THE CHANGES IN SAFER INTERNET USE OF CHILDREN IN TURKEY BETWEEN THE YEARS 2010 and 2015

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CONTENTS

1. KEY FINDINGS

In this report, changes from 2010 to 2015 over internet use, activities conducted on the internet, internet usage skills, risks faced on the internet and coping strategies for such risks for children between ages 9 to 16 who live in Turkey have been revealed. According to the statistical classification of territorial units of Turkey, 784 children in between ages 9 to 16 from 12 different regions have participated in the study.

1.1. Internet access and use

When we look at the age of first internet access between 2010 and 2015, it can be seen that it has dropped from 5 to 2. The ratio of children accessing internet at their homes, in and out of their rooms has increased almost 50% from 2010 to 2015. The ratio of children accessing internet at schools and prep schools has decreased 10% in the same time frame, and this decline was realized as 20% for the children accessing internet in internet cafes. An increase in daily internet access of the children has also been observed.

1.2. Activities and skills

An increase has been observed in all kinds of activities conducted by children over the internet from 2010 to 2015. In this context, one of the biggest increases has been seen in online movie and music streaming which has been increased from 45.3% to 81.4%. Also, the use of social networks has been increased from 51.7% to 81.3%. The average skills of children using the internet have been increased in a significant amount from 2.64 in 2010 to 4.77 in 2015.

1.3. Risks and coping strategies

The risks faced by children over the internet have increased from 2010 to 2015. The ratio of children who stated that they came across with sexually explicit content has been increased from 14.4% to 51%. The ratio of receiving sexually explicit messages has also been increased from 11.5% to 30.7%. The ratio of children getting in contact with persons unbeknownst to

them has also been increased from 15.9% to 37.6%. The ratio of children who stated that they look for new friends over the internet has been increased from 23.9% to 49.7%. Regarding the coping skills of children against the risks that they face over the internet, the ratio of children who can change the privacy settings of their accounts has been increased from 30% to 71.7%.

1.4. Strategies of social environment to guide and raise awareness

According to the results of questions asked to children regarding what their parents do in terms of safer internet use in between years 2010 to 2015, it's been seen that the ratio of parents communicating with their children and checking up on them as they are using the internet has been decreased, however, parents started to heavily prefer the approach which requires them to help their children whenever they are faced with a problem and then take restrictive measures.

2. CONTEXT

While internet use in Turkey has become widespread, it is also possible to find studies that claim the use of internet among children has also been increased. In the study conducted by Ocak (2013) which covered 8 cities and 1848 students, the internet use ratio for children has been found to be 77.4%. Similar studies conducted in Turkey has put out roughly the same results (Kayri and Günüç, 2010; Burnukara and Uçanok, 2010; Kuzu, 2011; Hasdemir, 2013; Yılmaz et al., 2014).

According to November 2015 data of Internet World Stats, Turkey ranks 18th, in the number of people who have internet access in a country with 46.282.850 people. The internet use ratio throughout Turkey has reached from 2.9% to 59.6% from 2010 to 2015 (İWS, 2015b). The increase in the ratio of internet access within Turkey from 2010 to 2015 has been given in Figure 1.
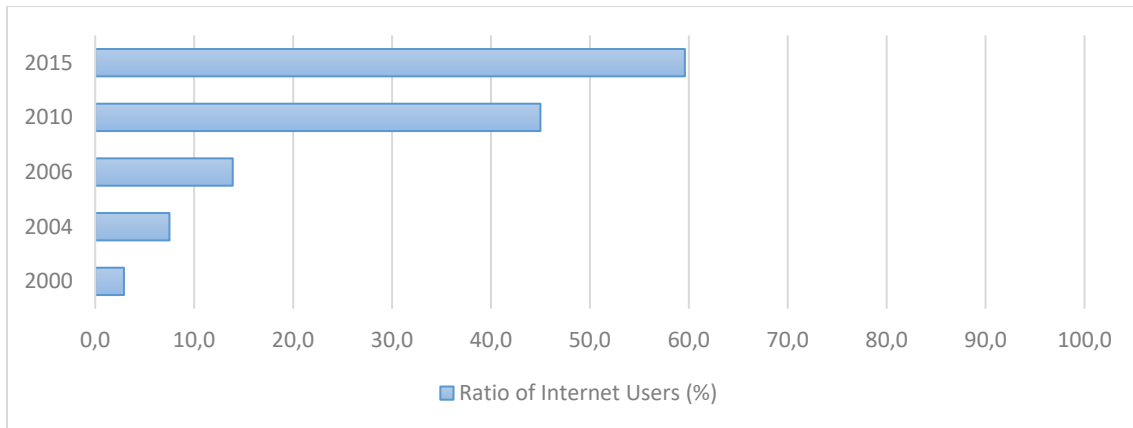
Figure 1. The change in the ratio of internet access within Turkey by years (IWS, 2015c)

According to the report of Turkish Statistical Institute (2015a), 53.8% internet use ratio for Turkey in 2014 has risen to 55.9% in 2015. The ratio of households with internet access was found to be 69.5% (TSI, 2015a). In other words, 7 of 10 houses have internet access. The data related to the locations that provide internet access has been given in Figure 2.
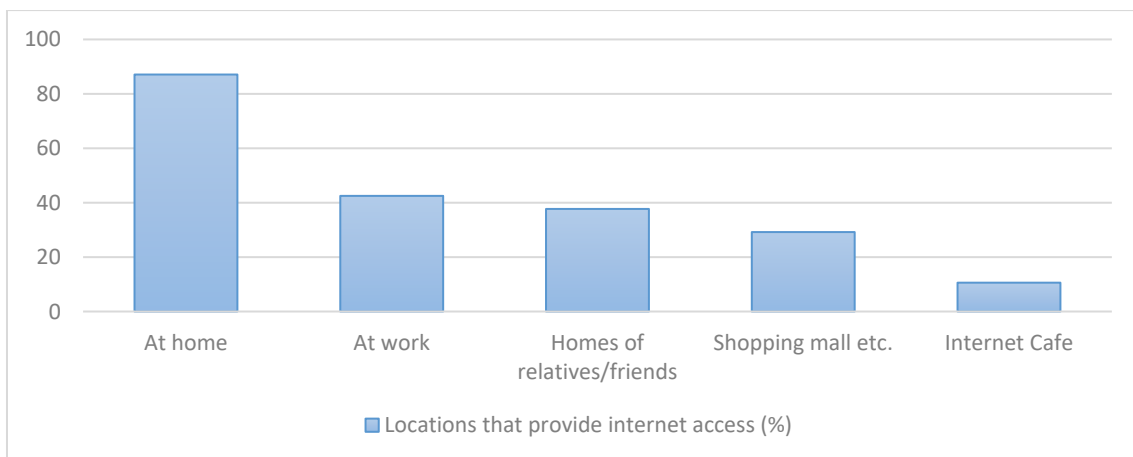
Figure 2. Locations that provide internet access in Turkey (TSI, 2015a)

When Figure 2 is examined, it can be seen that the primary locations that provide internet access in Turkey are houses (87.1%), and workplaces (42.5%). Rapid increase of internet access and use in Turkey also introduced safer internet use applications to the agenda. In this context, various safe practices regarding internet use in Turkey are being implemented. Among these practices which were introduced in the context of political enforcement, technical filtering and restrictions stand out. This may be caused by the demands of the ones who are in power to response immediately and get quick results. The internet filtering can be made through ISSs, but also by using personal software. Studies show that this kind of filtering software can be effective in blocking sexually explicit content (Mitchell, Finkelhor

and Wolak, 2005). Two of the most remarkable of such political implementations are Information Reporting Center which was introduced in 2007 and Safe Internet Service which was commissioned by Information and Communication Technologies Authority in 2011. Information Reporting Center carries out the blocking of web sites according to the complaints received. As of 2014, the number of complaints received by The Reporting Center has reached to 35.222 (ICT activity report 2014). In the service provided, there are two profiles as in family profile and child profile. The users can use any of these profiles, free of charge, if they wish to do so (ICT activity report 2012). Karahisar (2014) in his study, has reported that 64.7% of the households with children used the family protection filter. Regarding the personal filtering software use, Kaçıkçı et al., in their study conducted in 2014, have reported that 33.6% of the parents used internet filtering software. Apart from the technical measures, some educational practices have also been introduced in Turkey. One of such is the media literacy course. This course has been introduced as a selective one since 2007. However, media literacy course, the contents of the course and the discussions of the teacher group that would provide the course, the lack of hours and the lack of care for the course have contributed to the failure of the practice, so that the expected results could not be obtained (Hasdemir, 2013). Also, in the contexts of practices and activities aimed at raising awareness, many institutions and NGOs throughout Turkey are still carrying out practices aimed at safer use of the internet.

3. THIS REPORT

This report was prepared in order to put forth the changes in internet use of children in ages ranging from 9 to 16, between the years 2010 and 2015. When looked at the research results regarding the internet use skills of Turkish children, in the framework of EU Kids Online II project conducted in scope of The Safe Internet Program of The European Commission in 2010, it's been seen that they have the lowest internet use skills among Europe in general, and that they are in the moderate-risk group (Kaşıkçı, Çağıltay, Karakuş, Kurşun and Ogan, 2014). On the other hand, with the notion that there would be a huge difference with the rapid spread of internet tools in a 5-year time frame, a re-application was done by adhering to a large extent to the original survey that was designed and conducted in high standards in year 2015, by EU Kids Online Project Group. This report will provide the data of 2010 and 2015 in a comparative method.

Stratified sampling method has been used in order to adhere to the methodology of the survey conducted in 2015. In this context, according to the Turkey Statistical Classification of Territorial Units (TİBBS) (TSI, 2005), 784 children from 12 regions, in ages ranging from 9 to 16 have been included in the study, classified in age groups (9,10,11,12,13,14,15,16) and genders, with equal distribution. For the selection of the schools in the cities included in the sampling, to accelerate the study and make it more practical, convenience sampling method has been used. Accordingly, schools that have been picked randomly from the central provinces of the cities within the scope of the study have been contacted. If the appropriate environment is found in the schools after the interviews conducted, these schools were included into the study. Primary schools were visited for 9 year old children, for children in between ages 10 to 13, middle schools and for children over 14, high schools were visited.

After the selection of the schools were made, for the selection of the children that will be included in the study, criterion sampling among the purposive sampling methods has been used for the selection of more informative conditions depending on the purpose of the study itself. So, the determining factors have been selected as children being in ages between 9 and 16 and also being active internet users.

The survey that was used in scope of this study has been developed by EUKO work group in order to determine the risks faced by children over the internet and the supportive actions of the parents regarding the safer internet use. This work group consisted of 95 experienced researchers, 5 of them being Turkish and among the work group which was active in project teams in 24 different European countries (Livingstone, Haddon, Görzig and Ólafsson, 2011a). The data that belonged to year 2010 which was used for comparison, consisted of the data gathered by the Turkish work group in May of 2010 from 1018 children throughout Turkey, in the context of EUKO project.

Because the original survey used in the study was developed by EUKO project work group, it happens to be in English. In the translation of the survey into Turkish, the following steps have been taken by Şeker and Gençdoğan (2006):

1. The researcher that implemented the test made his/her own translation. Later on, two linguists with proper knowledge of both English and Turkish made two independent translations.
2. The translations were compared linguistically and the ones with the most understandable phrases have been included into the Turkish form. Not much diversion has been observed in between different translations.

3. Two linguists who are not aware of the original of the survey have been given the task to translate 15 random questions of the survey that was translated into Turkish, back to English. As the survey consisted of 101 questions, in order to save time and cost, instead of all questions of the survey, 15 randomly selected questions have been translated back to English. The questions translated have been compared with the original survey. In this comparison, no differences have been detected in between the questions.

4. The translated survey has been reviewed by Turkish language experts in order to find spelling, punctuation, phrasal errors, subject-verb discrepancies, incoherencies and lack of clarities, and then necessary corrections were made.

5. The survey prepared by Turkish language experts has been reviewed by the researcher, and where necessary, two experts in the field have been contacted with for their opinions and in accordance with their responses, the survey was rearranged.

6. After the necessary arrangements were done on the translated survey, in order to find out if the children understand the questions in the survey, cognitive interviews were held with 8 children, as in one child from each age group (9-10, 11-12, 13-14, 15-16).

7. In order to ensure the validity and reliability of the questions, a pilot study has been conducted with 80 children. The survey was rearranged in accordance with the data obtained from the pilot study.

4. DATA COLLECTION PROCESS

After the adaptation of the survey into Turkish, the necessary research permit has been obtained from The Ministry of Education, Innovation and Educational Technology Directorate, in order to conduct this survey in 12 different cities. After the cognitive interviews, pilot applications and the obtaining of the permits during the adaptation process of the survey, in order to fix the deficiencies in regard to the application process, expert opinions have been taken and corrections have been made in 19 articles in 11 questions, 2 questions and 14 articles have been taken out, and 3 new articles have been added. During the permission obtaining phase from Ministry of Education, the relevant department head requested some of the questions to be taken out of the survey to prevent the children from being adversely affected, pursuant to the Communiqué for permissions for research, competition and social activities number 2012/13 of The Ministry of Education. The relevant questions and articles have been taken out, pursuant to the department head's concern. Also, for the questions and articles that have been requested to be corrected, expressions in the

Information Technology text books which were approved by The Board of Education and Discipline for primary and middle schools were used. Especially the units of 6th step "Communication", 8th step "information systems", and 4th step "I share my information" within the text book were used. In this context, during the permission obtaining phase, 5 questions were corrected, and another 5 questions and 4 articles were taken out of the survey. In the pilot studies, it's been seen that the original state of the survey might lead to data loss during the data collection process. In the study conducted in 2010, data collection process was made face to face. Thus, data loss has not been the case. However, as in this study, the surveys had to be filled out by the students themselves, so in order to prevent any data loss, a shortening of the survey was needed. In this context, the questions that could be merged have been simplified in by the experts in their fields.

5. INTERNET ACCESS AND USAGE LEVELS

In this section, descriptive analysis results obtained from the data in order to investigate the change of internet access and internet use of children between years 2010 and 2015 have been presented. In this context, internet access and internet use of children have been evaluated in several different aspects. At first, internet access patterns of children according to ages have been presented in Figure 3.
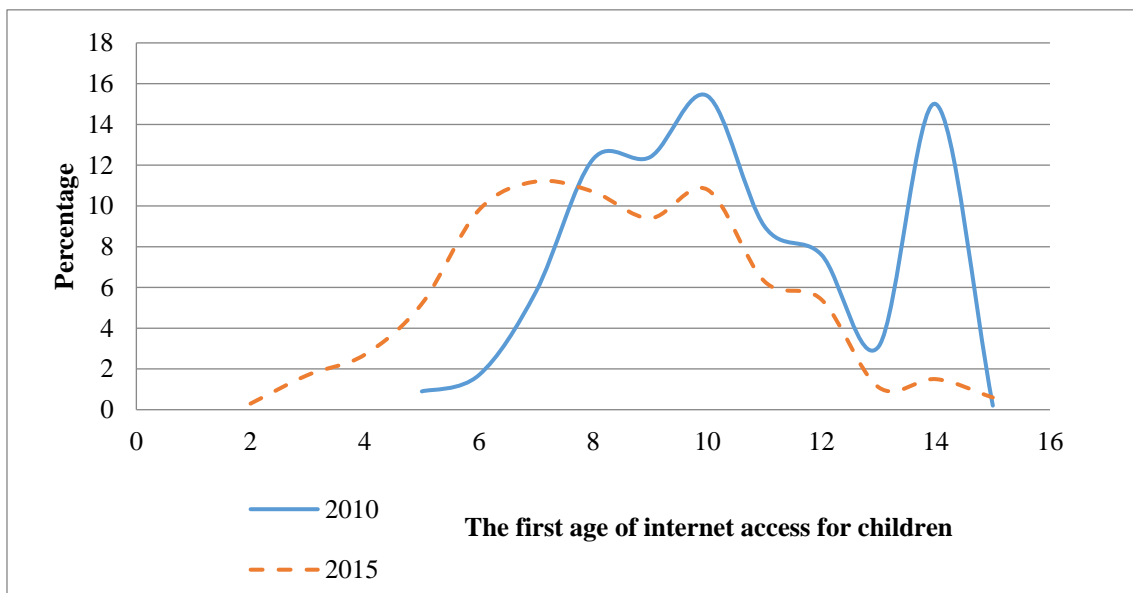
Figure 3. *The first age of internet access for children*

When looked at the change of the average age of internet access of children from 2010 to 2015, it can be seen that the average age has gone down from 9.64 to 8.28. The first age of

internet access in year 2010 was 5, but in 2015, it has fallen down to 2. The change in locations that the children access the internet between year 2010 and 2015 has been presented in Figure 4. When looked at Figure 2, the ratio of children accessing the internet at home in and out of their rooms has increased almost 50% from 2010 to 2015. The ratio of internet access of children at schools and prep schools has fallen 10% in this time frame. This decline has been 20% for the children accessing the internet at internet cafes. On the other hand, the biggest change observed in this time frame has been the ratio of internet access of children while they are outside, or on their way to school or any other place. According to the data obtained in 2010, only 3% of the children could access the internet when mobile, however, this ratio has been increased to 54% in 2015.

	At home, own room	At home, outside own room	At school and prep school	Outside	At internet cafe
2010	31,9	24,3	60,1	3,8	51,1
2015	84,6	80,2	49,6	54,2	30,2

Figure 4. *Locations in which children have internet access*

After the explanation of the data stating the change in locations that the children access the internet between years 2010 and 2015, the analysis results regarding the duration that children access the internet during school days or holidays have been given in Table 1.

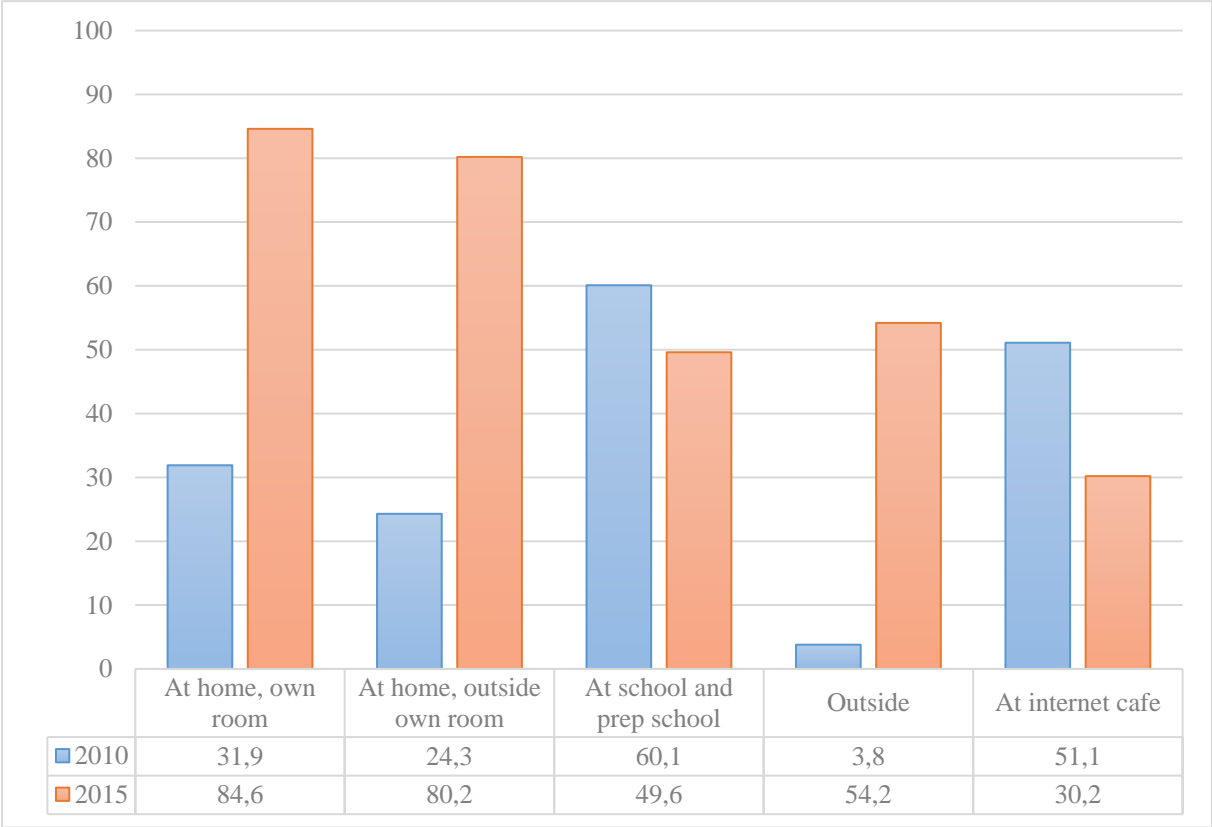Table 1. *The duration of internet access of children in school days/holidays*

The duration of internet access in school days	2010		2015	
	f	*%*	*f*	*%*
Short or none	29	2,8	169	21,6
Half an hour	249	24,5	118	15,1
One hour	369	36,2	163	20,8
Two hours	127	22,3	135	17,2
Three hours	37	3,7	63	8,0
Four hours	9	0,9	40	5,1
More than four hours / Five hours	14	1,4	28	3,6
Six hours			7	0,9
Seven hours or more			28	3,6

The duration of internet access in holidays	2010		2015	
	f	*%*	*f*	*%*
Short or none	15	1,5	48	6,1
Half an hour	168	16,5	57	7,3
One hour	268	26,3	96	12,2
Two hours	249	25,4	150	19,1
Three hours	102	10,0	118	15,1
Four hour	51	5,1	95	12,1
More than four hours / Five hours	48	4,7	48	6,1
Six hours			34	4,3
Seven hours or more			104	13,3

As the percentages of answers like "I don't know, I have no idea" have not been listed, the total amount is not equal to 100%.

Looking at Table 1, the data from year 2010 suggests that 36.2% of the children spent an average of 1 hour on the internet in school days. In year 2015 however, 21.6% of the children stated that they spend less than half an hour on the internet. The data from year 2010 suggests that 26.3% of the children spent an average of 1 hour on the internet in holidays, however this average has been increased to two hours with 19.1%

In the above given tables and graphs, internet access of children and their internet usage levels, the first age of internet access, daily internet access locations, devices used to access the internet and internet access durations at school days and holidays have been observed. In this context, the results of analysis derived from the data regarding the frequency of internet access of children during their daily lives have been presented in Figure 5.

	Everyday or almost everyday	Once or twice a week	Once or twice a month	Less than once a month
2010	32,2	52,5	11,5	3,3
2015	57,5	32,3	3,7	2
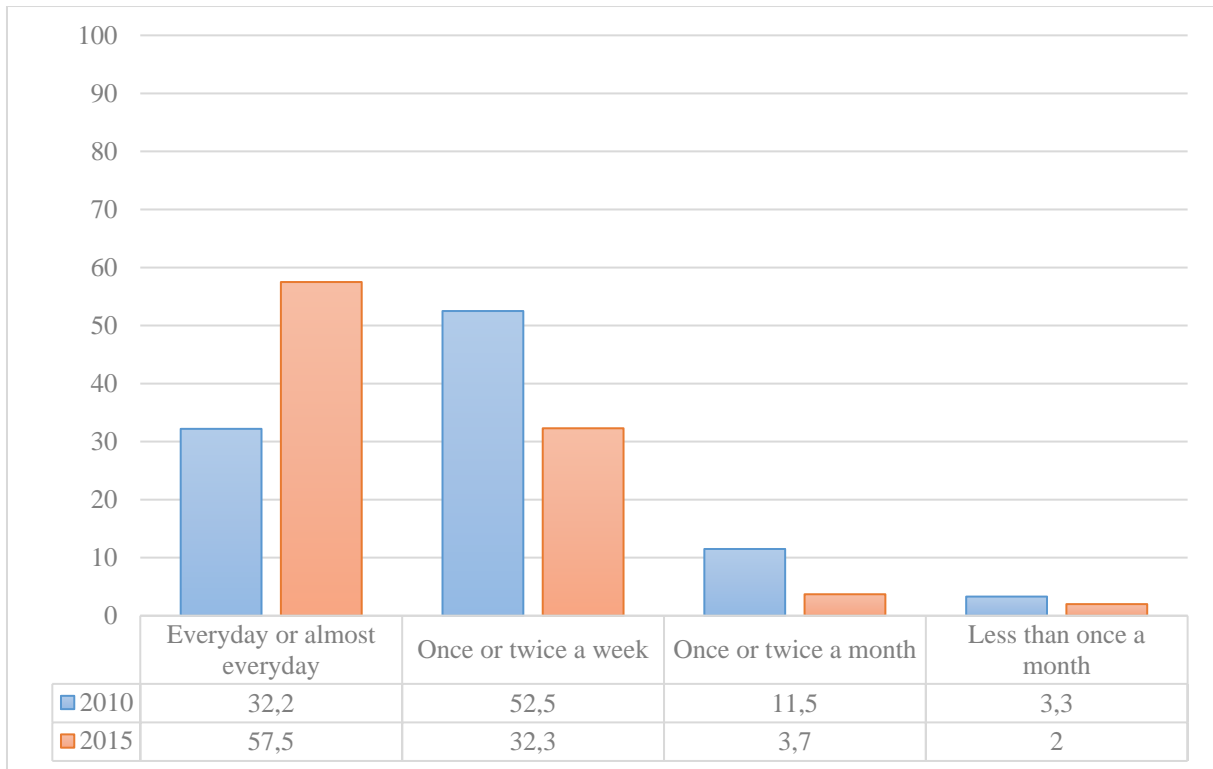
Figure 5. *The frequency of internet access for children*

When the figures are examined, it is possible to see that in year 2010, 52.5% of children used to access the internet once or twice a week, however after a 5 year period, 57.5% of children started to access the internet either everyday or almost everyday.

6. ACTIVITIES AND SKILLS

In this section, descriptive analysis results obtained from the data in order to investigate the change of activities performed by children over the internet and their internet usage skills between years 2010 and 2015 have been presented. Analysis results related to the activities performed by children over the internet can be seen in Figure 6.
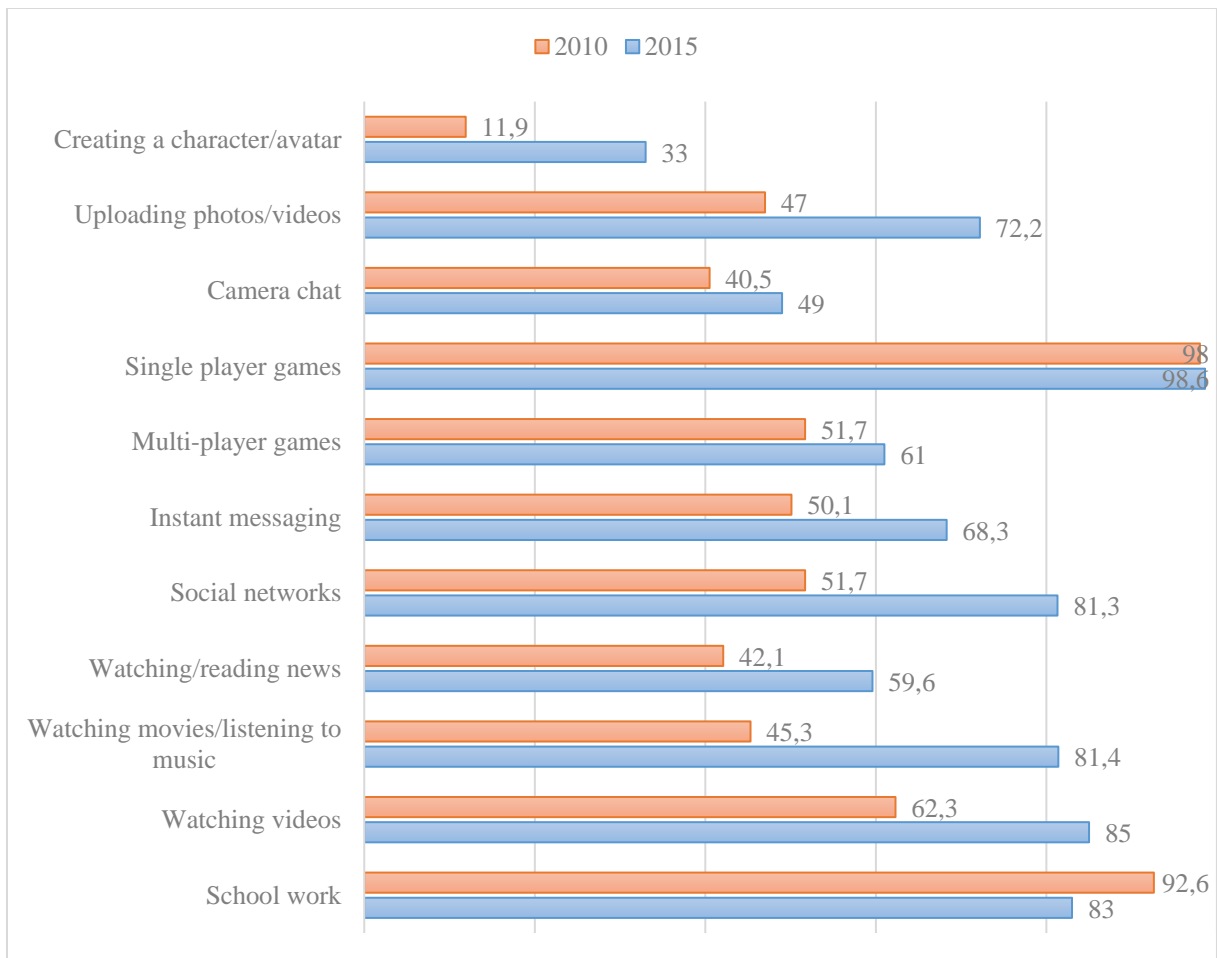
Figure 6. *Activities performed by children on the internet*

When the figure is observed, it is clear to see that there is an increase in the activities performed by children over the internet from 2010 to 2015. One of the biggest increases in this context happens to be online video streaming or listening to music with an increase from 45.3% to 81.4%. Watching video clips, using social networking websites, commenting in websites and sharing content (photos/videos) have also been increased roughly 20-30%. As it could be seen in the table, there are lower increases in other activities. Also, it can be seen that 98% ratio of single player gaming use of the internet by children still holds its percentage.

After the general activities performed by children over the internet, data for the social networking which is one of such activities has been presented. In this context, the analysis results of the data regarding the change of children having social network accounts from year 2010 to 2015 has been presented in Figure 7.

	I have a social network account	I have multiple social network accounts
2010	38,4	9
2015	57,8	31,3
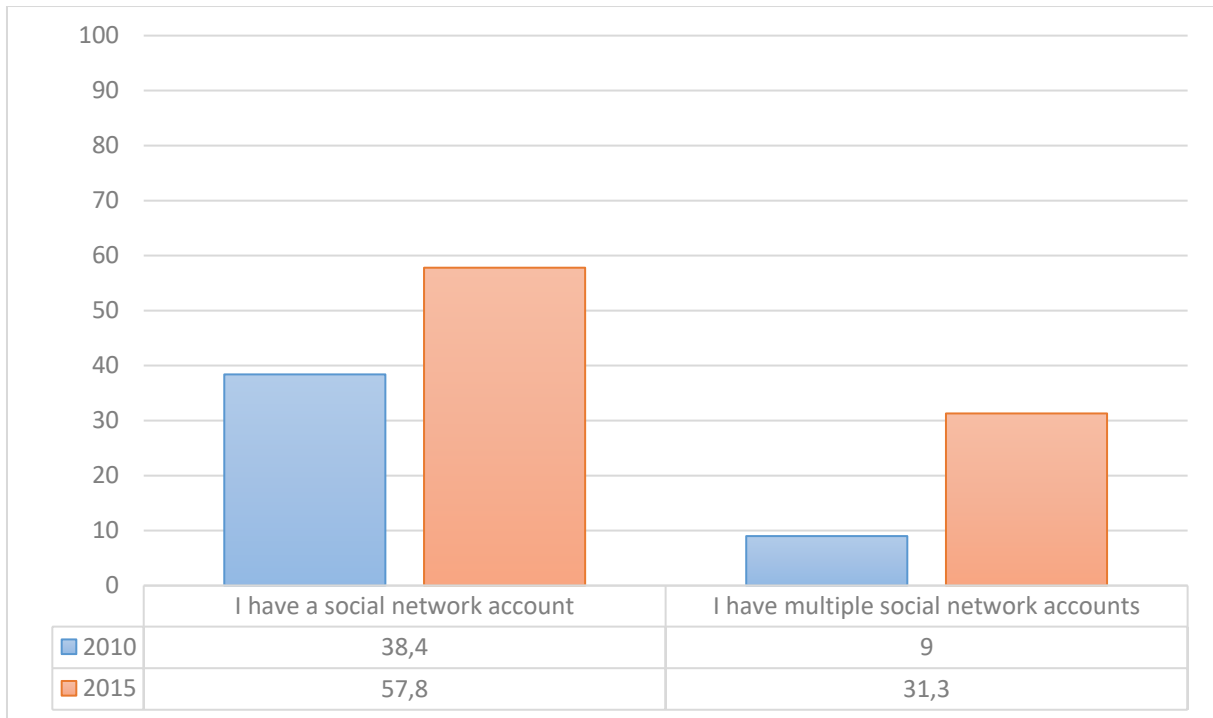
Figure 7. The ratios for children having social network accounts

When Figure 7 is examined, it can be seen that the ratio of children with multiple social networking accounts has risen from 9.0% in 2010 to 31.3% in 2015. The total ratio of having social networking accounts in 2010 was 47.6%, but it has risen in 2015 to 89.5%. The change in the number of friends over social networks of children has been given in Figure 8.
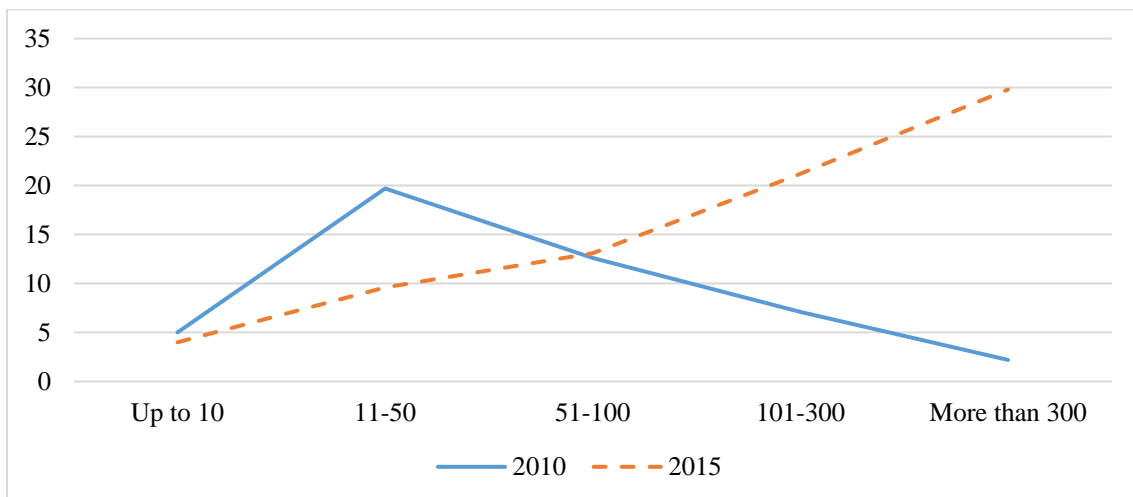
Figure 8. The number of friends per child over social networks

When Figure 8 is examined, it can be seen that there has been an increase in the number of friends of children over the social networks. In the data from year 2010, it was stated that 19.7% of children had 11-50 friends in social networks, but only 9.6% of children in 2015 had 11-50 friends over social networking websites. If we compare the ratios of children having

300 or more friends over social networking websites, the ratio in 2010 was 2.2%. This number has risen up to 29.8% in 2015. In the findings regarding social network use of children, a general increase in the number of friends over social networking websites has been observed. The change in the amount of shared information over the social networking websites by children from year 2010 to 2015 has been given in Table 3.

Table 3. *Personal information shared by children over social networking websites*

|	2010		2015	
	f	*%*	*f*	*%*
A clear photo of my face	316	65,0	559	91,0
My last name	320	66,0	596	95,1
Home address	91	18,8	56	20,2
Telephone number	38	7,8	135	41,3
The name of my school	164	33,8	450	84,4
My actual age	230	47,4	337	76,6

Looking at the table, an increase of shared content over the social networking websites by children can be seen. The biggest increase on that regard is the information regarding their schools which has risen from 33.8% in year 2010, to 84.4% in 2015. Internet usage skills can be examined under various headings. Descriptive analysis results regarding internet usage skills of children like filtering options while they are searching for something over the internet, their skills of comparing the information they find through various different sources, their skills of blocking unwanted ads, spams and e-mails, and related information can be seen in Figure 9.
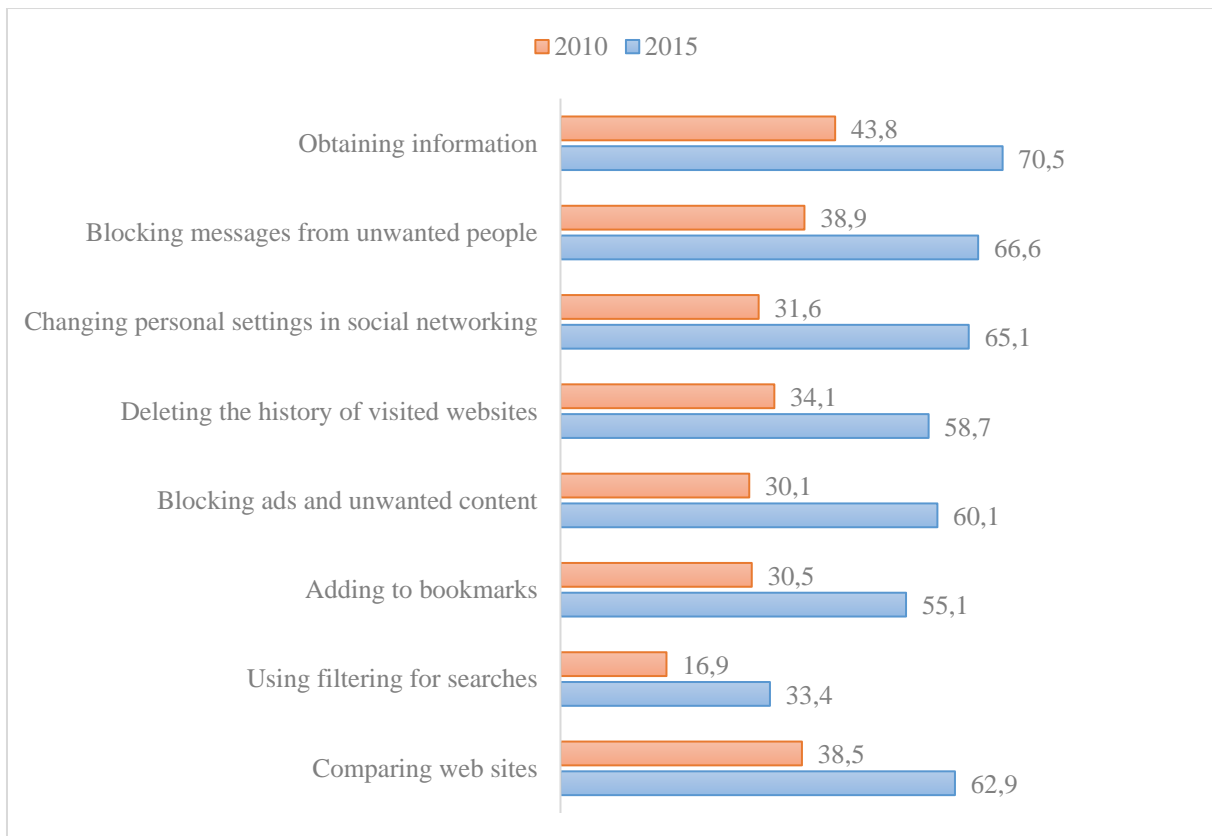
Figure 9. Internet usage skills of children

When looked at the figure, it can be seen that the ratio of children comparing the information they find over the internet through various websites has risen from 38.5% to 63.4%. A similar increase is the use of bookmarking. The ratio here has risen from 30.5% to 56.3%. When the figure is examined, one can see that one of the biggest increases has been the blocking of unwanted ads, spam and e-mails. According to the data of year 2010, only 30.1% of children could block such content, but the data from year 2015 suggests that this ratio has risen up to 60.9%. A similar increase can also be seen in the ability to change personal settings in social networking profiles, which has increased from 31.6% in 2010, to 66% in 2015.

7. RISKS AND COPING STRATEGIES

In this section, descriptive analysis results regarding the changes of risks faced by children over the internet, risk levels and the coping skills of children with such risks from year 2010 to 2015 has been presented. Firstly, analysis results regarding the data obtained about sexually explicit content (photos, visuals) which is one of the risks that children face over the internet has been presented in Table 6.

Table 6. *Encountering of sexually explicit materials over the internet by children*

Seeing sexually explicit content over the internet	2010		2015	
	f	*%*	*f*	*%*
Yes	147	14,4	300	51
No	785	77,1	283	48,1
The frequency of seeing sexually explicit material				
Daily or almost everyday	14	9,5	104	17,6
At least once a week	28	19,0	78	13,3
Less frequent	95	64,6	178	30,3
The material that sexually explicit content is seen in				
Magazine or books	27	18,6	81	44,5
TV or films	59	40,7	163	64,9
Video sharing websites (Youtube)	41	36,6	197	70,4
Photograph sharing websites (Instagram)	13	11,6	106	52,5
Unwanted pop-ups while browsing the internet	47	42,0	161	66,8
Social networks (Facebook, Twitter)	38	33,9	227	73,0
Gaming websites	40	35,7	67	41,4
SMS or MMS coming through the cell phones	13	9,0	35	24,5
Adult oriented web sites	23	20,5	42	28,4

 When Table 6 is examined, it can be seen that the ratio of encountering sexually explicit material over the internet by children has risen from 14.4% in 2010 to 51% in 2015. Regarding the frequency of seeing sexually explicit material by children, according to the data of year 2010, 9.5% of children stated that they have seen sexually explicit material almost every day. This number has risen to 17.6% in 2015. On the other hand, the number of children stating that they rarely see sexually explicit material has gone down from 64.6% in 2010 to 30.3% in 2015. When we look at the ratio of children feeling frustrated when they see sexually explicit material, the number of children who stated that they feel very frustrated has gone down from 31.5% to 14.9%, and the number of children who stated mild frustration has also gone down from 25.9% to 17.6. The number of children who stated that they do not feel frustrated however, has risen from 14.8% to 19.8%. Comparing the environments that the children encounter sexually explicit materials, the ratio of children encountering such materials in social networking websites for year 2010 was 33.9%. This number has risen to 73.0% in 2015.

Another risk factor for children over the internet is the messages they receive. These messages usually consist of words, pictures or videos. Analysis results regarding the ratio that children receiving sexually explicit messages (words, pictures, videos), the frequency and the way they receive such messages have been given in table 8.

Table 8. *Sexually explicit messages received by children*

Receiving sexually explicit messages	2010		2015	
	f	*%*	*f*	*%*
Yes	65	11,5	181	30,7
No	422	74,7	344	58,5
Frequency of receiving sexually explicit messages				
Daily or almost everyday	5	7,7	42	7,1
At least once a week	18	27,7	47	8,0
Less frequent	37	57,0	119	20,3
How sexually explicit messages are received	**2010**		**2015**	
	f	*%*	*f*	*%*
Through social networks	13	21,3	181	79,4
Through instant messages (MSN, WhatsApp, Skype)	19	31,1	53	46,1
Chat rooms	12	19,7	29	30,9
E-mail	11	18,0	33	35,1
Gaming websites	13	21,3	63	53,4
Unwanted pop-ups	24	39,3	51	46,4

When the table is examined, it can be seen that the ratio of children receiving sexually explicit messages was 11.5% in 2010, however this ratio has increased up to 30.7% in 2015. When the ways of receiving such messages are examined, the biggest increase can be seen in the social networking websites. The ratio of children who stated that they received sexually explicit messages over social networking websites was 21.3% in 2010. In 2015, this ratio has been increased up to 79.4%.

The risks faced by children over the internet and the risk levels were presented in this section. Also, other risk factors have been collectively discussed. Analysis results of the obtained data have been presented in Table 10.

Table 10. *Risks faced by children over the internet in previous years*

Getting in contact with foreigners	2010		2015	
	f	*%*	*f*	*%*
Somebody used my personal info in a way that could harm me	29	4,1	74	13,7
I lost money as I've been a victim of a fraud	12	1,8	9	1,7
Somebody used my password to access my data or pretended to be me	49	7,1	112	20,4
I sent my personal information to someone I've never met face to face	116	15,4	105	15,8
I've added people I've never met face to face to my list of friends	165	22,0	169	28,6
I've acted like somebody else over the internet	136	18,1	156	26,4
I've sent a photo or video of mine to someone I've never met before	105	14,1	97	16,8
I've contacted with someone I've never met before over the internet	120	15,9	221	37,6
I've met face to face with someone that I've first met over the internet	18	15,0	125	21,3
İnternet Addiction				
I've suffered hunger and sleep deprivation due to internet	169	23,2	208	36,8
I've felt frustrated when I am not online	204	28,0	313	54,7
I've realized that I've spent time on the internet for subjects that I'm not	263	36,1	295	52,1

	f	%	f	%
even interested in				
I've ignored my family, friends, school work due to hours I've spent over the internet	208	28,6	314	54,5
I wanted to spend less time on the internet but I've failed	241	33,1	298	51,8
I've looked for new friends over the internet	180	23,9	292	49,7

An increase in almost all the incidents listed in Table 10 can be seen over the years. 28.6% of children stated negligence/postponing of family time, time for friends and school work in year 2010, however, this number has increased to 54.5% in 2015. On the other hand, the ratio of children who feel frustrated when not online has also been increased from 28% to 54.7%. If we look at the table, we can see that the ratio of children who look for new friends online has made the biggest increase from 23.9% to 49.7%. Parallel to this increase, the ratio of children contacting to unknown people over the internet has increased more than twice between 2010 and 2015, from 15.9% to 37.6%.

Children might get upset or frustrated due to pictures or videos they see over the internet. Children might also get upset by the actions of any third party over the internet. In Table 12, analysis results of the obtained data in this topic have been presented.

Table 12. *The incidents which upset or frustrated children over the years*

Ratio of such incidents happening	2010		2015	
	f	%	f	%
Yes	103	10,1	266	45,2
No	843	82,8	312	53,1
Frequency				
Daily or almost everyday	9	0,9	34	4,3
At least once a week	17	1,2	42	5,4
Less frequent	59	5,8	177	22,6
Locations that the incidents happened				
Face to face	69	6,8	84	48
Cell phone conversation	5	0,5	82	46,3
Over a social networking website (Facebook, Twitter)	12	1,2	211	72,8
Instant messaging (MSN, What's App, Skype)	12	1,2	72	43,6
Chat room	4	0,4	29	21,6
E-mail	5	0,5	26	19,8
Gaming website	6	0,6	43	30,1

As the percentages of answers like "I don't know, I have no idea" have not been listed, the total amount is not equal to 100%.

When we look at the table, we can see that according to the data obtained in 2010, 10.1% of the children got upset or frustrated by the actions of other people online, but this ratio has increased to 45.2% in 2015. Regarding the frequency of such incidents, only 0.9% of the children have stated that they experienced such incidents almost everyday. This number has increased up to 4.3% in 2015.

In this section, findings regarding the internet risks and risk levels have been presented. After this section, findings regarding the coping strategies with the possible risks over the internet have been presented. In this context, first, in Table 14, analysis results of the data regarding the methods children practiced in order to solve such problems have been presented.

Table 14. *The experiences of children after a frustrating online incident*

	2010		2015	
	f	*%*	*f*	*%*
I've expected the problem to go away by itself	4	16,7	84	45,7
I've tried to solve the problem myself	12	50,0	154	62,9
I've blamed myself for the things that went wrong	5	20,8	21	14,8
I've tried to persuade the other person to leave me alone	4	16,7	65	36,9
I've tried to get revenge for the incident	1	4,2	31	20,9
I've stopped using internet for a while	14	46,7	132	40,6
I've deleted the messages of the person who frustrated me	17	56,7	246	74,5
I've changed the privacy settings of my account	9	30,0	243	71,7
I've blocked the person who disturbed me from contacting me	13	43,3	285	81,9

When we look at Table 14, we can see that all kinds of experiences of children after they see an upsetting or frustrating content over the internet have increased from 2010 to 2015. The changes in the data for the individuals that the children share their experiences in order to solve their problems from 2010 to 2015 have been presented in Table 15.

Table 15. *The individuals whom the children share their frustrating online experiences with*

	2010		2015	
	f	*%*	*f*	*%*
Parents	15	71,4	145	68,4
Big brother or big sister	6	28,6	118	62,8
A friend	8	38,1	260	87,5
Teacher	3	14,3	38	28,8
A social worker with the task of helping children	1	4,8	22	19,0
A reliable adult	2	9,5	121	65,4
Somebody else	2	9,5	41	32,3

When looked at Table 15, it is possible to see an increase of children sharing their frustrating or upsetting experiences over the internet from 2010 to 2015. According to the data of 2010, 38.1% of children shared such incidents with their friends, but in 2015, this number has risen up to 87.5%. Also, the ratio of children sharing such incidents with their parents has fallen down from 71.4% to 68.4%. The table shows that children share such incidents to their trusted adult acquaintances, if not their parents. The ratio of children sharing such incidents with trusted adults was 9.5% in 2010, however this number has risen up to 65.4% in 2015.

8. STRATEGIES OF SOCIAL ENVIRONMENT TO GUIDE AND RAISE AWARENESS

In this section, descriptive analysis results of the data regarding the changes happened from 2010 to 2015 of the guidance and awareness-raising strategies used by the social environment regarding safer internet access have been presented. The data was obtained from children. In this context, findings about the limitation levels and types of supervision regarding the internet access of children have been tackled. First, data regarding the parents' actions together with their children for a safer internet access have been provided in Table 16.

Table 16. *Parents' actions regarding safer internet use together with their children according to children*

	2010		2015	
	f	*%*	*f*	*%*
Talks to me about the things I do over the internet	629	61,8	344	44,9
Encourages me to discover new things on the internet by myself	403	39,6	317	41
Sits next to me and watches me without intervening while I am on the internet	424	41,7	211	27,3
Stays close to me while I am on the internet	441	43,3	312	40,5
Participates in my activities over the internet	310	30,5	231	34,2
Helps me for the difficult things to be done over the internet	487	47,8	483	62
Explains to me why specific web sites are good or bad	583	57,3	506	65
Advices me on how to use the internet safer	602	59,1	497	64
Suggests ways on how to interact with other people over the internet	505	49,6	392	50,7
Helps me if something upsets or frustrates me over the internet	408	40,1	320	41,2

When Table 16 is examined, it can be seen that there have been changes in the activities performed by parents together with their children for a safer internet access over the years from 2010 to 2015. For example, when we look at the ratio of parents talking to their children about the things they do over the internet, we can see that this ratio has gone down from 61.8% in 2010, to 44.9% in 2015. On the other hand, if we look at the ratio of children stating that their parents help them for the harder to find things over the internet, we can see that it has increased from 47.8% in 2010 to 62% in 2015. Additionally, the ratio of children stating that their parents give advice to them about safer internet access has gone up from 59.1% to 64%. If we examine the table, it is possible to see that some factors have gone up, and some gone down, but also, some factors did not change much. In this context, the number of children stating that their parents help them whenever they see an upsetting or frustrating content over the internet has not changed much over the years. A similar situation is also seen in the ratio of parents giving advice to their children on how to interact with other people over the internet. This ratio has hardly changed over the years. After the examination of the data regarding the activities performed by parents together with their children for a safer internet

access, activities that children can perform over the internet which are either allowed or disallowed by their parents can be seen in Table 17.

Table 17. Activities of children over the internet which are allowed by the parents.

	2010				2015			
	P	PWK	P	PWK	P	PWK	P	PWK
	f		*%*		*f*		*%*	
Having a personal social networking profile	404	240	39,7	23,6	539	98	69	15,2
Sharing personal information with other people over the internet	158	206	15,5	20,2	106	145	13,6	18,7
Sending instant messages	462	248	45,4	24,4	359	132	58,1	14,5
Downloading films or music over the internet	390	280	38,3	27,5	521	134	67,4	17,3
Watching videos over the internet	417	265	41,0	26,0	572	117	74,1	15,2
Uploading video, photograph or music to the internet to share with other people	284	240	27,9	23,6	446	166	58,0	21,6

P : Permitted – PWK : Permitted within knowledge

If we examine Table 17, we can see that in 2010, 39.7% of parents allowed their children to have their own social networking profiles and 23.6% of the parents allowed their children to have social networking profiles within their information. The ratio of parents who give direct permit has risen to 69%, and the ratio of parents who give permit within their information has fallen down to 15.2 in 2015. Regarding the sharing of personal information over the internet, the ratio of permitting parents has fallen down from 15.5% to 13.6%. The ratio of parents who permit within their information has also gone down from 20.2% to 18.7. In addition to the change in the ratio of permissions, analysis results regarding parents' monitoring their children while they are online can be seen in Table 18.

Table 18. *Parents' control over their children on the internet according to the children*

My parent controls;	2010		2015	
	f	*%*	*f*	*%*
What pages I surf on the internet	230	47,8	381	48,6
Which of my friends or acquaintances I add to my social network profile or the instant messaging service	161	44,4	355	45,3
Messages within my e-mail account or my instant messaging account	111	37,8	235	30,0
My profile in a social networking website or an online community	143	47,2	340	43,4

When we examine Table 18, we can't really see any significant change from 2010 to 2015 in the levels that the parents control their children while they are online (according to the data obtained from children). Even some factors in that regard showed declining numbers. The ratios are almost unchanged regarding the parents who control their children on what web sites they visit, which of their friends they add to their social profiles or instant messaging profiles. In the contrary, according to children, there has been some decline in the ratio of

parents who control their children's e-mails or instant messaging accounts or their profiles on a social networking website or online community.

The analysis results regarding the software or services used by the parents for safer internet access (according to children) have been provided in Table 19.

Table 19. *Software or services used by the parents for a safer internet access (according to children)*

	2010		2015	
	f	*%*	*f*	*%*
Software that allow parental control or blocks or filters certain websites	122	33,9	290	40,3
A service that limits the time I spend on the internet	97	26,9	142	18,3
Software that blocks spam or viruses	191	53,1	325	41,9

When we examine Table 19, we can see that the ratio of parents who benefit from software that allows parental control or blocks certain types of websites has increased slightly from 33.9% in 2010 to 40.3% in 2015. In addition to that, the ratio of parents who use services that limits online time of their children and the parents who use spam or virus blocking software has declined.

Data regarding the levels that children receive peer advice on safer internet access can be seen in Table 20.

Table 20. *The level the children receive advice from their peers for a safer internet access*

	2010		2015	
	f	*%*	*f*	*%*
My friends gave me advice regarding safer internet access	538	52,8	362	46,2
Explained to me why certain web sites are good or bad	541	53,1	374	47,7
Gave me advice on how to interact with other people over the internet	494	48,5	260	33,2
Helped me in the past, whenever I was upset or frustrated about something I saw over the internet	431	42,3	358	45,7

If we examine Table 20, we can see a change in the ratio of children receiving peer advice on safer internet access from 2010 to 2015. In 2010, 52.8% of the children stated that they receive peer advice for safer internet access, however, this ratio has declined to 46.2% in 2015. Similarly, the ratio of children receiving advice on how to interact with other people over the internet has declined from 48.5% to 33.2%.

After examining the data relating to the changes in the levels of children seeking advice from their peers, analysis results of the data on the level of children giving advice to their peers have been provided in Table 21.

Table 21. *The level that children give advice to their friends on safer internet access*

	2010		2015	
	f	*%*	*f*	*%*
Yes	362	35,6	438	58,7
No	623	61,2	246	33,0

If we examine Table 21, we can see that the ratio of children providing advice about safer internet access to their peers was 35.6% in 2010, but this ratio has risen up to 58.7% in 2015. The analysis results on the data regarding the ratio of children receiving advice on safer internet access from their teachers have been provided in Table 22.

Table 22. *The level that children receive advice from their teachers regarding safer internet access*

	2010		2015	
	f	*%*	*f*	*%*
My teacher gave me advice on safer internet access	605	59,4	431	55,0
My teacher helped me over the internet for something which is hard to find/do	604	59,3	353	45,0
My teacher talked to me about the things that I do over the internet	521	51,2	234	29,8
My teacher explained why particular websites are good/bad	625	61,4	463	59,1
My teacher gave me advice on how to interact with other people over the internet	509	50,0	328	41,8
My teacher helped me in the past whenever I was frustrated/upset about something I've experienced over the internet	429	42,1	159	20,3
My teacher talked to me in general on what to do if something frustrates/upsets me over the internet	448	44,0	187	23,9

When we examine Table 22, we can see a decline in the ratio of children receiving advice on safer internet access from their teachers. For example, the ratio of children receiving advice from their teachers on how to interact with others over the internet has fallen down from 50% to 51.8%. Similarly, the ratio of children stating that their teachers talk to them about the things that upset/frustrate them over the internet has declined from 44% in 2010 to 23.9% in 2015. The ratio of children who receive general advice from their teachers on safer internet access has also fallen down from 59.4% to 55%.

The data regarding children receiving advice from their relatives on safer internet access and the ratio of children receiving advice from trusted acquaintances regarding things that upset/frustrate them over the internet has been provided in Figure 8.
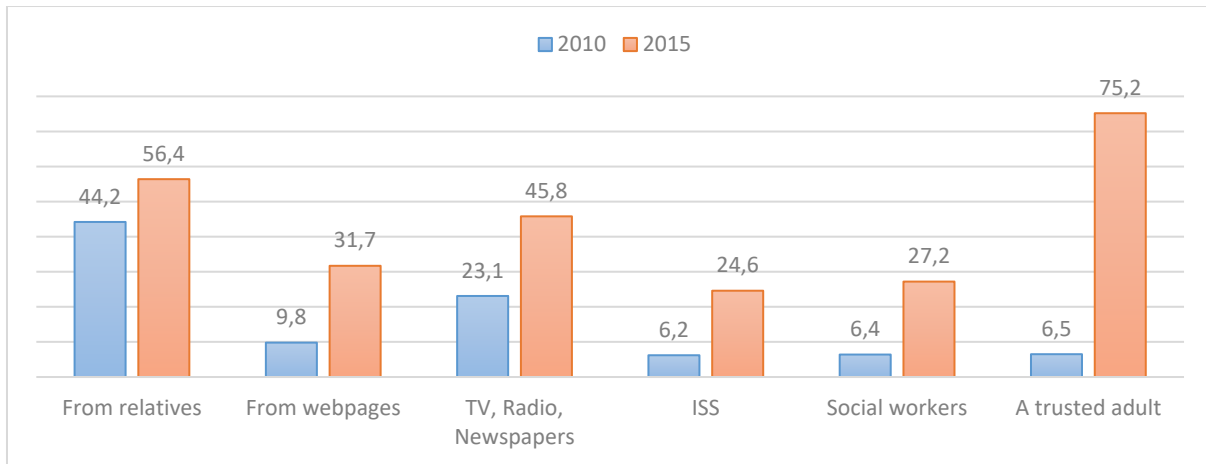
Figure 8. The levels that children receive advice on safer internet access

When we examine the figure, we can see that the ratio of children receiving advice from their relatives has risen from 44.2% in 2010 to 56.4% in 2015. The ratio of children receiving advice from people they trust has also risen from 6.5% to 75.2%. There also have been increases in other ways children receive advice about safer internet access.

9. DISCUSSION

9.1. Starting age for internet use has fallen down to 2

When we look at the findings of the study regarding the internet access and internet use of children in Turkey, it is possible to see a general increase from 2010 to 2015. Also according to the results of the study, the average age of internet use for children has fallen down from 9.64 to 8.24, and the age of first internet access has also fallen down from 5 to 2. The increasing of the possibilities of internet access, gained experience of parents over the internet, and the development of new devices that provide internet access can be regarded as some of the factors that lower the age of first internet access in Turkey.

9.2. Internet Cafe usage ratios has diminished 20%

Results of the study also show an increase of daily online time. When we look at the locations that children access the internet, we can see that a majority of them access the internet at their homes. Also, the ratio of children accessing the internet in internet cafes has declined in 2015, when compared to 2010 data. There has been a significant change in the number of devices provide internet access to children from 2010 to 2015. Parallel to the increases in internet access and internet use, it is predictable that there also has been an increase in the variety of devices that allow internet access.

9.3. Using internet for entertainment purposes has been widespread

We can see a general increase of the activities performed by children over the internet. The most remarkable increases have been seen in watching movies or listening to music online, using social networking websites and uploading photos and videos to the internet for sharing purposes. It is important to realize that these activities are mostly for entertainment purposes. Contrary to this, internet use of children for school work purposes shows a decline over the years. When we look at the data, we can see that entertaining activities over the internet have gained more popularity compared to the data in 2010, and as a natural result of this, internet is being used less for school work and research purposes. Indeed, the literature also suggests that internet is primarily used for entertainment and its use for educational purposes is secondary (Akbulut, 2013; Yılmaz et al. 2014). When we consider the fact that internet use is becoming more widespread in almost every aspect, still, there is a decline in its use for school work by children. In the face to face interviews with children within the scope of the study, children usually stated that if they do not have any devices that allow them mobile internet access like smartphones, tablets, they usually access the internet through computers. The general view is that once they finish their school work on computer, they stop using it. A general decline can be seen in the use of internet by children for education purposes, within the five year period. However, the reason of this decline is not thought to be the declining numbers of activities for such purposes but it is considered that the ever increasing number of devices owned by children to access the internet like smartphones or tablets, thus, the increased use of internet for entertainment purposes are the reasons. Thus, this situation is not caused by a decline of internet use for educational purposes but an increase of entertainment possibilities over the internet.

9.4. The ratio of using social networks has been increased

When we look at the ratio of children having social networking accounts, we can see an increase compared to 2010. Additionally, there has been a significant increase in the number of friends of children in their social networking accounts and the information they share online. These factors indicate how much popularity the social networking has gained among children and how widespread it has become. In this case, we can say that this also negatively impacts children's exposure to internet risks arising from social networking.

9.5. Internet using skills has been increased

According to the results of the study, a significant increase in the internet skills of children can be seen compared to year 2010. The average ratio for internet skills which was 2.64 in 2010, has risen up to 4.77 in 2015. Among the reasons of this increase, we can mention the increasing internet experience of children, the proliferation of activities they perform over the internet, development of facilities for internet access and the increase of experience of parents over the internet.

9.6. Children are more prone to risks over the internet

According to the findings of the study, we can see an increase of the risks faced by children over the internet, compared to the data of 2010. The most remarkable risks can be listed as follows: "the feeling of frustration when not online; ignoring friends, family and school work due to long online hours; searching new friends over the internet; browsing of the internet without any purpose or aim."

9.7. The ratio of encountering sexually explicit materials and receiving sexually explicit messages has been increased.

On the other hand, an increase in the ratio of children encountering sexually explicit content and receiving sexually explicit messages has been detected. Children have been exposed to this type of content and messages in social networks, the most. In general, the risks that children face over the internet have been increased significantly from 2010 to 2015. In this case, we can say that the risks faced by the children over the internet have been increased from 2010 to 2015 also in Turkey.

9.8. Parents started to engage in more communication with their children

Study results of actions of parents regarding safer internet use show that there has been a decline of parents communicating with their children and controlling them while they are online, but an increase in the acts of helping their children whenever they had a problem and taking restrictive measures whenever necessary. For example, the ratio of parents talking to their children about the things they do online has been reduced, but the ratio of parents helping their children for difficult things to do/find has been increased. We can say that the social support roles of parents have morphed into a more restricting and technically restricting one. Another important actor in the social support that children receive regarding safer

internet access is their peers, thus their friends. When we look at the level of advice that children receive from their peers, we can see a general decline within five years.