GADGETS, SCREENS, WELL-BEING, AND EFFECTIVENESS IN HIGHER EDUCATION

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Abstract

"The king is dead. God save the king!" Is the RAM the new king of storage in favour of the old paper'? Is it the new leader in the kingdom of learn and knowledge? Students and teachers alike tend to use digitalization and its functions with the purpose of updating and streamlining study materials in the current era (especially after the pandemic). The belief that information and formal higher education are supported by static tools in order to create the idea of materiality and 'staying put' is heavily being challenged by the idea of moving and 'flowing'. This case study is meant to quantify and analyse students' familiarity and preference of various gadgets and screens in their study. It is also partially seeking to observe their effect on health/well-being in relationship with data-and-knowledge-storage (DKS).

Keywords: *digitalization; static; flowing; visuals; higher education; well-being.*

1. Introduction

As strange as it may have appeared some time ago, bringing together the ideas of people's well-being and technology no longer seems to stay at different poles. Of course, gadgets have been originally created to improve human life by helping with our domestic chores. Using devices in education turned out to be a last resort when the pandemic started and a necessity soon after its beginning. We are witnessing a non-subject, a circumstance unwillingly playing the role of professional marketer who creates a necessity humans did not look at before. This being said, we cannot overlook its effects – we are not here to criticize devices, nor to blindly embrace them.

The topic of this work is not new, either among other researchers' work or my own academic interests, but the idea of doing this particular case study came to me while I was teaching a class. I was in a classroom where each student could use a desktop screen to have access to the material I had uploaded, yet most of them preferred their mobile screens. I noticed this did not happen in a singular class. This obviously triggered many more questions in my head, such as: how well did students connect with the information on such a small screen? how powerful the learning process was when students were striving to find the right page, although they were numbered? how well could they concentrate on the particular task they had? did they have distributed attention? or maybe multi-focused attention? was this using more effort and energy on their part? what effect would it have on a long term? and so on. Concerns on new education technologies and their impact upon students' well-being have occurred in analysis and

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theory for some time (Garcia-Mas et al, 2020; Lazarus et al, 2021; Lorusso et al, 2021) and are still being researched nowadays (Dalingwater et al, 2022; Muench et al, 2022).

2. Case Study

2.1 Methodology

The case study is based on a questionnaire I designed with the purpose of making students becoming aware of a practice or custom they seem to be taking for granted or at which they look as a matter-of-thing activity. Additionally, a significant purpose is to find out what is the percentage of first-year students who prefer using small phone screens in favour of anything else in their study. The questionnaire is designed in fifteen mixed questions, both open and closed. The questions are aimed at guiding the respondents towards the maintaining the topic of the study but they still offer enough freedom for personal answers. I received answers from sixty-two respondents but I intend to extend and improve the first version of the questionnaire after some time.

The choice of first-year students is based on the fact that they have recently graduated from high-school, which they spent mostly during the pandemic and so, have been in a situation of almost complete isolation from face-to-face education, followed now by complete on-campus study, with new colleagues, teachers, and a chance to return to 'how it used to be'. We, as teachers, need to understand the way in which our new-coming generations of students understand education and the world, in general. Teaching languages involves all kinds of communication, verbal and non-verbal, it is a complex process that includes – I still believe that – human rapport.

Each question will be analysed separately as well as in relationship with other questions in the questionnaire. Questions do not include more than one specific key-word or key-idea as they are targeted towards answers that are not influenced by side words/ideas. However, the latter are not overlooked, being included in separate specific questions that follow the first ones.

2.2 Analysis of answers

The first question - **How important do you consider *study* in your life?** - focuses on students' opinion on their priority activities in their lives, one of them being study. The question purposefully does not include the word 'education', but 'study', because 'study' is more specific a word and points more to their personal involvement in their education. As there have been even public debates on the topic of higher education or theoretical education versus professional schools among youngsters their age, I considered it important to include among the potential answers from which to choose one that puts out loud an attitude more or less informally embraced by quite a few students: this answer says 'It's not a priority, I only need a diploma' and has been chosen by two out of 62 respondents – that makes 3.3%. Only 34.4% think study is crucial in their lives, while a big majority of 62.3% (38 respondents) admit that 'it's quite important.' This answer is meant to point at options for self-improvement and career-making other than just study. It tells us that although there are other open options, first-year students do not consider putting study aside.

The next question – **Do you use your *phone* in your *study*?** – brings together the idea of study in relation with smart phones. It is no longer a surprise that smartphones are the ultimate devices that do not leave our side, even in the classroom. Accessing the university platform seems to be preferable on their phone than on desktop screens available in classrooms. The question does not refer to screens yet, as it aims at admitting first that the phone has become a tool for study. 60 out of 62 respondents answered the question affirmatively, while two said no.

In the next stage, I wanted to quantify the frequency with which students use the phone in their study, so I included four potential answer.

Fig. 1. How frequently do students use their mobile phones in their study?

62 de răspunsuri
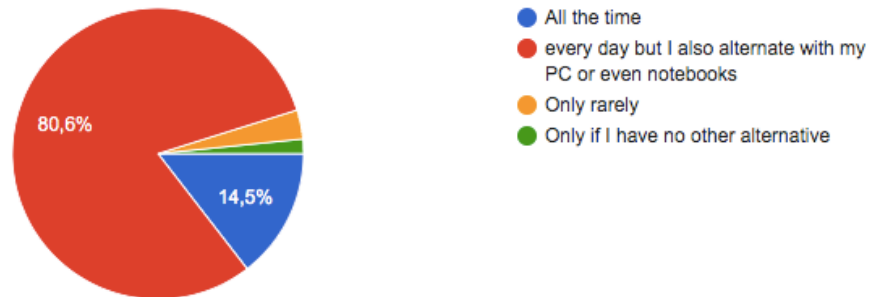
The first (blue) and last (green) options represent the extremes, as I tried to find out how many respondents really love or hate using it. Nine students admitted they use it all the time, while only one said 'only if I have no other alternative.' Two other students said they used it very rarely and the remaining 80.3% (49 respondents) answered 'every day but I also alternate with my PC and notebooks'. The third (yellow) and fourth (green) options could be interpreted as recurrent so I consider summing up the answered which result in 3 respondents, while those saying "yes", either totally or partially, make up a majority of 58 respondents.

The findings of the first three questions above are very useful in the interpretation of those on question number #4, which focuses on the respondents' use of mobiles in comparison to books and notebooks in the *pre- and post-pandemic contexts* (taking as reference point the year 2020). Based on my empirical research and personal observations, this custom, or choice, or behavior has been largely influenced by the impossibility of face-to-face communication and paper study material starting with 2020. The starting point of mobiles use as study tools among respondents seems significant. One potential answers gave respondents the option to admit they used it more before the pandemic (3 respondents said yes). The great majority, 58.3% of respondents said they used it more since and during the pandemic, yet 36.3% said they actually used mobile phones for this purpose both before and after the pandemic, thus admitting that there has been a certain trend among students and possibly teachers of replacing traditional paper study material with the digital one. This paper, intended to include data that would make up only the first stage of a more complex study, has mainly findings related to the students' awareness of preferences for devices in their study while touching upon their well-being in connection with these tools' usage. A second-stage questionnaire is meant to approach more closely the students' awareness of this well-being and of its importance both in their specific educational efficiency and in their being-in-the-world.

In the following part, the study aims at taking the direction towards a certain preference of the mobile phone screen by students in front of other, even bigger, screens. I found out that the number of respondents who still prefer the mobile screen is slightly higher than that of respondents who do not: it is higher by 7 respondents. The reasons for this preference include three options – I call the 'the three Fs'. The first is **familiarity** – focusing on the respondents' customary practice to use mobiles for every necessary activity, including study – and it accounts for 55.7% of the total respondents. Admitting familiarity as the main reason for preferring the mobile screen translates into a students' habit and convenience rather than into a special quality that mobiles might have over other types of study material/tools.

The second F - **functionality**, focusing on the respondents' use of the mobile functions, and the third one - **facility**, focusing on the advantage of storing all important documents on one device only, sum up 44.3% of respondents, each of the last two Fs accounting for approximately 20% of the total respondents.

Functionality and facility look at the students' ability to use technological devices' functions and easiness of finding various necessary documents and data.

The three options included in the answers for question #5 therefore look both at the tool's technicality and the personal organizational skills of respondents. Another option, which is not included in the questionnaire but could be added in a second version of it, could look at the physical advantage – let's say its practicality – since the mobile is much smaller and less heavy than a tablet, a laptop or a notebook to carry along, and can store enough study material for a one-day classes at least. All three Fs make up a synchronized platform supported by one mini friendly-user type of PC.

**Fig.2. The reason for students' preference of the mobile screen in their study is due to:**
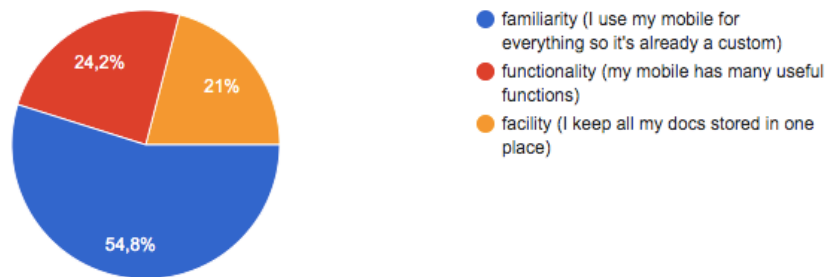
However, irrespective of the reasons for their preferring the mobiles, I was interested in finding out if, after using a certain digital study material, students kept or deleted it and for how long they did. Slightly over 44% of respondents said they stored material for one year, almost 20% stored it for one semester, 13% did for only one class, and 23% of respondents said they did not, which made me assume they either preferred printing out digital materials or they shared one screen per two students. This last category of students (not keeping digital material) may also delete digital pages one by one, immediately after using them, or they may combine with those who do only for one class, thus making a total of 34% of respondents for whom digital study material was not necessary enough to be stored. However, a greater number of students store it long enough to have it at hand during their study. This question, question #6 (*Do you store study material in your phone?*) may be also backed up by an extra one that looks at other devices and platforms where they do or are interested in storing for later returns.

*2.2.1 Digital documents, mobile screens and visuals*

The next four questions (questions #7, #8, #9, and #10) look at the use of visuals in the respondents' study or in other activities because of two reasons: the first is based on the collective trend – therefore among students as well – of pictures and videos: posting, watching, liking, and so on. The second reason is that visuals are very applicable on smart phones and prove a helpful teaching instrument. 34 respondents are convinced of the visuals' utility and 26, although they do not reject them, they still do not find them a priority. In version 2.0 of the questionnaire, respondents will be asked if they used visuals in their classes before, what kind of visuals and how frequently they did.

Fig.3. Questions #7 and #8

Do you find visuals (photos and videos) useful in your study?
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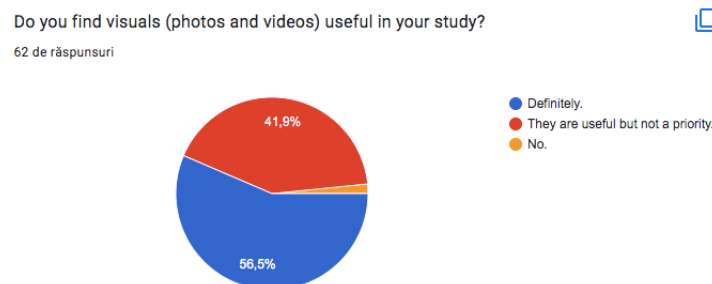
Do you usually watch videos that contain interesting info for you?

62 de răspunsuri
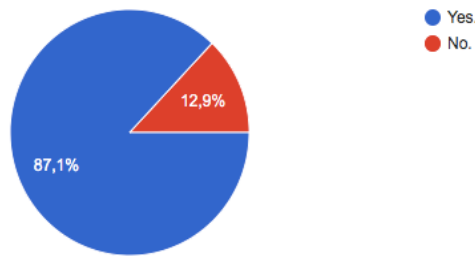
In order to find out more about the respondents' custom of watching videos containing interesting information not only during classes, but also outside them, students were asked to answer question #8 – *Do you usually watch videos that contain interesting info for you?*. A great majority of 53 out of 62 respondents said yes. The platforms they use for this are YouTube with over 40 respondents, followed by those who answered Google and google classroom (seven respondents), Tiktok, Twitter, Twitch, www.ase.ro. (five students – either all platforms or separately), three students also included Instagram, while other three students said they did not watch videos for information.

The answers related to these questions are linked to the next one, in which visuals and the study of foreign languages such as English are brought together. 39 students said visuals are preferable in studying languages, 20 students are not sure, and 2 students plainly said no. The findings are necessary for the teachers of foreign languages as a basis for their choice of including visuals – and to what extent – in their classes.

Fig. 4. Students' preference of visuals in study

Do you consider visuals preferable in the study of foreign languages (like english)?

62 de răspunsuri
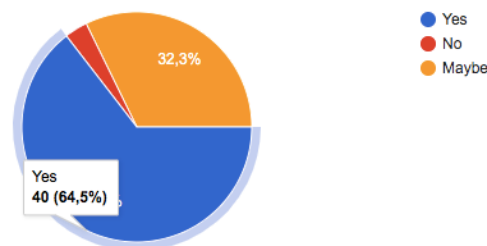
2.2.2 Emphasis on health and well-being

The next question looks at the respondents' health and well-being from the perspective of a high-degree usage of device screens in their professional and personal lives. an important 23% said that they themselves noticed that using screens has become tiring and 6.6% admitted they even started wearing glasses. 31.1% find it tiring only sometimes and admit they would return to old school material, while an important 39.3% simply said no, considering this a part of their lives. 45.9% of respondents then said they were worried about the impact of regular use of screens in their health, followed by 29.5% who were not, and by another 24.6% who were in between, saying "maybe".

Fig. 5. Do you find the regular use of screens in your study and work tiring?
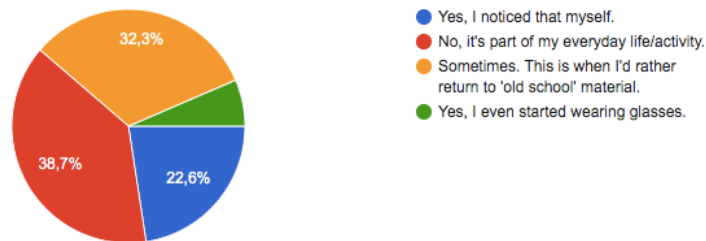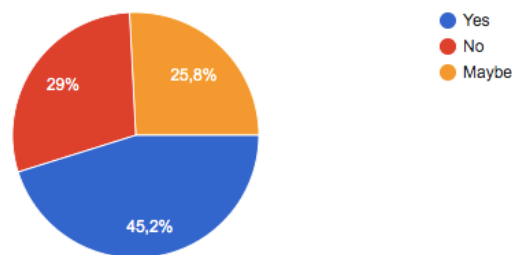
62 de răspunsuri

- Yes, I noticed that myself.
- No, it's part of my everyday life/activity.
- Sometimes. This is when I'd rather return to 'old school' material.
- Yes, I even started wearing glasses.

32,3%
38,7%
22,6%

Fig. 6. Are you worried about the impact of regular use of screens in your health?

62 de răspunsuri

- Yes
- No
- Maybe

29%
25,8%
45,2%

The last question – *If you think about your educational effectiveness, how do you see it being accomplished? (think of types of didactic material of your choice)* – looks at the accomplishing of educational effectiveness. This is an open question, respondents being able to answer freely. One respondent replied he had not thought about this issue, two didn't know what to answer (one said he did not understand the question), and a couple of answers were irrelevant for the question. 15 respondents mention mainly written material, including books and worksheets, practice exercises, portfolios and so on. Most students would rather combine written and digital material, including PowerPoint presentations, videos and even listening activities. One respondent admits the effectiveness of digital material but is worried about its effect on health. Others consider student assessment and interactive projects as being more effective without specifying the format (written or digital), and others emphasise the importance of practicality over theory.

3. Conclusions

In conclusion, students' use of mobile phones in their study has already become a custom they are not ready to leave behind. The combination of digital study material on phone and traditional paper may be just a temporary stage in a longer process whose final result may be the embracing of the digital in students' education altogether. At this point, I cannot state that this is happening for real or it is just a trend. It does have a certain effect though in our teaching and learning process as we are concerned both about their efficiency in the higher educational system and about the students' well-being. Well-being translates into satisfaction and lack of frustration, and therefore in a more dedicated attitude towards study. Of course, the tools used in this process are not the sole influencing factor but it could be said to be a sort of front-desk connection between the education-suppliers and the educational process receivers.

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