Mobile Phone Use at School as an Element of Hidden Curriculum: M-Hidden Curriculum

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***Abstract*— Mobile phone is a new educational phenomenon that can be related with students' health, academic and social development. There a number of studies in literature on this subject. However, there aren't any studies on the relation of mobile phone with informal processes at school. Mobile phone is a new phenomenon which builds school culture with informal ways or reproduces the existing culture. The relation of this element with the hidden curriculum at school is disputable. The aim of this study is to determine the views of high school students in Turkey on the reasons of their mobile phone use in the context of hidden curriculum and evaluate those views in terms of different variables. The study was carried out on 289 students enrolled at state schools in the cities of Elazig and Malatya in 2013-2014 educational year. The data obtained via a questionnaire form were analyzed using SPSS package program. As a result of the analysis, it was determined that most of the high school students in Turkey have mobile phones and they bring them into classes although it is banned by the regulations. Students prefer to use mobile phones to communicate, listen to music, share announcements, send text messages, take photos, connect to social networks and for educational purposes. These preferences are, in a sense, means of building a school culture or reproducing it, which is described as hidden curriculum. This case can be considered as the sign of a new hidden curriculum, being built by mobile phones informally. This curriculum can be named as m-hidden curriculum or e-hidden curriculum.**

***Index Terms*—hidden curriculum, m-hidden curriculum, e-hidden curriculum, mobile phone, mobile learning, mobile school culture**

I. Introduction

The rate of individuals having mobile phone in Turkey is above the world average. According to Turkish Statistical Institute data, children in Turkey start using mobile phones in average at the age of ten [1]. The rate of children having their own mobile phones is about 40 per cent [2]. This rate reaches 90 per cent at high schools [3]. Far from discussing whether it is true or not, mobile phone is a new educational phenomenon which has already entered into school with students.

As being an unavoidable fact of this century, mobile phone, which has become a part of students' school lives, is a conspicuous issue for educators by its many extents [4]. These extents can be specified as the effects of using mobile phones on students' physical-mental health and academic-social improvement. Although there isn't much research done on this case which is generally called e-learning or mobile learning [5], [6], [4], no research accepts mobile phone as a component of hidden curriculum. Thus, it is certain that there is a relationship between students' use of mobile phones at school and informal cultural processes (hidden curriculum components).

Hidden curriculum, apart from official curriculum, includes students' social learning gained through daily school experience [7]. Informal morals, attitudes, habits and skills are in the scope of hidden curriculum [8]. It involves unwritten informal messages, stimulus and activities [9]. Therefore, the functions of mobile phone can be identified as the source of this mentioned activity and learning. Mobile phone ban in classes in Turkey makes it an informal communication source determined out of formal education authority. Thus, messages (containing communication, attitudes and morals) transferred through informal way (mobile phone) can be named m-Hidden curriculum or e-Hidden curriculum.

It is important to know the reasons and results of using mobile phone at schools and especially in classes to apply formal education curriculum effectively and efficiently. In this respect, it is important to know and take into consideration m-Hidden Curriculum whose resource is mobile phone to achieve success with formal curriculum. m-Hidden Curriculum which is a system of beliefs, attitudes, habits and values created through mobile phone by students, whether they are aware of this or not, matches Porteli's definition [10] " hidden curriculum formed by students". Apart from students, administrators, teachers and other employees also have roles to play to produce hidden culture in the school. However; this research has focused on m-Hidden Curriculum created through mobile phone by high school students. This is

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because there is no such kind of research in literature. In this respect, it can be expected from this research, which aims to find out the purpose of using mobile phone as a high school students' hidden culture component in school and classroom, to contribute to literature.

II. METHOD

A. Population and Sampling

The population of this research is the students enrolled at state high schools in the cities of Elazığ and Malatya in 2013-2014 educational year. The sampling consists of 316 students, who could be reached from among the sampling. The distribution of students according to demographic variables is seen in Table I.

TABLE I. THE DISTRIBUTION OF STUDENTS INVOLVED IN THE SAMPLING ACCORDING TO DEMOGRAPHIC VARIABLES

Variables		N	%
Gender	Female	162	51.3
	Male	154	48.7
Having GSM	Yes	284	89.1
	No	32	10.1
Economic Condition	High	11	3.5
	Medium	265	83.9
	Low	40	12.7
Learning Domain	Science-Maths	186	58.9
	Social Domain	95	30.1
	Foreign Language	35	11.1
	Total	316	100.0

B. Analysis of Data

The data in this study, which was carried out in descriptive survey model, were obtained through likert-type questionnaire form developed by the researchers. The questionnaire items were graded as five point likert items; 1. Totally disagree (1.00-1.80), 2. Disagree (1.81-2.60), 3. Undecided (2.61-3.40), 4. Agree (3.41-4.20) and 5. Totally Agree (4.21-5.00).

Mean, standard deviation, variance analysis for parametric (homogeneous) items and "t" test were used in the study for the analysis of data. KWH and MWU were used for nonparametric items. The significance level for this was accepted as p= 0.05.

III. FINDINGS

A. Findings on Students' Aim of Mobile Phone Use

When Table II is examined, it is observed that students use mobile phones in silent mode in the class ($\bar{x}_{10}$=4.20). Students use mobile phones for the following purposes: communication ($\bar{x}_1$=4.52), listening to music (x_8=3.92), messages ($\bar{x}_6$=3.57), sharing the announcements ($\bar{x}_{12}$=3.65), education ($\bar{x}_2$=3.55), taking photos ($\bar{x}_{11}$=3.50) and connecting to social networks ($\bar{x}_9$=3.48).

Students think that mobile phones are harmful for health ($\bar{x}_4$=3.45); however they are undecided whether mobile phones provide them with status and respect ($\bar{x}_3$=3.28), lead to discipline problems ($\bar{x}_5$=3.14) and they use them to play games ($\bar{x}_7$=2.80).

TABLE II. THE VIEWS OF STUDENTS ON MOBILE PHONE USE

Item no	Opinions	$\bar{x}$	S
1.	I use mobile phone for communication with my friends at school.	4.52	.85
2.	I use mobile phone for educational purposes at school.	3.55	1.31
3.	Having a mobile phone means having a status and respect.	3.28	1.38
4.	Mobile phone is harmful for health.	3.45	1.46
5.	Using mobile phone in class leads to discipline problems.	3.14	1.58
6.	I use mobile phone for messages with my friends at school.	3.57	1.24
7.	I use mobile phone to play games at school.	2.80	1.47
8.	I use mobile phone to listen to music at school.	3.92	1.22
9.	I use mobile phone to connect to social networks at school.	3.48	1.41
10.	I use mobile phone at silent mode in the class.	4.20	1.25
11.	I use mobile phone to take photos at school.	3.50	1.59
12.	I use mobile phone to share the announcements at school.	3.65	1.48

Significant differences were found among students' views in 6th [(t_{314}=3.847; p=0,000)], 8th [(t_{314}=2.389; p=0,017)] and 10th [(MWU=10482.000; p=0,005)] items in terms of gender. Female students favour the 6th item ($\bar{x}_1$=3.83) more than male students ($\bar{x}_2$=3.30) and the case is no different in the following two items where female students favour 8th item ($\bar{x}_1$=4.08) more than males do ($\bar{x}_2$=3.75) and 10th item (MR_1=170.80) again more than male students (MR_2=145.56).

There are significant differences among student views on 3th [(MWU=3772.500; p=0,008)] and 9th item [(t_{314}=2.864; p=0,004)] in terms of possessing a mobile phone. Thus, students with mobile phones (MR_1=162.98) favour 3th item more than the ones lacking mobile phones (MR_2=118.77) and again they favour 9th item ($\bar{x}_1$=3.55) more than the ones without phones ($\bar{x}_2$=2.81).

Significant differences were found among students' views on 6th item [($F_{2\text{-}313}$=3.311; p=0,038)] in terms of economic condition. As a result of the LDS test, students having a medium level economic condition ($\bar{x}_2$=3.63) favour the 6th item more than those with low level economic condition ($\bar{x}_3$=3.12).

There are significant differences among student views on 2th [($F_{2\text{-}313}$=3.425; p=0,034)], 3th [($F_{2\text{-}313}$=6.521; p=0,033)] and 8th [(KWH=12. 206; p=0,002)] items with respect to learning domain variable. According to Scheffe test, Science-Maths students ($\bar{x}_1$=3.69) favour 2th item more than the students in Social domain (x_2=3. 25). Also, Science –Maths students (x_1=3.37) favour the 3th item more than the ones in Foreign language domain ($\bar{x}_3$=2. 71). The significant difference on the 8th item is between the groups 1-2 [($MWU_{1\text{-}2}$=7371.500; p=0,016)] and 1-3 [($MWU_{1\text{-}3}$=2259.000; p=0,002)]. Thus, Science-Maths students (MR_1=148.87) favour the 8th item more than

students in Social domain (MR_2=125.59) and again Science-Maths students (MR_1=116.35) favour it more than the ones in Foreign Language domain (MR_3=82.54).

IV. Discussion and Results

89.1 % of the high school students participating in the research have mobile phones and use them in the silent mode in class, though it is forbidden. Considering this, it can be argued that mobile phone is a new informal education phenomenon and class variable in Turkey.

The high schools students, participating in the research, use mobile phones for communication with friends, listening to music, sharing the announcements, messaging, education, taking photos and using social networks. All others, except education, can be related with informal messages, attitudes, values and habits, they form and share (reproduce) among themselves as a result of their daily experiences. It is certain that these stimuli result in social learning in these students. These stimuli are informal in terms of content because, first of all, it is illegal to use mobile phone in class. Therefore, the message and image contents, sent or shared via mobile phones, have not been legitimized by official education authorities. Even, busying himself/herself with mobile phone in class is considered among undesirable behaviors [11], [12]. In this regard, the learning outcomes, occurring through officially unrecognized and unforeseen content and ways, are considered hidden learning. The content that is realized by means of mobile phone and the program that initiates the learning, which is informal-based in terms of method, can be called Mobile-Hidden Curriculum (m-Hidden Curriculum). This program, since the inputs of the curriculum in question are student-based, can be named as m-Hidden Curriculum, which is established by students. In today's world, when messages, attitudes, values and belief systems rapidly spread and seriously affect people beyond official discourse, it is not surprising that m-Hidden Curriculum builds attitudes, beliefs and values. Even research shows that out-of-school (maybe foreign factors) e-factors are the most important factors in introducing values [13]. Therefore, it seems that nowadays mobile phone messages will perform what stories, epics and myths performed in the schools in the past. So teachers' task should be searching for the ways to utilize new phenomena in such a way that they will support formal education, instead of vainly opposing them.

According to the research, high school students do not see mobile phones as status indicators, do not play with them, and accept that they are harmful for health.

Furthermore, it is identified that female students are more likely to send text messages and to listen to music on their mobile phones at school. The reason for this situation may be cultural. Even if it has undergone some changes in recent years, there is a male-dominant culture in Turkey. When females have conversations or listen to music publicly, it is not very well received. Therefore, female students may prefer to send text messages and to listen to music on their mobile phones in private. It is also possible to associate that female students adopt the item "I use my mobile phone in the classroom in silent mode" more to the mentioned cultural situation.

In the research, it is found out that students who have mobile phones see the devices as status accessories and use social networks much more than the ones who do not have them.

When student opinions are compared in terms of economic conditions variable, it is recognized that middle-class students use mobile phones for messages much more than those who come from lower economic background. This finding is understandable in Turkey where communication via mobile phone is not cheap.

According to the learning domain variable, students in Science-Math domain use mobile phones for educational purposes at school more than the students in Social domain. This finding may be related to the fact that Science-Math domain is more promising for those students who are nominees for university. It is also possible that Science-Math students may be more aware of the pedagogical benefits of mobile phones [14]. In addition, it is expected that students in the field of Foreign Language use mobile phones for educational purposes much more than the others [15] because it is widely known that mobile phones contribute a lot to foreign language education [16].

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