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Smartphone Perception and Experiences of Teacher Candidates During Covid 19 Process: What is My Smartphone for Me?

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Abstract
The purpose of this study is to reveal the experiences of the teacher candidates about their personal phones, their phone usage situations and their perceptions about their smartphones during the Covid-19 process. The mixed method procedure was followed in the study. In the quantitative dimension, the survey model was used in order to reveal the smartphone usage status of the teacher candidates, while in the qualitative dimension, the phenomenology model was used to determine their perceptions about the smartphone. The sample of the study consisted of 45 teacher candidates studying in the faculty of education at a state university located in Turkey's Aegean region during the 2020-2021 fall semester. The data of the study were collected by the researcher with a questionnaire form created by taking the literature review and expert opinion. The quantitative data collected within the scope of the research were subjected to statistical analysis. The metaphors collected in qualitative dimension were analyzed with content analysis. Research findings indicated that the teacher candidates were generally aware of the technical features of their personal phones. On the other hand, it has been determined that they are indecisive in controlling themselves about their phone usage, being dependent on their phones and being aware of their phone time. It has been observed that the teacher candidates produced metaphors for their smart phones that point to the themes of "addiction, functionality, correct use, having a happy time, socialization/communication and other." It can be said that the research is important in terms of providing researchers and decision makers with new perspectives on the smartphone perception and experiences of teacher candidates in the Covid-19 process.

Keywords: Covid-19, Teacher Candidates, Smartphone, Experiences, Perceptions

1. Introduction

In today's world described as knowledge, communication and technology era, especially with the rapid development of communication technologies, different technologies affecting interpersonal communication have appeared. Computer, mobile devices, internet and smartphones can be considered at the top of these technologies.

These technologies are also seen to become indispensable elements of life (Çalışkan, et al., 2017). Today, mobile phones used nearly by everyone and are constantly developed with new generation technologies make human life much easier thanks to their various properties. It can be said that many important features such as talking, messaging and internet access, camera, calculator, flashlight, compass, notepad and bank transactions are collected in one device is the main reason why these phones are so widely used today (Yusufoğlu, 2017). A smartphone is a device that has a number of advanced features as well as talking and texting functions and can quickly perform these features. The smartphone has the functions to view photos, play games, play videos, play or record audio-video via the built-in camera, email, develop some applications for social websites, and surf on the net due to its wireless internet feature (Samwar & Soomro, 2013).

Mankind have always been impressed by the changes in technology throughout his life. Especially the acceleration of technological change in recent years is remarkable (Eren et al., 2020). These changes have certainly led to changes in human attitudes and relationships. With the use of computers, internet and smartphones, the use of these technologies have increased in our lives. While interpersonal communication previously used to be by face-to-face, today, communication channels have found a place in different environments thanks to technologies. Online environments, in particular, rank first in these communication channels. Social groups can meet not only in physical environments where they encounter with each other face-to-face, but also communicate online (Knop, 2016). Individuals agree that using social media channels for work and educational purposes has some benefits and is generally positive (Asterhan & Rosenberg, 2015; Hershkovitz & Forkosh-Baruch, 2013). From this perspective, particularly smartphones offer people a unique experience and allow them to go online with time independence. (Alan & Eyuboğlu, 2012).

It can be stated that smartphones are used by many. According to 2017 data, there are 2.32 billion smartphone users worldwide and this number is expected to rise to 2.87 billion in 2020(Statista The Statistics Portal, 2017). In the report prepared by the Turkish Statistical Institute (TUIK), the ratios of computer, internet and mobile phone use of children in the 06-15 age group are 60.5%, 50.8% and 24.3%, respectively. The average age in which children using mobile phones in the 06-15 age group's starting using mobile phones is 10, while the average starting age in the 06-10 age group is 7, and in the 11-15 age group, it is 11. Among the purposes of using the phone, conversations rank first with 92.8%, followed by gaming with 66.8%, messaging with 65.4%, and internet access with 30.7%. 80% of 06-10 age group children using mobile phones, 62.9% of 11-15 age group children playing games over mobile phones; 29.4% of 06-10 age group children and 76.2% of 11-15 age group children texted (TÜİK, 2013).

In recent years, the rates of university students' possessing mobile internet devices have been increasing (Dahlstrom, et al., 2012). It has become inevitable to encounter students in every corner of college campuses with their heads embedded in a smartphone screen. It has become a constant companion to today's university students even when walking down the street, in elevators, smartphones in classrooms (Reese & Bomhold, 2013) That it enables socializing through online communication and social network allow smartphones to be an important device among high school and university students (Hong, et. al. 2012). Moreover, smartphone use is a characteristic feature of today's young people. (Choliz, 2012; Yılmaz, et al., 2015). The fact that people use a large number of features of smartphones has also led to students taking photos of course notes with their smartphones, rather than taking notes in lessons (Aktaş &Yılmaz, 2017).

Smart phones are at the top of technologies that affect humans and make their life easier. Data concerning the use of smartphones and mobile phone make this clear. According to the data taken from the World Bank, nearly 45% of the world's population uses the internet (World Bank, 2017). When viewed the data on internet use in Europe, 8 out of every 10 people connect to the internet through a smartphone. (Eurostat, 2016). According to the Turkey Statistical Institute (2019), the rate of telephone and internet use in Turkey was determined as 98.7%. These devices offer a high level of use by providing people with a large number of opportunities such as time and space independence, speed, time saving, being portable, easy sharing of information and increasing participation (Güler & Veysikarani, 2019; Yengin, 2016). This can lead to an increase in people's dependence on these devices over time.

That the purchase rate and use periods of smart phones are increasing over time brings different problems caused by these devices. These devices lead to physical and psychological problems due to excessive use (Tamura, et al., 2017). The fact that smartphones have become a part of our lives undoubtedly causes some problems as well. At the beginning of these problems is smartphone addiction. Smartphone addiction is a type of addiction that does not contain any chemicals but when not used, people face psychologically negative situation. (Minaz &Çetinkaya Bozkurt, 2017). One of the negative consequences of excessive use of mobile phones or smartphones is a psychological disorder called nomophobia. Nomophobia", an acronym for the English phrase "no mobilephone phobia," is "fear of being without a smartphone" with a general meaning in Turkish (Türen, et al., 2017). Nomophobic individuals constantly look at the screen, use the phone regularly, constantly check for messages, and experience anxiety when they leave the phone. (Kocabaş & Korucu, 2018). Smartphone addiction can be thought to be a kind of dependence on technology (Lin, et al., 2014). Smartphone addiction can be described as excessive use of the phone, inability to prevent the desire to use it, having problems stopping or minimizing use, being stressed when it cannot be used, and not telling the truth about the duration of use (Kwon, 2013; Savcı & Aysan, 2017).

Recently, it is seen that a number of studies have been conducted on smartphone use and the addictions it creates on people. These studies have included research such as smartphone addiction (Kuyucu, 2017), problematic mobile phone use (Doğan & İlçin-Tosun, 2016) and excessive smartphone use (Lee, et al., 2014). When different studies examined in this perspective, it was observed that nomophobic people experienced stress, anxiety, and insomnia; their school life and academic success were affected negatively; they experienced sadness when (Kuyucu, 2017), they were out of coverage and their battery was run out; social network users were nomophobic in medium level, they keep their phones open 24 hours a day and they check their phones before sleeping and just after waking up. In the literature, studies concerning high school and university students where problems with smartphone use observed much more intensively. Aljomaa, et al. (2016) found that 48% of university students are addicted to smartphones. Kahyaoğlu, et al. (2016) stated that smartphone use among university students was dramatically higher. Minaz, et al. (2017), they indicated in their research investigating addiction levels of university students and their usage purpose that students use their smartphones most for accessing social networks and their smartphone addiction is high. Çalışkan, et al. (2017) carried out a research aimed at determining the addiction levels of teacher candidates. In the study, they pointed to the result that teacher candidates had a smartphone addiction level close to moderate.

When domestic and international studies on smartphone use and addiction are examined, there are not enough studies aimed at investigating the experiences and perceptions of university students about smartphone use and their smartphones though there are a number of studies in the field, especially within the sample of teacher candidates, Thus it is important to investigate the perceptions and experiences from different branches concerning smartphones, especially ones used more during the covid-19 process. Conscious use of smartphones will allow individuals, especially those teenagers to increase their existing human and social capital. Therefore, it can be said that the research within this framework can contribute to the detection of problems and determination of solutions for decision makers and practitioners. The aim of this research is to reveal the experiences of teacher candidates with their personal phones in the Covid-19 process, their phone use and their perceptions about their smartphones.

2. Method

2.1. Research Model

The mixed method procedure, in which qualitative and quantitative research methods were used together, was followed in the study. Mixed method research, in which quantitative and qualitative methods are carried out together, is a type of research used to benefit from the strengths of both methods. Using quantitative and qualitative data together provides the researcher with a better understanding of a problem (Morse, 2003; Creswell & Plano, 2011). In the quantitative dimension of the study, the descriptive survey model was used to reveal the smartphone usage status of the teacher candidates, while in the qualitative dimension, the phenomenological model was used to determine their perceptions about the smartphone. In the descriptive survey model, the subject or the individual in the research is tried to be described as it is in the circumstances (Karasar, 2015). The phenomenological model

is used to reveal common applications and to define and explain meanings/phenomena created by the participants (Annells, 2006).

2.2. Research Sample

This research was carried out with 45 teacher candidates studying at a state university's faculty of education in Turkey's Aegean region in 2020-2021 fall semester. In the study, some criteria were taken into consideration such as the voluntary willing of teacher candidates to participate in the study, easy access of the researcher, ensuring participation from different teaching branches as much as possible, and ensuring the participation of male and female teacher candidates. In this framework, the purposeful sampling method was used to eliminate problems that could adversely affect the results of the research (Given, 2008; Knight et al., 2013). With these processes, it was aimed to ensure the external validity of the research (Merriam, 2013). 25 (%55.5) of the participants are girls and 20 (44.5%) of them are boys. While 16 (36%) teacher candidates from Social Studies education participated in the research, 8 (17.7%) from Classroom education, 6 (13.3%) from Mathematics education, 5 (11%) from Turkish education, 5 (11%) from Psychological Counseling education and 5 (11%) from Science education teacher candidates have participated.

2.3. Data Collection Tool

The data of the study were collected with a questionnaire form which was created by the researcher by taking the literature review and expert opinion. The data collection tool consists of 3 parts:

- The first part includes the questions of the participants about telephone brands and mobile tariffs.
- The second part includes the question (If I were asked to make my phone look like something, I would have likened it ……. Because ……) aimed at determining the metaphors the participants produced about their personal phones.
- The third part consists of 5 questionnaire items in 3-point Likert-type, which were created to determine the participants' experiences with their smart phones. The responses to the questionnaire items were scored as "agree (3.00), undecided (2.00) and disagree (1.00)".

2.4. Data Collection and Analysis

In order to collect data, Google Forms online survey application was used. Before the research, teacher candidates were informed about the questionnaire form and an approval section was created where they can give their personal consent before participating in the questionnaire. The quantitative data collected within the scope of the research were subjected to statistical analysis. SPSS 22.00 package program was used in the analysis of quantitative data. In the analysis of the data, "frequency (f), percentage (%), arithmetic mean ($\overline{X}$), standard deviation (Sd.) maximum score (Max.) and minimum score (Min.)" values were examined. The metaphors collected in qualitative dimension were analyzed with content analysis. The main reason for using content analysis is that because of the lack of pre-determined conceptual dimensions (categories) of the data, it is the analysis of the evaluated data under appropriate categories by the researcher. Content analysis is a scientific approach that enables the objective and systematic examination of verbal, written and other materials and their organization according to certain categories (Bilgin, 2006; Bogdan & Biklen, 2007; Lichtman, 2010).

3. Findings

In this section, firstly, the findings regarding the smartphone usage information of the teacher candidates participating in the research are given. Then, findings are reflected regarding their personal smartphone experiences and metaphors which reflecting smartphone perceptions.

Table 1: Smartphone information used by participants

Operating System	Smartphone Brand	f	%
Android	Samsung	22	49
	Xiaomi	8	18
	Huawei	4	9
	General Mobile	2	4
	Casper	1	2
iOS	iPhone	8	18
Total		**45**	**100**

Table 1 shows that the teacher candidates participating in the study use smart phones with both Android and iOS operating systems. In general, it is understood that smartphones with andorid operating systems are preferred more intensely (82%). Teacher candidates mostly use Samsung brand (22, 49%) smartphones. This is followed by Xiaomi (8, 18%), iPhone (8, 18%), Huawei (4, 9%), General Mobile (2, 4%) and Casper (1, 2%) brand phones.

Table 2: Mobile line tariff information used by the participants

Tariffs	$\bar{X}$	Min.	Max.
Internet (GB)	10	2	25
Calls (Minute)	800	250	1000
Messages (Number)	550	100	1000
Fee (Turkish Lira*)	47	30	100

**1 Turkish Lira equals 0.12 US Dollars (13.04.2021).*

Table 2 includes mobile line tariff information of teacher candidates participating in the study. It is observed that there is a tendency in tariff preferences of teacher candidates average of 10 GB internet, average of 550 SMS messaging, average of 800 minutes of speech. It is seen that teacher candidates prefer an average of 47 Turkish Lira (TL) mobile line tariffs ranging from 30 TL to 100 TL. In general, it can be said that internet and speaking packages are more determinant in the tariff preferences of teacher candidates.

Table 3: Smartphone experiences of the participants

My Smartphone and Me	$\bar{X}$	%	Sd.
*My smartphone is indispensable in my life.	2,23	74	,79
I know the technical features of my smartphone.	2,50	84	,50
My smartphone usage is under my control.	2,27	76	,75
*I am thinking that I'm addicted to my smartphone.	2,05	68	,82
I am aware of my daily smartphone screen time.	2,14	71	,92

**Reverse coding was done for negative items.*

In Table 3, the personal evaluations of the teacher candidates participating in the research about their experiences with their smartphones are reflected. Three of the 5 basic questionnaire items directed to teacher candidates reflect positive smartphone usage experience, while two reflect negative smartphone usage experience. Accordingly, it is understood that personal perceptions of positive smartphone usage experiences of teacher candidates about "knowing the technical features of smart phones (2.50, 84%), the ability to control phone usage (2.27, 76%) and daily screen time awareness (2.14, 71%)" are quite high. On the other hand, it is also observed that the level of personal perceptions of negative smartphone usage experience of teacher candidates about "seeing their smartphone as an essential in their life (2.23, 74%) and thinking that they are dependent on their smartphone (2.14, 71%)" are also high.

Table 4: The metaphors of the participants regarding their smartphone perceptions

Themes	Metaphors	f	%
Addiction	My organ, Octopus, Part of my body, Engagement ring, Bread, Cigarette, Drug, Clock, Clothing, Handcuffs, Clothing pocket, Mask, A third arm, Limb, Bus, Shadow, Dried nuts.	17	36
Functionality	Medicine cabinet, My assurance, Swiss army knife, The mall, Basic need, Combination of technological tools, Car, A minimized World, The school bag, Mask, Pocket computer, Time machine.	12	25
Correct Usage	Money, Time, Rope, Car, Sea, Black box, A lockbox.	7	15
Spending Happy Time	My close friend, My favourite outfit, Chips, My room, The mall, Music box.	6	13
Socializing/Communication	The combination of my soul with technology, Hang out with my friends, Footed news agency, Coffee.	5	11
Total		47	100

In Table 4, metaphor findings reflecting the perceptions of teacher candidates participating in the study about their personal smartphones are given. In the content analysis, teacher candidates produced a total of 47 metaphors that were evaluated in five categories. According to the order of intensity, these metaphors are “addiction (17, 36%), functionality (12, 25%), correct usage (7, 15%), spending happy time (6, 13%), and socializing/communication (5, 11%). categorized under themes. In the study, the metaphors that the teacher candidates produced for their smartphones were discussed separately under these themes.

As seen in Table 4, teacher candidates mostly produced metaphors on the theme of addiction. Under this theme, they produced 17 metaphors in total; " My organ, Octopus, Part of my body, Engagement ring, Bread, Cigarette, Drug, Clock, Clothing, Handcuffs, Clothing pocket, Mask, A third arm, Limb, Bus, Shadow, Dried nuts." Some quotations from teacher candidates' metaphors pointing to the addictive aspect of their smartphones:

My Organ; *I can never separate it from my side in any way. I get uneasy even if he stays in a separate place from me for even a second. It feels like a piece of me is missing* (Participant 8).

Octopus; *When I pick up the phone, I cannot easily put it away. Just like the octopus, it surrounds you* (P3).

Cigarette; *People who smoke do not want to do anything and feel bad when they do not smoke, and they only react properly after smoking and I often feel the need to use it when I am away from the phone. I use it for a long time, although I am aware of its harms like smoking* (P33).

Dried Nut; *When I pick it up like a sunflower seed, I cannot stop. I can't leave my phone* (P15).

Engagement Ring; I *always have my phone in my hand, wondering if I receive a message, even when I don't need it. Just as the engagement ring is always on our finger, I always have my phone* (P40).

Bread; *If I don't eat bread, it will be very good for me, but I can't stop eating it. Without it, I don't feel full. I can't do without a smart phone either* (P23).

Drug; *We feel stressed, irritable and disconnected from life when we take it or not. Just like drugs, our smart phones literally create people who are dependent on them* (P41).

The second important theme regarding the metaphors produced by the teacher candidates was the theme of functionality. Under this theme, they produced 12 metaphors in total; "Medicine cabinet, My assurance, Swiss army knife, The mall, Basic need, Combination of technological tools, Car, A minimized World, The school bag, Mask, Pocket computer, Time machine." Some quotations from teacher candidates' metaphors pointing to the functionality aspect of their smartphones:

Medicine Cabinet; *It meets many of my needs, it answers all my questions, I can find what I want there, when something happens, our smart phone comes to our mind first, we take it in our hands and take care of it immediately. Just like looking at the first medicine cabinet when something happens to us* (P5).

My Assurance; *I keep a lot of notes and information in it. I set alarms, one device provides the possibility to do a lot of things. Especially in such a period when everything is being digitalized, I feel the need to control my phone at all times* (P44).

Swiss Army Knife; *I handle almost every job with my phone and it is very useful. I can listen to music, watch movies, attend live classes, pay my bill and do dozens of other things easily on my phone. Just like the Swiss army knife's scissors, screwdriver, can opener functions* (P2).

A Minimized World; *I can be informed about all the developments in the world thanks to the phone.* (P10).

Time Machine*; We can get information about both the future and the past* (P21).

Pocket Computer; *I can do almost everything the computer does with the phone* (P35).

The third important theme regarding the metaphors produced by the teacher candidates was the theme of correct usage. Under this theme, they produced 7 metaphors in total; "Money, Time, Rope, Car, Sea, Black box, A lockbox." Some quotations from teacher candidates' metaphors pointing to the correct use of smartphones:

Money; *When you have little money, you learn to share with people and help you, but when you have a lot of money, you become selfish and lonely. If we use the phone less, we are in contact with people, if we use it too much, we become lonely, we move away from people.* (P1).

Sea; *If you want, you can have fun and fish there, but if you do not know how to swim and the harmful creatures in it, it is equally dangerous. Likewise, if he/she does not know how to use the phone correctly, it can be lost in a person and harm himself.* (P9).

Car; *I can do without my own car. But if I have a car of my own, my life becomes easier and more comfortable. But if I am not careful in driving, I may encounter bad results in my over speeding.* (P12).

Black Box; *As we open up it, we get a lot of news that we do not know, good or bad. We do not know what will come out, what we will encounter every time we take it. Maybe good news, maybe an expected search or unexpected information* (P30).

Rope; *When appropriate, a swing is made and becomes a fun and useful thing. If you do not know what to do with the rope, it will get around and become an object that tries to strangle you.* (P38).

The fourth important theme regarding the metaphors produced by the teacher candidates was the theme of spending happy time. Under this theme, they produced 6 metaphors in total; "My favourite outfit, My close friend, Chips, My room, The mall, Music box." Some quotations from teacher candidates' metaphors pointing to the aspect which their smart phones enabled spending happy time:

My Favourite Outfit; *I feel very happy and peaceful that day when I wear my favourite outfit. Likewise, I am happy while browsing the videos I enjoy during the day or entertainment platforms with my phone too* (P18).

My Room; *Sometimes I retires to my own room to relax and doesn't leave for a long time; I write, draw, compose something. I leave when I pour out my feelings* (P19).

Music Box; *I love listening to music. I use my smartphone mostly to listen to music* (P36).

Chips; *I don't need it, but a snack that I enjoy too much, I know it harmful to me, but I continue to eat it because it gives me a good pleasure.* (P42).

The last theme regarding the metaphors produced by the teacher candidates was the socialization/communication theme. Under this theme, they produced 5 metaphors in total; "The combination of my soul with technology, Hang out with my friends, Footed news agency, Coffee." Some quotations from teacher candidates' metaphors pointing to the aspect which their smart phones contributed to their socialization and communication:

Hang Out with My Friends*; We can also do the same in virtual environments.* (P26).

The Combination of My Soul with Technology*; We download our favorite music, fun apps and games to our phones. In addition, we follow people with the characters we want to be on social media, and put pictures that we are happy with. We share the photos we take in the environments we love.* (P7).

Footed News Agency; *I can get news instantly, especially from the Twitter without almost looking at the television or newspaper* (P25).

Coffee; *Because My smartphone is always with me when I gather to chat with people and spend time alone in my spare time* (P13).

4. Result, Discussion and Conclusion

According to the research, it is understood that teacher candidates mostly preferred phones with the android operating system (80%). In this category, Samsung was the most preferred phone brand (40%). On the other hand, iPhone users with Xiomi in the collocation of preferred phone brands. Although it was obtained from a small sample, this proportional finding of the study can also be said to be proportional to the 2015 World market Share [Android (81%), iOS (18%)] regarding the preferences of the respective operating systems (Wikipedia, 2021).

When the results of the research on phone tariff preferences of teacher candidates are examined, it is seen that internet and talk time are a more decisive factor in tariff package preferences, and the preferred tariff fees are also high within this framework. According to research findings, it is understood that teacher candidates tend to prefer internet packages of 10GB on average, ranging from 2 GB to 25 GB. It can be said that this condition is in line with the growing internet package preference tendency of general consumers especially during the Covid-19 process. (Fauzi & Sastra, 2020; Whitelaw et al., 2020; İnce & Kadıoğlu, 2020; Baltacı, et. al., 2021). It is an interesting phenomenon in some studies that teacher candidates mostly followed their distance education lessons through their personal phones (Kırmızıgül, 2020; Warren & Jean, 2020; Tejedor, et al., 2020). Although they utilize fixed internet at home, it can be said that teacher candidates are also turning to tariffs where more internet services are offered in mobile line packages in the process. Research findings show that teacher candidates are tending to mobile tariff fees, which can be considered as high as 47 TL on average, ranging from 30 TL to 100 TL.

In the scope of research, it has also been tried to determine the smartphone experiences of teacher candidates. In this regard, teacher candidates stated that they know the technical features of their smartphones (84%), have high smartphone self-control skills (76%) and are aware of daily screening time (71%). On the other hand, it is understood that their opinion that their smartphones are essential in their lives (74%) and that they are addicted to their smartphones (68%) stands out in the same way. This result of the study points out to the existence of a dilemma about teacher candidates' experiences with their personal smartphones. On the one hand, teacher candidates express that they can control themselves about their smartphones. On the other hand, they indicate that they are dependent on their smartphones. This result can also be interpreted in such a way that teacher candidates do not have high self-consciousness/awareness of smartphone use. The research conducted by Kana (2020) also draws attention to this dilemma. In the study, while Turkish teacher candidates mention about the positive aspects of mobile phones, making life easier on the one hand, they address its respects that are addictive and affect their pyschology negatively on the other. Geçgel (2020) pointed out in their research that teacher candidates stated they were uncomfortable with excessive smartphone usage times, trying to control it, but mostly failing.

Within the scope of the research, teacher candidates have produced 47 metaphors that reflect their perception of their personal smartphones. On examining these metaphors, it has been determined that there were perceptions pointing to the themes of "addiction, functionality, proper use, happy time, socialization/communication and other." Research results pointed that teacher candidates' perceptions of their personal smartphones are most shaped by the fact that their smartphones are addictive and functional. Under the addiction theme, they produced 17 metaphors in total. These are: "My organ, Octopus, Part of my body, Engagement ring, Bread, Cigarette, Drug, Clock, Clothing, Handcuffs, Clothing pocket, Mask, A third arm, Limb, Bus, Shadow, Dried nuts.". When their explanations for these metaphors were examined, it was observed that perceptions indicating its existence “fear of being without a smartphone,” known as “nomophobia,” such as the inability to leave his smartphone, feeling restless in its absence, and not being able to break away from it even if he knows it is harmful, stood out as a rather dominant factor. Similarly, some studies also indicate that smartphones, social media and the Internet negatively affect the communication of individuals, are addictive applications and create psychological problems in individuals (Tang & Lee, 2013; Boulianne, 2015). On the other hand, under the theme of functionality, pointing that smartphones of teacher candidates are functional, they produce 12 metaphors including “Medicine cabinet, My assurance, Swiss army knife, The mall, Basic need, Combination of technological tools, Car, A minimized World, The school bag, Mask, Pocket computer, Time machine.” Upon examining their explanations concerning metaphors in this category, it can be said that their perceptions regarding functionality of smartphones also stand out in terms of features such as the facility to quickly and rapidly access to the desired information via internet;

being aware of all the developments in the world; listening to music, watching movies, following live lessons, having multi-purpose and multi-faceted functions such as digital banking and make their users' work easier. Bulduklu and Özer (2016) have stated in their study that attitudes of young people towards their smartphones are positive due to their features such as accessing information, facilitating communication, mobility, simplifying life, spending time, social relationship, saving time and sharing. In this study; Money, Time, Rope, Car, Sea, Black box, a lockbox, which points out that the teacher candidates should use smartphones correctly and consciously, apart from the themes of addiction and functionality featured in this study "a total of 7 metaphors, including " My favorite outfit, My close friend, Chips, my room, the mall, music box, indicating that their smartphones allow them to have a happy and fun time. "a total of 6 metaphors, including;" the combination of my soul with technology, Hang out with my friends, Footed news agency, Coffee," which points to the perspective that their smartphones contribute to socialization and communication, they produced a total of 5 metaphors. It can be said that these results of the study also overlap with the results of some studies conducted in the literature. Teacher candidates pointed out that smartphones should be used as properly and competently besides their functionality, and that if they are not used in this way, there will be negative consequences for them. On the other hand, they have also indicated that smartphones have a significant part in many fun activities that give them happiness in their personal lives and can contribute to building closer and social relationships with their environment and friends. In the study, when metaphors which teacher candidates put forward so as to reflect their perceptions regarding their personal smartphones and metaphors that are thought to represent the 5 separate themes are evaluated in a holistic manner, it can be claimed that these themes are linked with each other and that these young individuals should be addressed in a holistic way in understanding their smartphone perceptions. Because in this study, it has been observed that teacher candidates have both positive and negative perceptions about their personal smartphones and do not evaluate their smartphones in only one single aspect. This situation is reflected in figure1. However, given both the sample of the research and the limitations of the research, it is thought that this situation should be handled as a more deeply and comprehensive research topic.

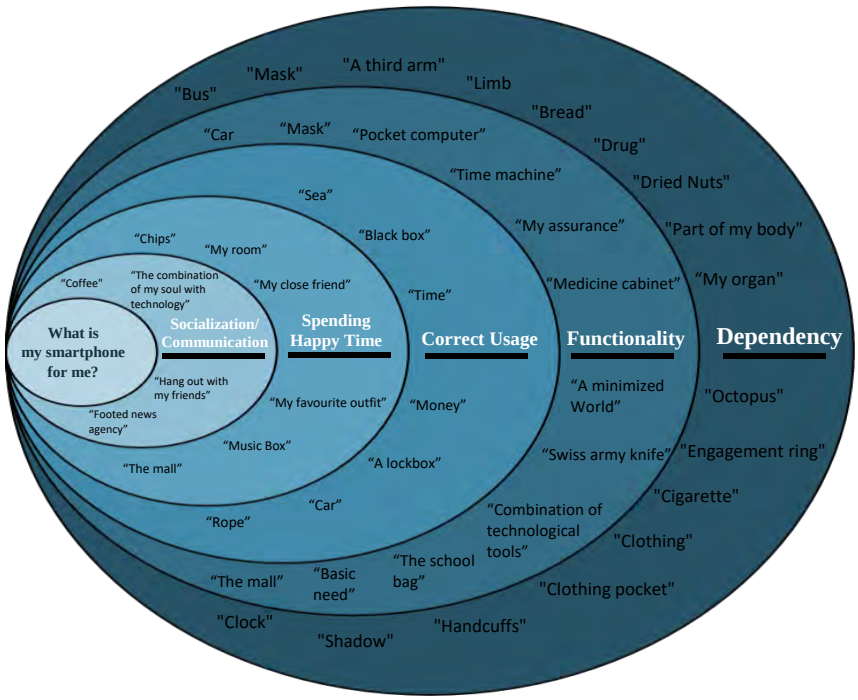

Figure 1: The holistic structure of teacher candidates' perceptions of smart phones.

5. Suggestions

Within the framework of the findings and results obtained within the scope of the research, a number of recommendations for researchers, practitioners and decision makers can be shared: Class hours of media literacy elective courses given to teacher candidates through undergraduate education may be increased. Course content can be diversified, especially for effective and productive smartphone use and smartphone management. The

number and variety of activities such as conferences, workshops and seminars can be increased in themes such as media literacy, digital literacy, media and communication tools, smart phones and mobile applications conducted by universities and non-governmental organizations. Workshops and competitions for creating ideas for functional smartphone applications (mobile applications/app) can be organized between universities/ faculties of education. Different studies can be conducted in which the smartphone perception, attitude, tendency, experiences of teacher candidates is examined more profoundly. More far-reaching research can be done in teacher, candidate and student samples.

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