
		Economic Administration	25	2	27
		Arts and Sciences	22	3	25
		Fine Arts	2	0	2
		Commerce	4	0	4
		Health	9	0	9
		Communication	34	1	35
		Engineering	24	0	24
Total			274	15	289

The university students have different NML scores in terms of sub dimensions. The mean of sub dimensions was shown in Table 20. For instance, the mean of Visualization (M=4, 01) is higher than the others. And also, Judgment (M=3, 98), Simulation (M=3, 85) and Distributed Cognition (M=3, 83) are higher. The lowest mean of score belongs to Performance (M=2, 62). Therefore, the university students have high NML level in terms of dimensions in Visualization, Judgment, Simulation and Distributed Cognition.

Table 8.

Result of descriptive statistics of NML in sub dimensions for sample

Dimensions	Mean	Std. Deviation	N
Play	3,8368	,83528	486
Simulation	3,8525	,85566	486
Performance	2,6235	1,07271	486
Appropriation	3,7229	,77890	486
Distributed Cognition	3,8328	,74124	486
MultiTasking	3,4676	,84759	486
Judgment	3,9825	,77006	486
Transmedia Navigation	3,6487	,77552	486
Networking	3,2109	,90845	486
Negotiation	3,6494	,82098	486
Visualization	4,0149	,83799	486

3.2 Research Question 2

Second research question of this study was stated as “Do the New Media Literacy levels of students differ according to their gender? ”.Independent-samples t-test was used to investigate the difference NML levels in terms of gender. In this section, the results of the analysis could be presented as follows:

An independent-samples t-test was conducted to compare the new media literacy scores for males and females. There was a significant difference in scores for males (M= 143.25, SO = 25, 26) and females (M= 148.47, SO=18, 08).

In this part, according to the results, it can be stated that there is a statistically significant differences between men and women. Therefore, the mean should be criticized. As a result, the mean of women is 148, 47 and the mean of men is 143, 25.

Thus, it can be noted that the level of women's NML is higher than men's NML level.

Table 9.

Result of descriptive statistic and t Test the new media literacy in terms of gender

Gender	Mean	Std. Deviation	N	p	Std. Error Difference
Male	143,2538	25,26304	197	,008	1,96652
Female	148,4775	18,08296	289	,013	2,09073

The university students have different NML scores in terms of sub dimensions and gender. The mean of sub dimensions was shown in Table 10. The mean of woman is differ from man in terms of some dimensions.

For example, Visualization for women (M=4, 16) is higher than the men (M= 3, 78). And also, Judgment (M=4, 05), Simulation (M=3, 88) and Distributed Cognition (M=3, 92) are higher for women. The lowest mean of score belongs to Performance for both gender, but the men have high score for Performance (M= 2, 86) according to the women (M=2, 46). The men have high score for Play (M=3, 87) according to the women(M=3, 80).Therefore, the women have high NML level in terms of Simulation, Appropriation, Transmedia Navigation, Networking, Visualization, Judgment and Distributed Cognition, Multitasking. Besides, the men have better score in three dimensions that are Play, Performance and Negotiation.

Table 10.

Result of descriptive statistic the new media literacy in sub dimensions in terms of gender

Dimensions	Gender	Mean	Std. Deviation	N
Play	Male	3,8782	,98276	197
	Female	3,8085	,71811	289
Simulation	Male	3,8003	,96812	197
	Female	3,8881	,76941	289
Performance	Male	2,8604	1,10290	197
	Female	2,4619	1,02246	289
Appropriation	Male	3,5702	,88272	197
	Female	3,8270	,68159	289
Distributed Cognition	Male	3,7030	,82647	197
	Female	3,9213	,66411	289
MultiTasking	Male	3,4315	,88374	197
	Female	3,4922	,82268	289
Judgment	Male	3,8832	,90122	197
	Female	4,0502	,65920	289
Transmedia Navigation	Male	3,4404	,82719	197
	Female	3,7907	,70516	289
Networking	Male	3,1129	1,00648	197
	Female	3,2777	,83026	289
Negotiation	Male	3,6690	,86314	197
	Female	3,6360	,79221	289
Visualization	Male	3,7893	,95834	197
	Female	4,1687	,70640	289

3.3 Research Question 3

Third research question of this study was defined as “Do the New Media Literacy levels of students differ according to their faculties?”. A one-way between-groups analysis of variance was applied to investigate the difference among faculties. In this section, outcomes are showed.

Distribution of faculties is as follow, 165 (34, 2 %) of Education, 44 (9, 1 %) of Architecture, 26 (5, 4 %) of Law, 55 (11, 4 %) of Economic Administration, 37 (7, 7 %) of Arts and Sciences, 14 (2, 9 %) of Commerce, 10 (2, 1 %) of Health Sciences, 50 (10, 4 %) of Communication, 82 (17, 0 %) of Engineering. There was 3 students who studied in Faculty of Fine Arts, but they were eliminated from sample in terms of this questions.

Distribution of departments was showed in Table 13.

Table 11.

Result of descriptive statistic the new media literacy in terms of faculties

Faculties	Mean	Std. Deviation	N	%
Education	149,3091	21,02369	165	34,2
Architecture	144,8864	18,49351	44	9,1
Law	144,4231	24,23415	26	5,4
Economic Administration	148,8545	16,21433	55	11,4
Arts and Sciences	138,7027	24,40044	37	7,7
Commerce	150,7857	21,90953	14	2,9
HealthSciences	156,5000	15,60093	10	2,1
Communication	145,3200	22,12067	50	10,4
Engineering	142,4878	23,56145	82	17,0
Total	146,3996	21,44209	483	100,0

A one-way between-groups analysis of variance was conducted to examine the faculty on levels of new media literacy, as surveyed by the New Media Literacy Scale (NMLS). Subjects were divided into nine groups according to their departments (Group1:Education; Group 2:Architecture; Group 3:Law; Group 4:EconomicAdministration;Group 5:Arts and Sciences; Group 6:Commerce; Group 7:Health Sciences; Group 8:Communication; Group 9:Engineering;).

There was no a statistically significant difference at the $p > .05$ level in NML scores for the faculties. Consequently, there was no significant difference between faculties.

Table 12.

Result of ANOVA for new media literacy levels in terms of faculties

NML Total	Sum of Squares	df	Mean Square	F	p
Between Groups	6725,075	8	840,634	1,854	,065
Within Groups	214880,805	474	453,335		
Total	221605,880	482			

There are some differences between departments in terms of sub dimensions. For instance, the high score of “Networking” belongs to Health Science, Commerce, Education, Economics Administration and Architecture. The score of “Appropriation” is also different from Commerce (M=3, 97) and Education (M=3, 89). The score of “Performance” is lowest for each faculty, so the mean of Performance is 2, 62.

Table 13.

Result of descriptive statistic the new media literacy in sub dimensions in terms of faculties

Dimensions	Faculties	Mean	Std. Deviation	N
		Play	Education	3,8869
	Architecture	3,5833	,84488	44
	Law	3,7051	,83972	26
	Economic Administration	3,9636	,65002	55
	Arts and Sciences	3,7838	,83967	37
	Commerce	4,0476	,83571	14
	Health Sciences	3,9333	,60451	10
	Communication	3,7667	,79468	50
	Engineering	3,8415	,97179	82
	Total	3,8357	,83668	483
Simulation	Education	3,9374	,83665	165
	Architecture	3,9394	,82991	44
	Law	3,8462	,79572	26
	Economic Administration	3,8182	,78781	55
	Arts and Sciences	3,4775	,99858	37
	Commerce	3,9286	,92615	14
	Health Sciences	3,9333	,68132	10
	Communication	3,7867	,85651	50
	Engineering	3,8415	,90453	82
	Total	3,8516	,85744	483
Performance	Education	2,6606	1,14230	165
	Architecture	2,5000	1,19592	44
	Law	2,3846	1,07059	26
	Economic Administration	2,7364	,89678	55
	Arts and Sciences	2,6757	1,13172	37
	Commerce	2,5357	1,06454	14
	Health Sciences	2,7500	,82496	10
	Communication	2,5500	,98587	50
	Engineering	2,6524	1,06194	82
	Total	2,6263	1,07527	483
Appropriation	Education	3,8949	,71265	165
	Architecture	3,5682	,79592	44
	Law	3,5769	,78631	26

	Economic Administration	3,6061	,77271	55
	Arts and Sciences	3,6036	,82341	37
	Commerce	3,9762	,57682	14
	Health Sciences	3,8000	,59213	10
	Communication	3,6000	,91597	50
	Engineering	3,6626	,80889	82
	Total	3,7233	,78101	483
Distributed Cognition	Education	3,8576	,77755	165
	Architecture	3,6818	,64781	44
	Law	3,8558	,81601	26
	Economic Administration	3,8773	,60260	55
	Arts and Sciences	3,6892	,73929	37
	Commerce	4,1607	,63251	14
	Health Sciences	4,3250	,42573	10
	Communication	3,7700	,75566	50
	Engineering	3,8140	,79816	82
	Total	3,8328	,74244	483
MultiTasking	Education	3,5136	,84746	165
	Architecture	3,6648	,79046	44
	Law	3,3846	1,05885	26
	Economic Administration	3,5818	,75470	55
	Arts and Sciences	3,3784	,76744	37
	Commerce	3,3393	,71795	14
	Health Sciences	3,7250	,81181	10
	Communication	3,4050	,93526	50
	Engineering	3,3079	,86183	82
	Total	3,4710	,84814	483
Judgment	Education	4,0167	,76566	165
	Architecture	3,8864	,72428	44
	Law	4,1154	,86669	26
	Economic Administration	4,0955	,68969	55
	Arts and Sciences	3,7770	,96965	37
	Commerce	4,0893	,82978	14
	Health Sciences	4,1500	,52967	10
	Communication	4,0600	,77683	50
	Engineering	3,8872	,71595	82
	Total	3,9881	,76810	483
TransmediaNavigation	Education	3,7106	,75251	165
	Architecture	3,7216	,65196	44

	Law	3,5865	1,00235	26
	Economic Administration	3,7591	,73435	55
	Arts and Sciences	3,4527	,83091	37
	Commerce	3,6964	,58981	14
	Health Sciences	3,8500	,88349	10
	Communication	3,7000	,71071	50
	Engineering	3,4604	,84663	82
	Total	3,6496	,77718	483
Networking	Education	3,3500	,89409	165
	Architecture	3,1420	,82898	44
	Law	3,1250	1,10736	26
	Economic Administration	3,3636	,82890	55
	Arts and Sciences	2,8716	,78754	37
	Commerce	3,4107	,58513	14
	Health Sciences	3,7750	,54582	10
	Communication	3,2600	,85559	50
	Engineering	2,9207	1,03256	82
	Total	3,2122	,91097	483
Negotiation	Education	3,7333	,78471	165
	Architecture	3,5273	,71149	44
	Law	3,7462	,86451	26
	Economic Administration	3,6255	,61950	55
	Arts and Sciences	3,4216	,88667	37
	Commerce	3,8571	,90615	14
	Health Sciences	4,0000	,97525	10
	Communication	3,6200	1,01760	50
	Engineering	3,5780	,85202	82
	Total	3,6501	,82183	483
Visualization	Education	4,0924	,82834	165
	Architecture	4,1477	,90431	44
	Law	3,8173	,90983	26
	Economic Administration	4,0955	,56620	55
	Arts and Sciences	3,7432	,97091	37
	Commerce	3,9464	,76068	14
	Health Sciences	4,1750	,60150	10
	Communication	3,9700	,90723	50
	Engineering	3,9238	,87373	82
	Total	4,0124	,83932	483

3.4 Research Question 4

Fourth research question of this study was specified as “Do the students' New Media Literacy levels vary depending on whether they take computer or communication courses or not?”. Independent-samples t-test was used to examine the difference NML levels in terms of whether they take courses about computer or communication or not. In this section, outcomes are showed.

Independent-samples t-test was conducted to investigate the courses on levels of new media literacy, as evaluated by the New Media Literacy Scale (NMLS). Subjects were divided into two groups according to their courses which they are taken or not (Group1: No Course; Group 2: Courses about Computer or Communication).

According to the answers, there are 132 students who did not take any course about computer or communication and their average NML level is 144, 08.

354 students took courses and their average score is 147, 20. Results showed that there was no a statistically significant difference at the $p > .05$ level in NML scores for the four course groups. As a result, there was no significant difference between the groups.

Table 14.

Result of descriptive statistic and t-Test the new media literacy in terms of taking courses

	Course	Mean	Std. Deviation	N	p	Std. Error Difference
NML Total	Without Course	144,0833	20,70809	132	,153	2,18180
	With Courses	147,2090	21,64264	354	,145	2,13819

The differences this variable between dimensions was shown in Table 15. There is not a big difference between groups in terms of sub dimensions. It can be said that the score of dimensions Simulation, Judgment and Visualization are higher for university students who took the courses about computer and communication. The mean of dimensions follows as 3, 89, 4, 01 and 4, 05.



Table 15.

Result of descriptive statistic the new media literacy in sub dimensions in terms of taking courses

Dimensions	Course	Mean	Std.	N
			Deviation	
Play	Without Course	3,8182	,83637	132
	With Courses	3,8437	,83596	354
Simulation	Without Course	3,7298	,81038	132
	With Courses	3,8983	,86862	354
Performance	Without Course	2,5417	1,02645	132
	With Courses	2,6540	1,08930	354
Appropriation	Without Course	3,6389	,70985	132
	With Courses	3,7542	,80183	354
Distributed Cognition	Without Course	3,7500	,74968	132
	With Courses	3,8637	,73675	354
MultiTasking	Without Course	3,4508	,82970	132
	With Courses	3,4739	,85524	354
Judgment	Without Course	3,8864	,83538	132
	With Courses	4,0184	,74230	354
Transmedia Navigation	Without Course	3,6345	,82042	132
	With Courses	3,6540	,75924	354
Networking	Without Course	3,1553	,94482	132
	With Courses	3,2316	,89499	354
Negotiation	Without Course	3,6500	,79938	132
	With Courses	3,6492	,83001	354
Visualization	Without Course	3,9205	,79916	132
	With Courses	4,0501	,85042	354

3.5 Research Question 5

Fifth research question of this study was specified as “Do the New Media Literacy levels of students differ according to spending time on internet in a day?”. The question separated in two sub-questions. One way analysis of variance (ANOVA) was used for two sub-questions. In this section, ANOVA and Post Hoc Test outcomes are showed for each sub-question.

3.5.1 Research Question 5.1

First sub- research question of this study was specified as “Do the New Media Literacy levels of students differ according to spending time on online games in a day?”.

A one-way between-groups analysis of variance was conducted to examine the spending time online games on levels of new media literacy, as surveyed by the New Media Literacy Scale (NMLS). Subjects were divided into three groups according to their spending time (Group1: Less than one hour; Group 2: Between Two and Four hours; Group 3: Much than four hours). There was a statistically significant difference at the $p < .05$ level in NML scores for the three time groups: $F(2, 339) = 4, 182, P = .016$

As a result, there was significant difference between the groups. Besides, the Post Hoc Test also was showed to verify. According to the Post Hoc Test, it can be stated that there is a statistically significant difference between Group1: Less than one hour and Group 3: Much than four hours. The mean of Group 1 is 146, 27 and the mean of Group 3 is 156, 15. Thus, the NML level of Group 3 is higher than Group 1. And also, the mean of Group 2 is 141, 55, so the NML level of who spending much more time on online gaming is higher than who spending less time on online gaming.

Furthermore, there is no statistically significant difference between Group1 and Group

2. The means of each group was shown in Table 16.

Table 16.

Result of descriptive statistic the new media literacy levels in terms of spending time on online games

Hours	Mean	Std. Deviation	N
Less than one	146,2727	21,69306	396
Two and four	141,5517	20,44434	58
Much than four	156,1563	16,40242	32
Total	146,3601	21,41692	486

Table 17.

Result of ANOVA for the new media literacy levels in terms of spending time on online games

NML Total	Sum of Squares	df	Mean Square	F	p
Between Groups	4414,877	2	2207,438	4,890	,008
Within Groups	218047,109	483	451,443		
Total	222461,986	485			

Table 18.

Result of Post Hoc for the new media literacy levels in terms of spending time on online games

(I) Online Games	(J) Online Games	Mean Difference (I-J)	Std. Error	p
Less than one hour	Two and four hours	4,72100	2,98723	,255
	Much than four hours*	-9,88352*	3,90482	,031
Two and four hours	Less than one hour	-4,72100	2,98723	,255
	Much than four hours	-14,60453*	4,67879	,005
Much than four hours	Less than one hour*	9,88352*	3,90482	,031
	Two and four hours*	14,60453*	4,67879	,005

There are also differences between dimensions. For example, playing online games many four hours showed that the score of NML is statically better than playing less than an hour especially dimensions in Play, Simulation, Performance, Multitasking, Networking, Negotiation and Visualization. The average of NML for all dimension and groups is showed in Table 19.

Table 19.

Result of descriptive statistic the new media literacy in sub dimensions in terms of spending time on online games

Dimensions		Sum of Squares	df	Mean Square	F	p
Play	Between Groups	4,263	2	2,131	3,081	,047
	Within Groups	334,121	483	,692		
	Total	338,383	485			
Simulation	Between Groups	5,362	2	2,681	3,703	,025
	Within Groups	349,736	483	,724		
	Total	355,099	485			
Performance	Between Groups	12,804	2	6,402	5,671	,004
	Within Groups	545,289	483	1,129		
	Total	558,093	485			
Appropriation	Between Groups	,912	2	,456	,751	,472
	Within Groups	293,328	483	,607		
	Total	294,241	485			
Distributed Cognition	Between Groups	2,384	2	1,192	2,180	,114
	Within Groups	264,095	483	,547		
	Total	266,479	485			
MultiTasking	Between Groups	5,179	2	2,589	3,644	,027
	Within Groups	343,248	483	,711		
	Total	348,427	485			
Judgment	Between Groups	2,471	2	1,235	2,093	,124
	Within Groups	285,131	483	,590		
	Total	287,601	485			
Transmedia Navigation	Between Groups	2,330	2	1,165	1,944	,144
	Within Groups	289,367	483	,599		
	Total	291,697	485			
Networking	Between Groups	6,771	2	3,385	4,156	,016
	Within Groups	393,486	483	,815		
	Total	400,257	485			
Negotiation	Between Groups	12,069	2	6,034	9,258	,000
	Within Groups	314,826	483	,652		
	Total	326,895	485			
Visualization	Between Groups	5,514	2	2,757	3,974	,019
	Within Groups	335,065	483	,694		
	Total	340,579	485			

3.5.2 Research Question 5.2

Second sub- research question of this study was specified as “Do the New Media Literacy levels of students differ according to spending time on mobile phones or computer in a day?”. A one-way between-groups analysis of variance was conducted to research the spending time on mobile phones or computer on levels of new media literacy, as surveyed by the New Media Literacy Scale (NMLS). Subjects were divided into three groups according to their spending time (Group1: Less than one hour; Group 2: Between Two and Four hours; Group 3: Much than four hours). There was no a statistically significant difference at the $p > .05$ level in NML scores for the three time groups: $F(2, 485) = .588, P = .556$

Table 20.

Result of descriptive statistic the new media literacy levels in terms of spending time on the internet

Hours	Mean	Std. Deviation	N
Less than one	146,4318	24,37345	44
Two and four	145,2222	21,11996	216
Much than four	147,4336	21,13191	226
Total	146,3601	21,41692	486

Table 21.

Result of ANOVA for the new media literacy levels in terms of spending time on the internet

NML Total	Sum of Squares	df	Mean Square	F	p
Between Groups	540,352	2	270,176	,588	,556
Within Groups	221921,633	483	459,465		
Total	222461,986	485			

As a result, there was no significant difference between the groups. Indeed, it can be said for dimensions that there are some differences between dimensions. For instance, spending time on mobile phones and internet more than four hours has better score in terms of dimensions in Multitasking (M=3, 54), Networking (M=3, 29) and Negotiation (M=3, 71). The other scores of dimensions are similar to each other.



DISCUSSION AND CONCLUSION

In this chapter, it was discussed the results of the research questions of the study in a line with the literature about NML.

First research question of the study was stated as “What are the New Media Literacy levels of university students?”

According to the answer of students in Yeditepe University, the average level of NML is 146, 26. Therefore, the university students have higher scores on NML. In Young’s (2015) study, the scores of students and social work educators are compared and the scores of students are higher than educators. Besides, the variable “age” is important factor to be new media literate because the new media occurred in their age and they adapted immediately. On the other hand, in Balaban’s (2012) study, age is important factor to be literate.

In Balaban’s (2012) study, the participants consist of the communication students and their skills were higher in Judgment, Collective Intelligence, Multitasking and Visualization. And also, the level of Performance was the lowest score for her study. Result of dimension Performance is similar in this study. The average university students’ level of New Media Literacy in this study was above the medium. That means, university students were usually literate on new media.

Second research question of the study was determined as “Do the New Media Literacy levels of students differ according to their gender?”

In this study the means level of women’s NML is higher than men’s. For each dimensions, it was examined that the women have high score in 8 dimensions (Simulation, Appropriation, Distributed Cognition, Multitasking, Judgment,

Transmedia Navigation, Networking and Visualization) and the men have better score in 3 dimensions (Play, Performance and Negotiation). In Literat's (2011) study it was also separated that the in terms of dimensions. For instance, while the average level of men's NML for "Play" and "Performance" dimensions are better, the average level of "Transmedia" dimensions is better for women. Furthermore, in Arsenijevic's (2015) results showed that men succeed in better scores in some dimensions such as Performance, Negotiation, Collective Intelligence, and Play.

Results of all studies are similar with each other. Therefore, it can be determined that gender is a variable that has a significant role on NML. In this study, especially the women have higher score on NML than the others. In Balaban's (2012) study, there is no statistically significant difference between female and male students. There is only a difference in Play dimension that male students' score are higher than female students in Play dimension. The results of the present study show that there is a statistically important difference between level of NML for female and male students.

Third research question of the study was stated as "Do the New Media Literacy levels of students differ according to their faculties?"

In this study, nine faculties that are Education Architecture, Law, Economic Administration, Arts and Sciences, Commerce, Health Sciences, Communication and Engineering examined. The results of faculties showed that scores of faculties are similar and there are no statistically significant differences. There are some differences in terms of dimensions. For instance, the high score of "Networking" belongs to Health Science, Commerce, Education, Economics Administration and Architecture. The score of "Appropriation" is also different from Commerce (M=3, 97) and Education (M=3, 89). The score of "Performance" is lowest for each faculty, so the mean of Performance is 2, 62.

The reason of differences between dimensions can be courses about their departments. In Turkey, Balaban (2012) has a study about communication students. The result of her study is showed that the communication students' new media literacy level were higher.

Fourth research question of the study was stated as "Do the students' New Media Literacy levels vary depending on whether they take computer or communication courses or not? This independent variable is about taking courses and the variable separated two groups. The average scores of these groups are as follow: Group 1:144, 20, Group 2: 147. According to the averages of groups, results showed that there was no a statistically significant difference, but it can be said that the students who took the courses have better scores than the others in terms of average.

Fifth research question of the study was stated as "Do the New Media Literacy levels of students differ according to spending time on online games and mobile phones or computer in a day?".

In this study, the NML level of students is differ from each other in terms of spending time on online games in a day. The results showed that the students who spend much more time on online gaming in a day have higher level than the others. There are also differences between dimensions. For instance, playing online games more than four hours in a day showed that the score of NML is higher than playing less than an hour in a day especially dimensions in Play, Simulation, Performance, Multitasking, Judgment, Transmedia Navigation, Networking, Negotiation and Visualization. The scores of Appropriation and Distributed Cognition are better for playing online games less than an hour in a day. Besides, in Balaban's (2012) study, there is significantly difference

between “Performance” dimension and time spent on games. The results of the present study show that there is a statistically important difference between level of NML and spending time on playing online games in a day.

In this study, the NML level of students is not differ in terms of spending time on mobile phones and internet in a day. That means there are no statistically differences. However, Balaban’s (2012) results showed that many sub-dimensions such as Networking, Multitasking, and Appropriation have difference between their scores and time spent on Internet.

To sum up, the university students’ new media literacy level are above medium, but it should be higher because the new generation was born in digital age. Besides, their all communication tools are not traditional and everything is possible thanks to new media such as following the agenda in the world and using tools. And also, new media literacy provides people to improve their skills to figure out problems by utilization of 21st century skills. And also, young people are digital natives, so they also need a guidance to help guide them in digital world (Balaban, 2012). Therefore, the new media literacy scale may be a guidance to define and understand the list of skills. The aim of this study was to investigate the university students’ new media literacy levels, but in next studies it can be expanded to people because the new media literacy has effect on all people.

And also, the framework of this study with sub dimensions may provide us to examine the where students are successful or not. Thanks to this separation, the lack of knowledge or abilities can be realized. This awareness provides benefits especially in education area. For instance, the ability of an engineering student should be higher and it can be examined thanks to dimension Play, Performance etc. All departments have different abilities and the students’ skills depend on their department, so this scale provides us to examine and improve them. Except education area, the social and work life also

important and the new media have effects on social and work life. Therefore, this study can be used with other samples. The importance of new media literacy is this area related to all people and the world.

Totally, in this study, some research questions were answered and examined. Main results of the study are listed below:

1. The university students have higher new media literacy skills.
2. The variable gender has a role on NML skills.
3. The faculties of students do not have a significant effect on NML.
4. The courses which are about computer or communication of students do not have an important effect on NML.
5. The time spent on internet is important value in terms of affecting the NML in terms of playing online games.

REFERENCES

- Arsenijevic, J., & M. A. (2015). Media Convergence and Diversification–The Meeting of Old and New Media. *Procedia Technology*, 19, 1149-1155.
- Ashley, S., Maksl, A., & Craft, S. (2013). Developing a news media literacy scale. *Journalism & Mass Communication Educator*, 68(1), 7-21.
- Assesment, C. (2013). *What is literacy? An investigation into definitions of English as a subject and the relationship between English, literacy and 'being literate*. A Research Report Commissioned by Cambridge Assessment.
- Balaban, J. (2012). New Media Literacies of Communication Students. *Contemporary Educational Technology*, 265-277.
- Blake, D., & Hanley, V. (1995). *Dictionary of Educational Terms*. Aldershot: Arena: Ashgate Publishers Limited.
- Büyüköztürk, Ş. (2002). Faktör analizi: Temel kavramlar ve ölçek geliştirmede kullanımı. *Kuram ve uygulamada eğitim yönetimi*, 470-483.
- Carmines, E. G., & Zeller, R. (1979). *Reliability and Validity Assessment*. SAGE Publications.
- Commission of the European Communities. (2007). *Media Literacy Levels in Europe*. Directorate-General for Information Society and Media.
- Dohn, N. B. (2009). Web 2.0: Inherent tensions and evident challenges for education. *International journal of computer-supported collaborative learning*, 4(3), 343-363.
- Donald j. Leu, Kinzer, C. K., Coiro, J., Castek, J., & Henry,, L. A. (2017). New literacies: A dual-level theory of the changing nature of literacy, instruction, and assessment. *Journal of Education*, 197(2), 1-18.
- Erişti, B., & Erdem, C. (2017). Development of a Media Literacy Skills Scale. *Contemporary Educational Technology*, 8(3).
- Fedorov, A. (2003). Media education and media literacy: experts' opinions.
- Greene, J. A. (2008). Exploring differences between gifted and grade-level students' use of self-regulatory. *Computers and Education*, 1069-1080.
- Hobbs, R. (1998). The Seven Great Debates in the Media Literacy Movement. *Journal of Communication*, 16-32.
- Humanante-Ramos, P. R., García-Peñalvo, F., & Conde-González, M. (2017). Electronic devices and web 2.0 tools: usage trends in engineering students. *International Journal of Engineering Education (IJEE)*, 33.
- Jenkins, H., Clinton, K., Purushotma, R., Robison, A. J., & Weigel, M. (2006). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. MacArthur Foundation.

- Kara, M., Caner, S., & Yıldırım, S. (2017). Validation of an Instrument for Preservice Teachers and an Investigation of Their New Media Literacy. *Journal of Educational Computing*, 1–25.
- Kara, M., Caner, S., Gökben, A. G., Cengiz, C., İşgör Şimşek, E., & Yıldırım, S. (2017). Validation of an Instrument for Preservice Teachers and an Investigation of Their New Media Literacy. *Journal of Educational Computing Research*.
- Kellner, D. (2002). *New technologies / new literacies: Restructuring education for a new millennium*. London: Sage.: Handbook of New Media (pp.90-104).
- Lankshear, C., & Knobel, M. (2011). *New literacies*. UK: McGraw-Hill Education .
- Lawton, D., & Gordon, P. (1996). *Dictionary of Education*. Hodder & Stoughton.
- Lee, L. (2015). Understanding new media literacy: The development of a measuring. *Computers & Education*, 84-93.
- Leu, D. (2008). Handbook of research on new literacies. *ResearchGate*.
- Leu, D., Kinzer, C. K., Coiro, J., Castek, J., & Henry, L. A. (2017). New literacies: A dual-level theory of the changing nature of literacy, instruction, and assessment. *Journal of Education*, 197(2), 1-18.
- Lin, T.-B. (2013). Understanding New Media Literacy: An Explorative Theoretical Framework. *Educational Technology & Society*, 16 (4), 160–170.
- Literat, I. (2011). Measuring New Media Literacies: Towards the Development of a Comprehensive Assessment Tool. *Journal of Media Literacy Education*, 15-27.
- Mihailidis, P. (2011). New Civic Voices & the Emerging Media Literacy Landscape. *Journal of Media Literacy Education*, 3(1), 4-5.
- New Media Consortium. (2005). *A Global Imperative: The Report of the 21st*.
- O'Reilly, T. (2005, 09 30). 'What is Web 2.0?'. Retrieved from oreilly.com: <http://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html>
- Oxford Dictionary . (2012). <https://www.oxforddictionaries.com/>.
- Önal, İ. (2010). Önal, İ. (2010). Tarihsel değişim sürecinde yaşam boyu öğrenme ve okuryazarlık: Türkiye deneyimi. *Bilgi dünyası*, 11(1), 101-121.
- Taylor, A. (2016). *Taylor, A. (2016). Educational Technology and Innovation Capacity in Arkansas Public Schools*. University of Arkansas Doctoral dissertation, .
- Tredinnick, L. (2006). Web 2.0 and Business: A pointer to the intranets of the future? *Business information review*, 23(4), 228-234.
- Usluela, Y. K., & Mazmana, S. G. (2009). Adoption of Web 2.0 tools in distance education. *Procedia-Social and Behavioral Sciences*, 1(1), 818-823.

- Walsh, M. (2010). Walsh, M. (2010). Multimodal literacy: What does it mean for classroom practice? *Australian Journal of Language and Literacy*, , 33(3), 211.
- Young, J. A. (2015). Assessing new media literacies in social work education: The development and validation of a comprehensive assessment instrument. *Journal of Technology in Human Services*, 33(1), 72-86.
- Yördem, A. (2012). *Pre-service teachers' perceptions of media literacy*.



APPENDIX A

Bölüm 1	
Okuduğunuz Bölüm:	
Yaşınız:	
Cinsiyetiniz: Kadın () Erkek ()	
Telefon veya bilgisayar başında geçirdiğiniz süre ne kadardır? 1 saat veya daha az () 2-4 saat () 4 saatten fazla ()	
Günde kaç saat online oyun oynarsınız?	1 saat veya daha az () 2-4 saat () 4 saatten fazla ()
Bilgisayar veya iletişim konularını içeren ders aldınız mı?	Evet () Hayır ()
*Cevabınız Evet ise dersin adını veya kodunu belirtiniz. Örneğin: CET 110 Temel Bilgisayar Uygulamaları BTSM 510 İletişim Kuramları ve Medya Eğitimi	

APPENDIX B

Bölüm 2						
		Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
1	Bilgisayarı kurcalarken ne olduğunu görerek, kendi kendime yeni şeyler öğrenirim.					
2	Bir sorun ile karşılaştığım zaman vazgeçmeden önce genellikle birkaç farklı çözüm yolu denerim.					
3	Bir sorunu çözmeye çalışırken çıkmaza girdiğimde bunu kişisel bir başarısızlık olarak değil yeni bir şeyler öğrenme fırsatı olarak görüyorum.					
4	İnsanların deprem veya güvenlik tahliyesi gibi kriz durumlarında ne yapacaklarını bilmeleri için simülasyonlar önemlidir.					
5	Second Life, SimCity, TheSims, FIFA ve TigerWoods PGA Tour gibi simülasyon oyunlarını ve faaliyetlerini beğeniyorum.					
6	Gerçek hayatta yapamayacağım şeylerin (uzay mekiği ile aya gitmek veya savaş uçağı kullanmak gibi) simülasyonlarına katılmak isterim.					
7	Çevrimiçiyyken gerçekte olduğumdan farklı bir insan olduğumu hissediyorum.					
8	Bazı durumlarda kendin olmaman gerekiyor.					
9	Özgün bir multimedya projesi hazırlarken sevdiğim sanatçıların şarkı veya videolarından yararlanmanın yanlış bir şey olduğunu düşünmüyorum.					
10	En sevdiğim ünlü, sanatçı veya grup ile ilgili bir fan videosu hazırlayacak olsam, o kişiler bu videoyu gördüğünde büyük ihtimalle mutlu olurdu.					
11	Gençlerin, popüler kültür öğelerini kendi özgün yolları ile kullanmayı öğrenmeleri önemlidir.					
12	İçerisinde bulunduğum çevrenin zekam üzerinde önemli bir rolü var.					

13	Daha zeki olmak için çevremden bir şeyler öğrenmeye devam etmem gerekir.					
14	Belirli bir konuyla ilgili daha fazla bilgi edinmek istersem kime soracağımı veya ne yapacağımı bilmekte başarılıyım.					
15	Öğrenmeme veya çalışmama yardımcı olması için yazım denetimi, hesap makinesi ve ansiklopedi gibi araçları kullanmanın önemli olduğunu düşünüyorum.					
16	Müzik dinlemek veya mesaj çekmek gibi başka şeylerle ilgilenirken bir yandan da işimi başarılı bir şekilde tamamlayabiliyorum.					
17	Çevremde başka şeyler olurken (örneğin insanların konuşması, televizyon, müzik, internet vb.) dikkatimin dağılmasını önleyip üzerinde çalıştığım konuya odaklanabiliyorum.					
18	Bilgisayar üzerinde çalışırken aynı anda birden fazla uygulamanın açık olmasından hoşlanırım.					
19	Benim jenerasyonum çoklu görev (aynı anda birden fazla iş yapmak) konusunda başarılı bir jenerasyon.					
20	İnternet ortamında bulduğum bilginin doğru ve güvenilir olup olmadığına etkin bir şekilde karar verebilirim.					
21	İlgilendiğim konu ile ilgili genel bir bakış açısı elde etmek için televizyon, internet ve sosyal medya gibi birçok kaynaktan bilgi toplarım.					
22	İnternette bir şeyler arayıp binlerce sonuçla karşılaştığımda hangilerinin benim için en faydalı bilgiler olduğuna etkin bir şekilde karar verebilirim.					
23	Aradığım şeyi bulmak için arama motoruna doğru kelimeleri yazabilirim.					
24	En sevdiğim programları, aktörleri ve müzisyenleri televizyon, magazin dergileri, internet, Facebook ve Twitter gibi farklı platformlar ve ortamlar üzerinden takip ediyorum.					
25	Aynı hikayenin müzik, oyunculuk, yazı ve çizim gibi farklı yöntemlerle anlatıldığını hayal edebilirim.					
26	En sevdiğim televizyon programlarının ve grupların internet sitelerini (resmi ve fanlar tarafından hazırlanan) sıklıkla ziyaret ediyorum.					

27	Televizyonda gördüğüm bir şeyi merak edersem daha sonra bu konuyu internette araştırırım.					
28	En sevdiğim bağlantıları veya yaratıcı çalışmalarımı Facebook, Youtube veya Twitter gibi sosyal medya sitelerinde paylaşmaktan hoşlanıyorum.					
29	Sosyal medya hesaplarımda (Örn: Facebook, Twitter, Instagram, blogger vb.) sıklıkla bağlantı paylaşıyorum.					
30	Online olduğumda kendimi toplumun bir parçası olarak görmekten hoşlanıyorum.					
31	Arkadaşlarımla sadece gerçek hayatta değil sosyal ağlar yoluyla da bağlantıda olabilmem önemlidir.					
32	İnternetteki ve/veya video oyunlarındaki deneyimim, beni farklı kişilere karşı daha anlayışlı hale getirdi.					
33	İnternetin, farklı geçmişlere sahip olan ve farklı yerlerden gelen kişileri tanımak konusunda çok önemli bir fırsat sunduğunu düşünüyorum.					
34	Dünyanın farklı yerlerindeki insanlarla çevrimiçi olarak veya sosyal medya üzerinden etkileşime geçebildiğim için mutluyum.					
35	İnternette gezinerek, çevrimiçi oyunlar oynayarak, çevrimiçi topluluklara veya forumlara katılarak farklı kültürler hakkında yeni bir şeyler öğreniyorum.					
36	İnternet kullanmanın ve/veya video oyunlar oynamanın insanları diğer kültürlere daha açık hale getirdiğini düşünüyorum.					
37	Gözümde canlandırabildiğim şeyleri daha iyi anladığımı hissediyorum.					
38	İş veya okul için bir proje hazırlarken olabildiğince çok resim, grafik ve şema kullanmaktan hoşlanıyorum.					
39	Resim, grafik, şema ve diğer görsel araçlardan bilgi edinmek konusunda başarılı olduğumu düşünüyorum.					
40	Google Haritalar ve/veya Google Earth gibi uygulamaların çok kullanışlı olduğunu düşünüyorum.					