

## Analysis of the state of digital contact habits of primary school students

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### Abstract

The aim of this study is to examine the status of digital contact habits of primary school students during the pandemic period. This study is important because it will reveal the difference between primary school students' digital contact habits before and after the COVID-19 period. The study also has the distinction of being the first within the scope of studies conducted at primary school level in the direction of digital life skills and addiction. Survey method was used. The study group consists of 986 parents of primary school students in three different provinces in districts similar to each other in terms of socio-economic and cultural aspects. The collected data were obtained by Digital analyze technique. The data was interpreted in the artificial intelligence-algorithmic system. According to the findings, the addiction rate increased in the study group students during the COVID-19 period, and one out of every four children was digitally dependent.

**Keywords:** Covid-19; Digitalization; Digital Addiction; digital contact; primary school.

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## 1. Introduction

People's education, knowledge, and skills determine their living standards. The increase in people's quality of life depends on the availability of these factors in line with their wishes. While people can achieve their wishes, needs, and goals for a fee, it is a requirement of a democratic society that states meet these demands. This situation brings a team of responsibility and control to both educational organizations and parents. This responsibility is expected to liberate the society on issues such as innovation, improvement, especially global development, and adaptation to changing conditions. One of these changes, depending on the change imposed by the digital world, envisages the re-evaluation of the functions of schools.

Today, while computers and internet make life easier in many areas, an increasing interest as a game and entertainment tool (Irmak, & Erdoğan, 2016). Our internet access opportunity has increased a lot, and it continues to increase. Internet access brought many facilities with it, such as e-books, e-encyclopedias, e-dictionaries, accessible archives, virtual museums, web pages, shopping sites, form pages, social media accounts, etc. While this change and transformation that we encounter in the Digital Age takes place rapidly, education and training also include digitalization.

Research show that trainers in our country and NGOs (non-governmental organizations) that express their opinion on this issue, etc. states that the traditional education model in which the teacher is active, and the student is passive is not appropriate, and it does not fully meet the expectations from the education. In teacher-centered education, the teacher transfers the information directly to the student and a learning based on rote takes place. The student has difficulty in predicting information in daily life.

Education and digitalization process are now interdependent and widespread. With this spread, "How should we use digital objects correctly and healthily?" brings the question to mind. Students, teachers, and parents should be positioned in the most accurate and effective place of this process.

### 1.1. Related research

There are many studies that shed light on digital change and transformation. Specialists in their field and units affiliated to MEB support students and teachers in this context. EBA (Education Information Network), which is one of the platforms established to support it, serves by hosting many digital contents. Education Information Network (EBA) is an online social education platform offered free of charge to individuals by the General Directorate of Innovation and Educational Technologies (Education Information Network, 2016). Learning management systems, distance education systems, open access resources, social channels, and course materials used in educational organizations are widely used.

Digital life, unfortunately, is an area that is thought to be beneficial in the field of education, supporting education with additional studies such as presentation, document, visual, audio, video, and while it is expected to help, social media channels that will affect our education status and human relations in different ways, especially in a negative way comes into our lives on demand. The effects of interaction with social networks such as Twitter, Facebook, Instagram, etc., have taken all our lives, especially education, under control.

Thanks to the benefits of the Digital World, the lifelong learning perspective brought about a change on the learning individual. Educators, researchers, institutions and organizations serving educational organizations faced many factors in adapting to this change. The fact that websites produce active content and the transformation of these contents into applications on mobile phones opened another window in the education process.

Evirgen (2010) found in his study that children who positively represent family relationships develop more positive relationships with their friends at school and have higher social competence. On the other hand, children who perceive family relationships negatively have reached the view that they

develop negative relationships with their peers (Evirgen, 2010). According to almost all research, this rapid change, which is exposed, threatens the class as a result. At this point, many studies on increasing digitalization have been conducted. These studies were mostly focused on the parents' attitudes towards digital addiction and time spent in front of the screen and for what purpose they used it. Looking at some of these studies:

Güney's (2017) study examined the digital addiction in Turkey where it is going, what the size of that lead, in the context of the theory of interaction. This study explained the concepts of digitality, social media, internet addiction, netless phobia in detail and presented examples. He advocated the view that internet users unwittingly upload implicit loads to the internet they use.

Aksel (2018) emphasized in his study while emphasizing the negative effect of students' self-control skills, Arslan, Dilci and Ersoy (2019), "0-12 According to the study the data indicating that the digital addiction levels of children according to the variables of parents, gender, marital status, education level, children's age and gender are more in favor of boys in terms of digital contact time and habits compared to girls Yengin (2019), an individual who is digitally addicted prefers to communicate with digital objects instead of socializing and communicating with people. Even the like / comment button in social media affects their activity (Cetinkaya, 2019). Contrary to traditional methods, students can watch the theoretical information outside the classroom whenever they want, and they perform the activities given as homework in the classroom under the guidance of the teacher (Temizyürek, & Ünlü, 2015).

Ünlü (2015) In his study he concluded that family attitude is effective and directive in terms of digital contact and purpose of use in children. Especially divorces are behind the intense tendency of children to digital objects; there lies indifference due to family problems and indifference. Children complete many areas of development within the family and with what they learn from them. The family has a duty to support the child's adaptation to society (Ünlü, 2015). Divorce is not only an event that affects the child, but also affects the parents negatively (Ünlü, 2015). Ünlü (2015) says that the negative effects of divorce on children will be seen throughout their lives.

Because pedagogical studies show that the lack of interest, love and trust is behind children's behavioral disorders. On the other hand, it is known that children turn to the virtual world with the cries of attracting attention, creating attention and I am here, notice me. The child develops reactions towards himself or others against divorce. These reactions can be both emotional and physical reactions such as nail biting, anger, wetting, loneliness, and guilt (Ünlü, 2015). Ünlü (2015) found in his research that the anxiety levels of people whose parents are divorced are high. At this point, digital objects, which have undertaken the mission of shelter, embrace children with their attractive contents.

According to Şentürk (2012), the separation of the family as a result of divorce and death or the breakup of the family through violent conflict, argument and conflict, disrupts the education of the child. It is known that children who are not encouraged by emphasizing their strengths cause inadequacy in their education lives. For this reason, he stated that the child who is exposed to inappropriate attitudes such as comparison cannot meet a good educational process and his academic success will tend to decrease accordingly. At this point, it has been concluded that the possible choices of these children as a new living space will be shaped by social media, digital games and watching TV (Şentürk, 2012).

On the other hand, it is known that not having a healthy communication climate in the normal family dimension brings about problems related to digital competence of children in their attitudes towards trust and digital literacy skills. It is the smallest social unit consisting of family, parents and children, it is the foundation of the institutions that make up the society.

Studies draw attention to the fact that education can be shaped on the attitude of parents. The positive and constructive attitude of parents towards their children in a conscious and consistent manner will restore their inner world and make positive improvements in neurochemistry in their

cognitive functions. In this way, they depend on them to be peaceful, determined, balanced, peaceful and respectful to each other (Demir, 2020). Parental attitude is handled in 9 different categories as oppressive and authoritarian, overly tolerant, indecisive and unstable, overprotective, tolerant and reassuring, inconsistent, rejecting, perfectionist and discriminatory.

Conscious attitudes of educational organizations towards innovations and practices brought about by the digital age, in line with what has been said above, also reveals a different perspective. Educational institutions that cannot prepare the infrastructure for teaching materials suitable for the Digital Age and cannot create learning environments with digital material and content presentation will naturally fail to adapt.

In this process, "Open Learning Resources" were developed and made accessible. This situation brought along ease and provided an advantage in terms of the up-to-dateless of the information. Open learning resources are freely available to all and offer a variety of materials. At this point, the pedagogical competence dimension of the content and capacity of digital media comes into play.

The materials in open learning resources can be modified, updated, combined with similar contents, and reproduced as permitted by the author. These materials come from the open software movement. This situation, called digital openness, is open data sources, open science, open applications, open networks, etc. countable. Accurate and effective materials suitable for the requirements of the Digital Age, filled with content for the needs of students, facilitate the digitalization process in education. The higher the adaptation rate to the process, the less will the students fall behind from the Digital Age. In these cases, some points that educational organizations should consider:

The approach to the change process should include equality. Everyone should have equal access to digital objects. The process should be highly participatory and aim to increase quality. In the digitalization process where informational data is intense and diversity is rapidly increasing, it is important to find the way through many information sources, to provide fast and easy access, to be able to categorize the information, to examine and criticize, to evaluate it authentically.

Today, subjects such as e-learning technologies, social networks, digital competencies, and needs are now considered as an educational field of study. On the other hand, we can see digital games as the medium where children experience the most important time loss. Within the scope of this study, it was found worth investigating how long children who had intense digital contact had digital contact in which medium. On the other hand, the fact that the game life, which cannot be experienced face to face in real life, is concentrated on digital channels, has created a separate problem. Looking at the studies in this context:

Striking results in the direction of intense digital contact habits gaining weight in the direction of play (Somatization, Obsession, Interpersonal Sensitivity, Depression, Anxiety, Anger, Phobic, Paranoid and Psychotic) and those violent digital games are associated with psycho-social and behavioral problems (Dilci, 2015). On the other hand, depression, anxiety, social phobia developed, and school performance worsened in those who became addicted while being a normal player. However, depression, anxiety, social phobia, and positive improvements were observed in those who returned to normal actors while they were addicted players (Dilci, 2021a).

Considering the positive effects of Digital Games; Most of the studies show that digital games contribute positively to the child's world. In this context, it reduces stress, being a leisure activity, providing entertainment, allowing to relax its negative effects, improving the ability to solve problems, being alone and individual, increasing self-confidence, hand, and eye coordination skills; There are opinions that it improves visual-attention skills and especially games with educational content increase course success (Dilci, 2019a). On the other hand, there are many studies indicating that it may cause some physical, cognitive, and mental problems.

The digital contact habits and level of primary school children have been a matter of curiosity, based on the need to seek answers to questions about how the transformation of digital culture affects

children, as an extraordinary situation where educational organizations aiming to educate children born into the digital age are caught off guard. With all these components, digital contact, which has increased with the covid-19 process, and its effects on students constitute the subject of research.

### **1.2. Purpose of study**

Digital change and related life problems are among the changes brought by the New World order. One of them is childhood experiences, digital contact habits, behavioral disorders related to this and their effects on the child. With this study, it is aimed to prevent possible problems and to raise awareness of children about the habit of contact.

The main research question is:

What is the situation regarding the digital contact habits of primary school students?

The question was seen as a problem.

The sub questions are:

- a) What is the digital contact status and addiction level of primary school students in general?
- b) What is the most contacted digital medium according to gender variables?

#### **1.2.1. Hypothesis**

H1. Primary school students have a high level of digital contact.

H2. Primary school students have a high level of digital addiction.

H3. The digital contact status and addiction level of primary school students are directly proportional.

H4. Male students report higher addiction rates compared to female students.

## **2. Materials and Method**

### **2.1. Method**

The research has been carried out in scanning model. In the research, mixed patterning was carried out due to the nature of the quantitative and qualitative algo-rhythmic-artificial intelligence-based digitalization technique. In this context, data were obtained from 3 provinces that were accessed randomly through the relevant link in the digital environment on a voluntary basis.

### **2.2. Sample of the Research**

Since the number of participants obtained in the study is not general, the phrase generalization is not included. For this reason, the sample section discussed in the study was qualified as the study group. Within the scope of the research, the network that is assumed to have equal socio-economic and cultural level of families belonging to the study group was determined by interviewing the national education directorates of the relevant provinces.

In this context, it was aimed to reach the families of the working group families in the districts with middle income groups in all three provinces. Thus, the opinions of parents of 986 primary school students with accessible validity from primary schools operating in Ankara, Sivas and Rize provinces were examined as a sample of the study group.

### **2.3. Data collection tool**

The (Digital Addiction Scale) developed by Dilci (2019b) was used to collect research data. The scale consists of five sub-dimensions "Deprivation", "Impulsivity", "Low Performance", "Low Self-Perception" and "Social Isolation" and 40 items in total. The total reliability of the scale was determined as .94. In this study, the reliability of the scale was found as .91 in the deprivation sub-dimension, .94 in the impulsivity sub-dimension, .85 in the low performance sub-dimension, .84 in the low self-perception sub-dimension, .84 in the social isolation sub-dimension and .98 in total. The scale

was prepared in five-point Likert type and was graded as "I totally disagree = 1", "Disagree = 2", "Undecided = 3", "I partially agree = 4" and "I completely agree = 5". The highest score that can be obtained from the scale is 200 and the lowest score is 40. The increase in the score obtained from the scale is interpreted as the children's contact habits are intense (Dilci, 2019b).

A few of the questions in the scale are listed below:

1. "I feel bad after using computer, cell phone, TV, internet.", "I totally disagree = 1 / Disagree = 2 / Undecided = 3 / I partially agree = 4 / I completely agree = 5"
2. "I feel the need to check again immediately after using the computer, mobile phone, TV, internet.", "I totally disagree = 1 / Disagree = 2 / Undecided = 3 / I partially agree = 4 / I completely agree = 5"
3. "Computer, cell phone, TV, internet distract me from problems and negative thoughts.", "I totally disagree = 1 / Disagree = 2 / Undecided = 3 / I partially agree = 4 / I completely agree = 5"

### 3. Results

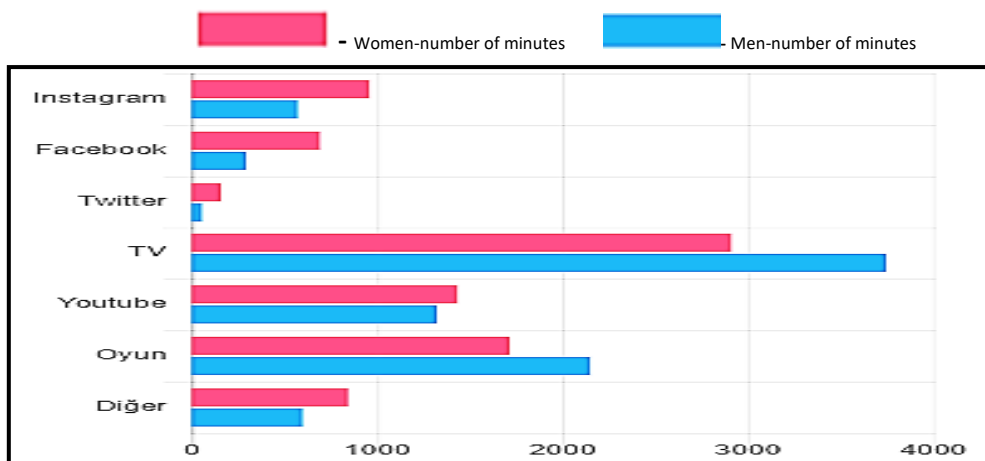
N = 986 primary school students who were reached to the study randomly were reached. Of these students, 510 females and 476 males have gender. Looking at the addiction rate; (n = 214) is reflected in the "Digitaliz" reports, of which 22.15% bear digital addiction indicators. When looking at the data of the general arithmetic average of all three provinces regarding the relevant behavioral dimensions; "26.12% withdrawal syndrome," "21.32% impulsive disorder," "22.22% low performance," "33.45% low self-perception" and "33,45". 43,23 "social isolation" is reflected in the data as they developed.

**Table 1** Rize Primary School- Distribution of Usage Time on The Related Digital Media by Gender Variable

Study	Frequency	Percent
Total Number of Participants	312	
Total Dependent	72	23,08
Dependent Male	38	52,77
Addicted Woman	34	47,22

As seen in Table 1, a total of 312 students at primary school level in Rize province were included in the study. The number of addicted students was represented by n = 72 students and the institutional commitment rate was determined as 23.08%. Considering the dependency gender variability, 52.77% of the participants are male and 47.22% are female. Looking at the results, it is seen that the rate of digital addiction is quite high compared to this rate.

**Table 2:** Relevant Digital Media data of Rize Province Primary School Students





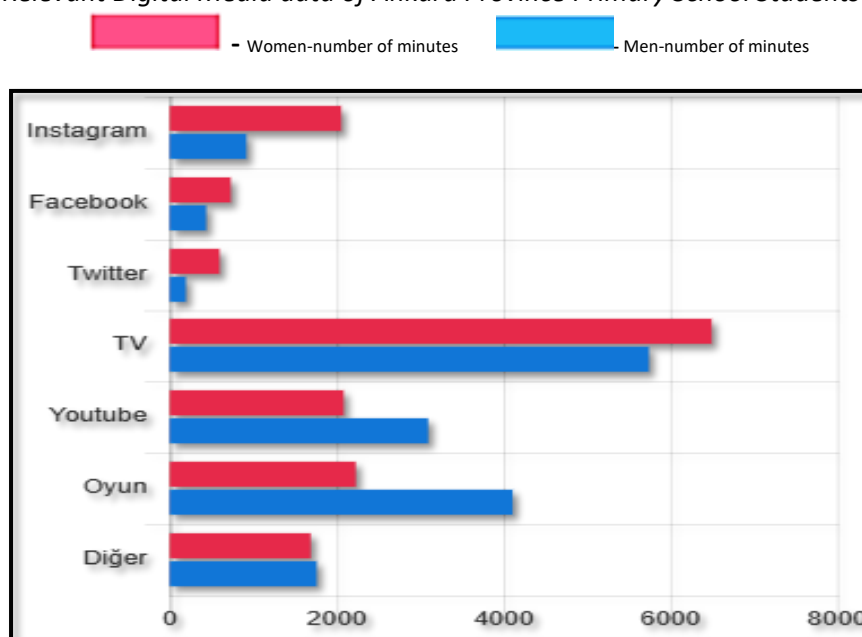
When Table'2 is examined, it is seen that the channels followed or spent time are mostly TV, YouTube and games. On the other hand, it is seen that the time spent on Facebook and Twitter is less than the others. On the other hand, when looking at the distribution by gender variable, it is seen that while Instagram, YouTube and Facebook are the most preferred digital media by female students, the digital media where TV and video are spent for games are preferred by male students. Approximately of the children residing in Rize is reflected in the data that they are dependent on the use of digital objects. It is seen that this situation is more in favor of men.

**Table 3:** Digital Addiction Rates for the Gender Variable of Ankara Primary School Students

Study	Frequency	Percent
Total Number of Participants	426	
Total Dependent	92	21,60
Dependent Male	60	65,21
Addicted Woman	32	34,78

As seen in Table 3, the number of participating students in the primary school of Ankara province is represented with a total of 426. The addiction rate is seen as 21.60%. Looking at the gender variability of addiction rate; 65.21% of the participants are men and 34.78% are women. While it is seen that there is a big difference in favor of men in the context of the gender variable in the said data, when the addiction rate reflected in the results is examined, it is seen that the addiction rate is quite high.

**Table 4:** Relevant Digital Media data of Ankara Province Primary School Students



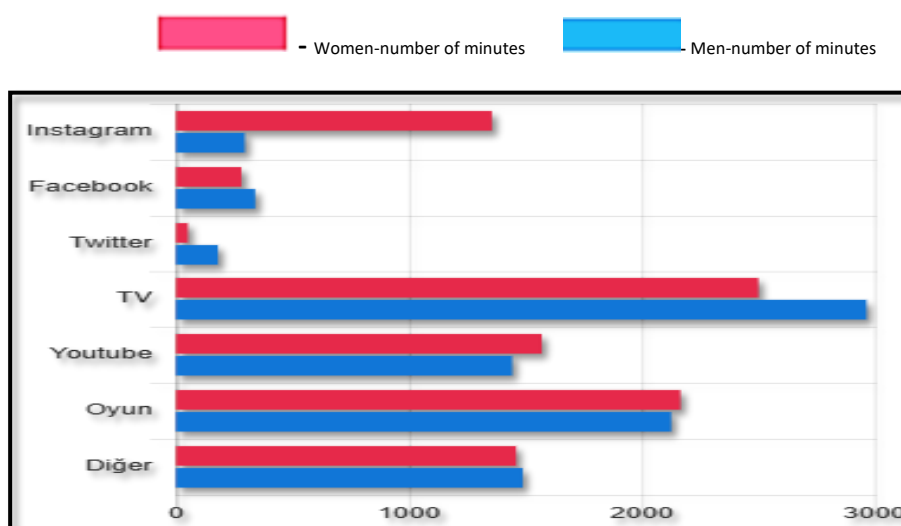
According to Table 4, it is seen that the channel followed or spent time at the primary school level of Ankara is mostly TV, games and YouTube. On the other hand, it is seen that the time spent on Facebook and Twitter is less than the others. On the other hand, when looking at the distribution by gender variable, it is seen that while Instagram and TV are the most preferred digital media by female students, Youtube and digital media where they spend time for games are more preferred by male students.

**Table 5: Digital Addiction Rates for Sivas Province Primary School Students' Gender Variable**

Study	Frequency	Percent
Total Number of Participants	248	
Total Dependent	54	21,77
Dependent Male	28	51,85
Addicted Woman	26	48,14

As seen in Table 5, the total number of participating students in Sivas province primary school was 248. Corporate loyalty rate was determined as 21.77%. Considering the gender variability of this ratio, 51.85% of the participants are male and 48.14% are female. Although this situation does not reveal a significant difference in terms of gender, it is seen that there is an excess in favor of men. On the other hand, looking at the results regarding the addiction rate, it is seen that this rate is quite high.

**Table 6: Relevant Digital Media data of Sivas Province Primary School Students**



As seen in Table 6, it is seen that the media followed or spent time at primary school level are mostly TV, games and YouTube. On the other hand, it is seen that the time spent on Facebook and Twitter is less than the others. On the other hand, when looking at the distribution by gender variable, it is seen that while Instagram and game are the most preferred digital media by female students, the digital media where they spend time with TV is more preferred by male students.

#### 4. Discussion

The participants of this study included 510 female students and 476 male students. This situation constitutes a neutral situation regarding the balances in the dependency ratio. While the rate of addiction increased in parallel with the covid-19 process, it is reflected in the research findings that approximately of the students are dependent in this process.

Students generally weakened their communication skills by developing "social isolation". Following this, it has been concluded that "inadequate self-perception and deprivation syndrome" is seen in primary school students. Yengin (2019) concludes that students prefer non-communication with the result that the digital addicted individual, instead of talking face-to-face with his / her environment, talk through the message, raise their morale thanks to the likes they share, and also position technology as the main determinant of their lives.



In general, as can be seen in the data of all three provinces, it is seen that the digital channels that are followed or spent on the primary school level are mostly TV, Youtube and game content. On the other hand, it is seen that the time spent on Facebook and Twitter is less than the others. This situation is a result that can be considered normal in the context of children's developmental stages. On the other hand, when looking at the distribution by gender variable, it is seen that while Instagram, Youtube and Facebook are the most preferred digital media by female students, the digital media where TV and video are spent for games are preferred by male students.

Looking at the distribution of addiction rates of 986 primary school students, the high rate of addiction points in favor of men. Such is the nature of Turkey in this case coincides with the results of other studies on general digital addiction. Arslan, Dilci, and Ersoy (2019), determined the digital addiction levels of children according to the variables of age and gender in favor of boys in terms of digital contact time and habits of boys compared to girls. It has been found that there is an excess.

## 5. Conclusion

As stated in the research findings and digital objects that encompass our entire lives, social media with increasing usage rates also affect educational organizations. Academics, teachers, students, and all educators, who are the leading actors of the digitalization process in education, should fulfill their duty. It should work in cooperation with educational organizations on the dynamics, tendencies, and expectations of the Digital Age. The fact that the educators are qualified and have certain competencies affect the future generations and the increase of the education level of our country.

Based on the above results, broader research and preventive studies on intensive digitalization and addiction can be recommended. In terms of family education, family could be a role model in the use of technology and digital environments, by mentoring their children in using technology, creating space and time without technology. It could also take the form of regulating their behavior, using technology together, having social activities as a family, creating alternatives to time and activities in technology and digital environments, and ensuring the safety of the child in such environments. Families should be provided with "Digital parenting" skills. Digital platforms can be created where families can access accurate information and suggestions about digital addiction.

Family and life habits and quality of life are important in preventing digital addiction. The same applies to traditional parenting. It should not be forgotten that parental competencies such as behaving consistently, not using technology as a reward-punishment, spending quality time with the child, active listening and correct communication are also valid in preventing digital addiction.

## 6. Recommendations

- The lifestyle in the family needs to be changed.
- Parents should be trained to control mobile phones and internet access.
- A kind of smart watch that allows limited search can be used.
- Families should be made aware of this issue and training should be provided on the subject.
- A time plan should be made.
- Bans are always tempting. "Use!" not "Use it like this!" should try.
- Regulatory rules should be included rather than prohibitive rules. In order to regulate themselves, children must set their own rules, follow them and learn to persevere.
- Based on the overall result of this study, more in-depth research on the contents of digital media is suggested.

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