It seems to have a hold on us: social media self-regulation of students

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Abstract. Social media plays a positive role in the lives of students by providing social networking, communication and information functionalities. However, social media also acts as a distraction, resulting in multi-tasking between social media and studying which leaves fragmented time intervals for focused concentration. Self-regulation is emphasized as an essential skill necessary to manage the use of social media when planning or performing learning activities. In this paper we determine whether students are aware of the need for social media self-regulation behavior during their studies and if so, which measures they take. Through interviews with 50 students, we analysed the self-reported self-regulation behaviour of students using Zimmerman's cyclical model of self-regulation. Students are aware of the distractive nature of social media and make and implement plans to limit it. Some of these include the physical removal of the phone, using technological functions to limit access (e.g. removal of the battery, uninstall the apps) or sheer will-power. However, what is clear from the data is the strong 'pulling' power of social media, making the implementation of these plans difficult. Reasons for this phenomenon include fear-of-missing-out (FOMO) and the habit-forming nature of social media and mobile devices. Another factor is the two 'worlds' of social media as perceived by students: it can be used both academically and socially. How to ignore the one and focus on the other? We emphasise the importance of awareness amongst students and lecturers regarding the need for self-regulation of social media use as well as strategies to manage it.

Keywords: social media self-regulation, cyclical self-regulation model of Zimmerman, social media habit, social media distraction, learning activities

1 Introduction

Social media (SM) refers to online tools available on mobile or desktop devices, which allow people to interact through texting, phone calls, sharing or posting photos, videos and audio clips. Well-known social media platforms include Facebook, Instagram, LinkedIn, Twitter, WhatsApp, YouTube and Snapchat. The affordances of social media result in its widespread adoption in both developed and developing countries. In South Africa, for example, Facebook is used by half of people older than 13 [1]. Young people in particular seem to embrace social media. Lau [2] reports that social media usage of young adults in the USA has climbed from 12% in 2005 to 90% in 2015. In a

study done in South Africa [3] age groups 18 – 24 and 25 – 34 were shown to be the largest user groups of Facebook in the 2016 – 2017 time period.

Educators and students alike use the opportunities provided by social media to their benefit in learning environments. Although mostly incidental and informal, some of the positive uses include the sharing of resources, access to course material, an unofficial substitute for a learning management system, increased collaboration between students and improved communication with lecturers ([2], [4]). On the downside, social media can be distracting [5], 'luring' students away from academic engagement and deep concentration [6].

To advise students to simply focus on their studies, does not seem to have the desired effect, as some recent studies point towards the addictive and habit-forming properties of social media ([7], [8]).

Self-regulation is mentioned as a necessary skill for students to combat the distractions presented by social media [9]. Baumeister and Vohs [10] define self-regulation as the capacity of humans to alter their behavior. Research suggests that the habitual, embodied nature of social media use makes self-regulation difficult and that teachers and lecturers should help students in this process [6]. One example is where teachers implement an 'open/close' policy where students get permission to use technology only during certain parts of the lecture. Aagaard [6] found, in a study focusing on off-task technology use in class, that students (even if some carry on with mobile phones under the desks) welcome these measures. In his study Aagaard (ibid.) indicated that students use similar measures to self-manage their technology use in class – it varies from closing a tab, quitting a browser to closing the lid of the laptop. As a result of this study, Aagaard (ibid.) contemplated students' self-management of technology distractions outside the classroom e.g. when in a café with friends, or around a dinner table. Similar to Aagaard, we are interested in how students manage their social media use both in and out of the classroom. To our knowledge there does not exist any research with this specific focus.

The purpose of this paper is therefore to investigate the self-regulative behaviour of students towards social media use during learning activities (i.e. to study, to attend lectures, to complete academic work) in formal and informal settings. We conducted interviews with 50 students at a South African university and analysed the interview data through the lens of self-regulation as understood by Zimmerman [11].

In the next section we elaborate on the distracting properties of social media, applicable to university students. Section 3 gives an overview of the cyclical self-regulation model of Zimmerman. Section 4 describes the research methodology after which the analysis and findings of the study are discussed.

2 Social media as habit and distraction

Researchers ascribe the irresistible nature of social media to varying factors. On the one hand, social media provides highly effective ways for communication, information-seeking and forming social connections. Wang, Lee and Hua [12] consider these uses as normal and harmless. However, these activities become habits which can eventually

lead to irrational behaviour or excessive use. With the intensification of habit, users focus on the emotional rewards gained, at the cost of other longer term goals [5]. Nadkami and Hofmann [13] list some of the emotional rewards provided by SM (in their case Facebook) as a sense of belonging and an opportunity for self-presentation. Another concept closely related to excessive use of social media is the fear of missing out (FOMO). Przybylski [14] describe this as " the pervasive apprehension that others might be having rewarding experiences from which one is absent, … FOMO is characterized by the desire to stay continually connected with what others are doing." (p.1841) The craving for this emotional gratification and the need to know what the 'group' is up to, can lead to social media dependence.

Another factor contributing to social media dependence is the habit-forming nature of IT devices itself ([6], [7]). Oulasvirta et al. [7] describe the checking habit formed with mobile devices: the almost constant visual inspection of the content of the device. The content includes social media, e-mail, news apps and so on. Aagaard [6] argues that habitual use of IT (including social media) is 'deeply sedimented' and embodied to such an extent that the user is not aware of performing them. Aagaard (op.cit:91) stated that "the process of logging onto Facebook has become embodied in ones fingers and happens almost automatically." As such users have a "pre-reflective attraction towards certain websites" (e.g. Facebook) implying that it does not involve rational choices or a reaction to stimuli (op cit., 94).

Whatever the reasons for social media's pervasive use, the fact is that it can distract students from focusing on their academic work with possible adverse effects on their studies. A number of studies focuses on this topic linking social media to concepts like cognitive distraction [15], multitasking ([5], [2]), off-task use of technology [6], and media induced task-switching [16]. These studies are in agreement that human cognitive resources are limited and placing competing demands on cognition can lead to decreased task performance [17]. In fact, Lau [2] found that social media multitasking has a negative effect on students' academic performance.

In a study considering the effect of students' self-regulation, personality traits and trust on the use of Facebook, Rouis, Limayem and Salehi-Sangari [9] found that students who are more self-regulated, control their use of social media more effectively. David et al. [17] found a positive correlation between deficient self-regulation behaviour and excessive mobile phone use at the expense of focusing on more important tasks.

It is clear that being a student in the 21st century puts great demands on self-regulation skills. But what exactly is meant with self-regulation – particularly related to learning? The next section elaborates on existing research on the concept of self-regulation and learning.

3 Self-regulation and learning

Panadero and Alonso-Tapia [18] consider self-regulation related to learning as "the control that students have over their cognition, behaviour, emotions and motivation through the use of personal strategies to achieve the goals they have established"

(p.450). Zimmerman [11] explains that self-regulation of learning involves not only the application of knowledge but the self-motivation, self-awareness and skill to know when to apply the knowledge. Baumeister and Vohs [10] highlight the role played by motivation in self-regulation. They argue that there are conflicting motivations at play during self-regulation and that "self-regulation is often employed to restrain motivations, but the motivation to self-regulate is often crucial to the success of engaging in self-regulation" (op cit.: 116). According to Zimmerman [11], good self-regulation skills are largely dependent on learners' perceptions of their efficacy regarding a subject as well as their interest in the subject. Zimmerman considers self-regulatory processes as taking place in a cycle of three phases: 1) the forethought phase, 2) the performance phase and 3) the self-reflection phase. The cyclical nature of the model shows the importance of including feedback from previous efforts in changing strategies for new tasks. Panadero and Alonso-Tapia [18] provide a thorough overview of the cyclical phase model of Zimmerman in appreciation of its important role in scientific literature. The three phases of the model, (see Figure 1) as explained by Zimmerman [11], Zimmerman and Moylan [19] and Panadero and Alonso-Tapia [18] are discussed in what follows below:

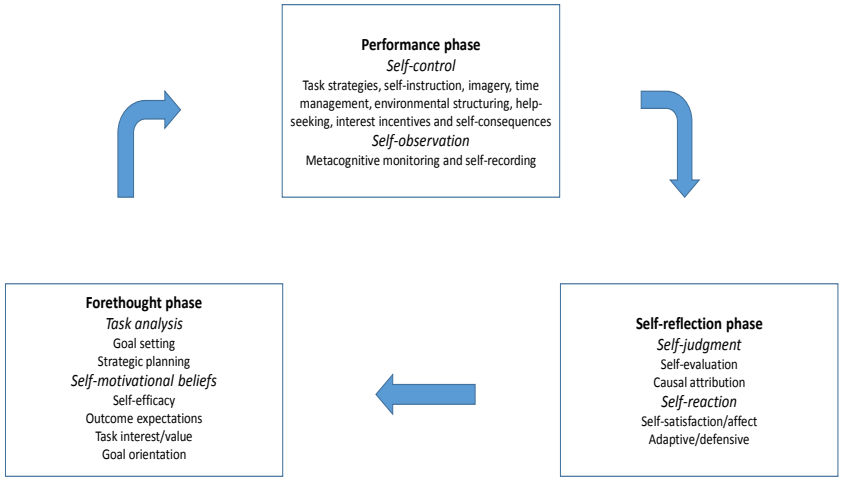

Fig. 1. The cyclical phase self-regulation model of Zimmerman [19]

3.1 The forethought phase:

This phase is divided into two processes: *task analysis* and *self-motivation*. Task analysis comprises two activities: *goal setting* and *strategic planning*. Studies show that students showing effective self-regulation behaviour start off by setting goals for themselves and devising strategies to attain that goal. Students take into account the assess-

ment criteria against which the performance will be assessed. The desired level of performance also plays a role [18]. However, these strategies will be to no avail if students do not believe in themselves. *Self-efficacy* forms part of self-motivation. Self-efficacy refers to a person's beliefs about his/her capability to perform a task. The *outcome expectations* of students also play a role in motivation: what do they expect the success of a learning task to be? Other ingredients of self-motivation are *intrinsic interest* and *learning goal orientation*. Both these concepts refer to a student's perceived intrinsic value of the specific learning task as well as the general goal of the process of learning (i.e. focus on developing competence rather than focusing on short-term performance rewards) [11].

3.2 Performance phase:

This phase refers to the self-regulative processes during the learning process itself. These processes are divided into two classes: *self-control* and *self-observation*. Typical self-control processes include *imagery, self-instruction, time management, structuring the learning environmental, help seeking, incentives to maintain their interest and self-consequences*. Visualization of a problem or concepts and drawing sketches are examples of imagery, whereas describing to yourself (can be 'aloud') how to approach the task can be seen as self-instruction. A learning environment structuring activity can be to make sure that the room where you study is quiet and away from distracting noises or not sitting next to a class mate who talks during class [18]. Help-seeking is a learning strategy only if students are not trying to avoid the activity but are willing to learn from the answer. Incentives to maintain interest and self-consequences refer to self-directing message about the importance of an activity and self-praise and self-rewards.

Two important self-observation processes are *self-recording* and *self-monitoring*. As an illustration of self-recording, consider a student comparing the time he/she takes to study a topic early in the morning to the time it takes to study a similar topic late at night. In this way a student learns when the ideal time is for him/her to study that type of topic. Self-monitoring refers to the self-assessment of the quality of the process followed [18].

3.3 Self-reflection phase:

The two major processes in this phase are *self-judgment* and *self-reaction*. Self-judgment includes *self-evaluation* that involves the comparisons made by the learner of his/her own performance against some standard. Another important component of self-judgment is to look for causes of one's errors or misunderstandings. Learners who believe that the cause of the errors is an inherent inability to comprehend the subject matter will become despondent, whereas learners who believe that the cause of the errors can be attributed to wrong strategies will be motivated to try different approaches. Zimmerman refers to this process as *causal attribution*.

Self-reaction in the self-reflection phase involves feelings of *self-satisfaction*. An increase in self-satisfaction leads to positive affect enhancing motivation regarding the learning experience. On the other hand a decrease in self-satisfaction may hinder the

learning process. Learners may show *defensive responses* in this phase by avoiding learning challenges. Learners can also, in this phase *adapt* their strategies to increase the effectiveness of their learning process.

3.4 The cyclical nature of self-regulation

The cyclical nature of the self-regulation process refers to the influence of the different phases on each other. So for example, self-dissatisfaction in the self-reflection phase lead to lower self-efficacy in the forethought phase. In fact, it was shown that significant correlations exist between learners' use of processes in the forethought, performance and self-reflection phases [11].

4 Research Methodology

This study follows a qualitative research approach. The researchers entered the research situation with no universal truth [20] and aimed to understand and interpret the social phenomena, students' use of social media and the influence on their learning activities, that occurred through their own frame of reference.

Data was collected from 50 students at a major South African University. The researchers approached random students entering the IT building on campus over a few consecutive days to collect the data. The students were interviewed using a semi-structured questionnaire and all interview data was transcribed by the researchers. The semi-structured questionnaire focused on four main areas: (1) type, frequency of and reasons for social platform used, (2) whether social media is distracting, (3) the perceived impact of social media on learning activities and (4) how they manage it.

The researchers employed thematic content analysis as the data analysis technique for this study. Thematic Content Analysis (TCA) is a data analysis method used to analyse written, verbal or visual messages [21]. Sub-themes were identified belonging to the first three main focus areas of the questionnaire whereas the cyclical self-regulation model of Zimmerman was used to analyse data regarding the fourth main area (management of social media) in a deductive way.

The following section presents the findings.

5 Data Analysis and Findings

We present the findings in two sections: the first section reports on demographics of the respondents and their social media usage whereas the second section presents the results of the data analysed according to Zimmerman's Self- Regulation Model [19].

5.1 Demographics and Social Media Usage

Demographics. The only demographics recorded were gender and age of respondents. Out of the 50 respondents, the majority (58%) of students were male. 21 females (42%)

completed the interview. 26% of the respondents were between 16-19 years of age, 54% of respondents were between 20 – 23 years of age and the rest (20%) of the respondents were between 24 – 27 years of age.

Social Media Platforms Used. The data indicated that the most common social media platform among the respondents was WhatsApp which is used by 49 of the 50 (98%) of the respondents. The second most frequently used platform was Facebook that was used by 37 of the 50 or 74% of the respondents. 32 (64%) of the respondents stated that they used Instagram, 20 (40%) of the respondents stated that they used Twitter, 19 (38%) used YouTube, 9 (18%) used Snap Chat, 5 (10%) used LinkedIn, 3 (6%) used Tinder and 2 (4%) used Google +. Respondents did use more than one social media platform.

Frequency of Social Media Usage. A word count of all the words used by respondents for a specific time period indicated that the word "daily" was used 25 times within the responses. The word "*hourly*" was used 24 times, "*every minute*" used 14 times, "*all the time*" used 7 times, "*weekly*" used three times and "*every second*" used once within the responses. Judging from these numbers, we can see that majority of the respondents are accessing their social media platforms daily and even hourly.

Purpose of Social Media Usage. The data indicated six purposes of social media by the respondents.

(1) Communication: Respondents stated that they used social media for communication purposes. This theme was supported by statements like: "Mostly to talk to my friends", *"Basically, communicating with other people, making sure my voice is heard and so that I can help you or send a message, just communication basically.", "It's for communicating, I mainly use WhatsApp that is generally the way that everyone communicates these days.".*

(2) Entertainment: This theme was supported with statements like: "*I guess it's from entertainment mostly and you can alleviate boredom.*" and "*Just look at people and laugh at them and for entertainment I guess*."

(3) Education: The respondents stated that they used social media for educational purposes. For example, "*Nowadays it's mainly for academic purposes because we have class groups to discuss what's happening…*",

(4) "*Keeping up to date*": This theme was supported with statements like "*…to keep up to date as to what is happening around the world*",

(5) Business: "*Well for example with LinkedIn I look for potential clients and look at which areas I can expand in to the market"* Some indicated that this was their main purpose for using social media

(6) Alleviate boredom: "*I guess its from entertainment mostly and you can alleviate boredom"*.

The data has indicated that the respondents used social media for more than one purpose. For example the following quote speaks to the business, entertainment, communication and education themes: "*Well for example with LinkedIn I look for potential*

clients and look at which areas I can expand into the market. For Facebook, I use it for entertainment and for keeping in touch with long distance family. YouTube, I use for watching educational videos and watching football highlights".

Inclination to "check" social media. The majority of respondents indicated that they feel inclined to constantly "check" their social media services. This was supported by the following statements: *"Yes, I feel, if I don't check it at least once an hour or once every two hours. I do feel inclined to check my social media so I can stay updated."* and *"Yes, sometimes I feel like I have to check what people are up to"*. Table 1 illustrates the reasons with supporting statements of why students feel inclined to constantly check there social media accounts. This includes (1) boredom and (2) the need to keep up to date.

Reason for checking	Quote
Boredom	*"No not really, when you are bored or when I'm following something or when I've been busy and I want to take a break or take a walk then I'll log onto social media"* *"Yes, when I am bored. I feel like I get bored a lot and social media keeps me busy".*
Keep up to date	*"I do feel inclined to check my social media so I can stay updated",* *"Yes, because I need to be updated with what's happening around me"* *"I think it's a norm these days to frequently check what's going on in the world".*

Table 1. Reasons for "checking" social media accounts

Eight of the respondents indicated that they do not feel an inclination towards checking their social media services constantly. This was supported by the following statement: "*No, I just check it whenever I want or whenever I can*".

One student out of the 50 responses stated that he "sometimes" feel the inclination to check their social media services.

5.2 Self-regulation behavior

As discussed in section 2.1, Zimmerman's cyclical Self-Regulation Model consist of three phases: forethought, performance and self-reflection. We start the discussion with the self-reflection phase since we argue students will not employ any self-management techniques if they are not aware of the distracting nature of social media while preparing for and participating in learning activities. This awareness will typically transpire in the self-reflection phase. In this phase we therefore asked them whether they experience social media as a distraction and if so, what the perceived impact is on their academic performance. The forethought process gives the strategies they have whereas the performance phase discusses the deployment of the plans. The data associated with each of these phases will be discussed next.

Self-reflection phase. The self-reflection phase is concerned with self-judgment (including self-evaluation) and self-reaction (including adapting). During the self-evaluation phase students become aware of the distraction of social media as well as the impact of social media on their studies.

Is social media a distraction? The majority of students indicated that they found social media distracting, whereas a few indicated they do not and one person indicated sometimes. Figure 6 below explains the themes that were identified from the analysis of those respondents that indicated that they found social media distracting.

Fig. 2. Reason for social media distraction

From those respondents that found social media distracting the following were found: some stated that having a break in concentration when completing their learning activities caused them to pick up their devices and access social media. An example of this is: "*Social media is a way of just grabbing your attention and you never know when to stop. It can be problem at times*". Respondents reported that they have the urge to respond when receiving a message: *"If your phone is near and a WhatsApp message comes in I find myself not focusing on my work and I want to respond to the message..".* The appealing content shared on social media lead the respondent astray, as illustrated here: "*..when you are checking it can lead to an hour when you find something interesting which leads to the following up stories and what is trending. Some trends can take forever".* Another theme that have emerged is when the respondents take a break from learning activities by browsing social media but then gets distracted: "*...when you're studying sometimes you take a break that is supposed to be ten minutes but it ends up being one hour or something like that"*. Group chats are also distracting, as explained by the next quote: "*It's distracting when your friends talk to you like on WhatsApp when there is a group chat and it goes on and goes on. YouTube can also take my whole day".* Another theme that has emerged was the fear of missing out (FOMO) as illustrated by the following quote: "*it is distracting in terms of when you are in class trying to listen but there's a message coming in on WhatsApp and you just have to attend to it because of FOMO".*

Those respondents that indicated that social media did not distract them mainly reasoned that they were disciplined and that they did not allow social media to become a distraction. One student out of the 50 stated that social media distracted them "sometimes".

What is the impact of social media on your academic performance? The thematic analysis conducted on the data revealed that social media has not only had a negative effect on their academic performance but also a positive impact. 44% reported a negative impact and 36% reported that social media also had a positive effect on their learning activities. 22% of the respondents said that social media has had both a positive and

a negative effect on their academic performance whilst 8% reported no effect. Table below summarises the responses.

Effect	Quote
Positive	*"I think it has honestly because you have academic WhatsApp groups where they post papers and advice so it really helps"* *"I don't think so. WhatsApp I use it a lot for academic purposes to communicate with students about work so that would have more of a positive effect"* *"YouTube has assisted as well as Google Drive to back up information. My academics have improved because of social media"*
Negative	*"It's just that sometimes you can procrastinate and end up on your phone a bit longer than you should"* *"Procrastination is already a problem for me and social media is just a thing that makes it worse"* *"I would find myself Googling people and pictures"* *"I end up focusing on watching YouTube videos and watching series instead of studying" and "you find yourself on Facebook and then one hour later and then you're like oh shucks I was supposed to be done with something else".*
Positive & Negative	*"Yeah it has helped me with getting notes from different students and has also affected me negatively when I get caught up logged into Instagram or looking at memes"* *"Well it is a bit of both, positively and negatively. Sometimes I use social media to get notes from friends and sometimes it distracts me, when I study people want to talk to me"* *"There is a negative and there is a positive. Negatively yes because I get super distracted and I don't cover as much work as I should have. Positively yes because I get news feeds on Twitter and they usually tell me what's going on around South Arica and provides me with news"*
No Effect	*"I don't think so", "No it has not affected my academics" and "No it has not, I can manage my social time"*

Table 2. Quotes support social media effect on learning activities

Students who stated that social media affected their academics positively used social media as a tool to communicate with fellow students with the aim of gathering infor-

mation for academic purposes. Some students stated that social media could cause distractions but also be used as a good research tool to find information and do research. The majority of students who found social media distracting also found their academics being affected negatively. One student went so far to see this as the reason for his academic failure: *"Always chatting caused me to fail, I learnt my lesson than started reducing social media."*

Forethought and Performance phase. In the forethought phase, during task analysis, students do strategic planning to prepare for the performance phase. These plans are implemented in the performance phase through the self-control process. The performance phase also includes structuring the environment to maximize concentration and focus during the learning activity.

The data has indicated that the respondents employ a number of social media management strategies to prepare themselves for learning activities. Only two respondents indicated that they have no social media management technique. The social media regulation techniques employed by the respondents were divided into three different categories, (1) limiting access through technological functions, (2) limiting access through physical removal strategies and (3) limiting access through willpower. Will-power has a role to play in each category but some students believe will-power or self-discipline alone is enough. Table 3 below presents codes that inform these categories as well as quotes showing how the strategies are implemented in the performance phase.

Theme	Forethought phase - strategies	Performance phase -implementation
Technological functions	*"switch off the WIFI" ,"switch off data", "just don't buy data", "put a data limit to it", "shutdown their electronic devices", "mute conversations", "turn off notifications", "delete applications", "delete accounts", "activate flight mode", "set profile on do not disturb", "switch off device", "put phone on silent", "disassemble device", "remove battery"*	*"Sometimes I switch off my data or put my phone on silent. Also, when I get notification I check them but I decide whether or not it's important enough to attend to.* *"I try to save my time by disabling my mobile data or switch off my phone. Sometimes I delete if its exam time"* *"For me it's hiding my phone and disassembling my phone. Taking out the battery, hiding one part in one room and another part in another room. That way I'm lazy to get up and find all those pieces and I just don't remember where they are. I'll remember when I'm disassembling my room.*"
Physical measure	*"Remove device from room", "put device far away", "leave device at home"*	*"I try to leave my phone at home before coming to campus if I know that I have a busy day or a test to write"*

Will-power	*"will-power", "mind over matter", "manage my social time", "prioritise", "ground myself", "manage", "setting a time limit"*	*"I set an alarm to study then another alarm for the amount of time is should be using social media."* "*Well you firstly just need to arrange your time schedule and also be aware of the fact that it's time consuming and distractive"* "*I've tried to quit to better my marks but then I realized I didn't need to quit I just needed to manage it effectively*"

Table 3. Categories and codes associated with forethought phase

The interviews seem to have created awareness about the problem since two respondents indicated that they have never thought of managing their social media use before but that they will definitely consider it for the future, given its distractive nature.

6 Discussion

Although students have a number of strategies to manage their social media use, some of them find it challenging to keep to their social media management plans during the performance phase: "*I thought that turning off the notifications would help but I keep going on the app just to check if I have any messages*." Students also seemed perplexed by the hold social media has on them. *"You're not sure why you do it but it seems to have a hold on us*." They described a certain helplessness using words like "being caught up" and "being trapped": "*It limits me from doing things that I should be doing in reality like I get so caught up in the virtual world*" and '*I usually find myself back in the trap'*.

Students tried to explain the enticing nature of social media in different ways. Confirming existing literature, they ascribed it to 1) FOMO (see for example [14]) and the habit-forming nature of social media and mobile devices (confirming [7] and [6]).

Some students were aware of the concept of FOMO and mentioned it, whereas others rephrased it as the need to "*keep up to date"* with what is going in others' lives.

Students refer to their social media as part of their habits, whereas one student observed that his/her social media use is triggered by certain events or environments: *For me it is environmental, you've created habits of when you check it, when you check and what situations you check social media more than others*". Aagaard [6] mentions the embodied nature of social media habits by saying that logging onto Facebook is "in ones fingers" (p.91). The embodiment of the habit is facilitated by the physical device as illustrated by one respondent: *"I found that one of the useful things is not to download social media applications on your phone, because your phone is quite invasive. So your phone tends to be very easily accessible. You usually always have it with you so it would be the least form of resistance to access social media*." Oulasvirta et al. [7]

mention the strong checking habit associated with mobile devices. They determined that checking behavior (brief times spent on the device) becomes a habit. In their study, users checked devices briefly focusing on one application only whereas some only viewed ('touched') the home screen for one second. Motivators for this habit are listed as entertainment, killing time and awareness. In our study students reported similar checking behavior with social media with very similar reasons for doing it (see section 5.1).

Finally, we argue that another factor making self-regulation of social media challenging during learning activities, is the fact that mobile phones and social media merge traditionally separate worlds on one device or one platform. Students mentioned diverse uses of social media such as maintaining and building business connections, educational purposes, entertainment and communication (see section 5.1). They know it can be distracting, but they still want access to some of the communication functionalities *([I only switch] off my data [when studying] because I still want to receive calls on my phone*) or they want it nearby to do research on the internet, without being 'pulled' into other content. *"… I need to do work on the internet, social media is there on the internet and is just a click away. It is distractive because most of the work done nowadays requires the internet so if you wonder off you can easily find yourself on social media…."*. This implies that students should invest more effort in the self-reflection phase (evaluating their own actions around social media) and forethought phase (doing a thorough task analysis to decide which parts of the task allows social media access or not) to prepare for their learning activities.

This study can be seen as an initial exploration of the topic. A more diverse sample (e.g. respondents from different degrees, different ethnic groups, different home languages, etc.) could have given more insightful results. Future research avenues might include focusing on those students already managing their social media well – which self-regulation skills do they possess? Other possibilities include quantitative studies determining the influence of student characteristics on social media management (e.g. intrinsic motivation, FOMO etc).

7 Conclusion

The data analysis shows that the respondents are aware of the distracting nature of social media and its impact on their academic performance. Most of them have a number of strategies to manage their social media use. The strategies all relate to limiting or stopping access to social media. These strategies were categorized as limiting access through physical measures (e.g. leave phone at home), technological functions (e.g. uninstall app, switch off data) and will-power. Will-power has a role to play in each category but some students believed will-power or self-discipline alone is enough. A smaller number of students do not find social media a distraction and welcome its entertainment value to kill time as well as its information sharing value to stay informed and connected.

We found that the social media self-regulation is particularly challenging because of the emotional rewards gained from it, the habit-forming nature of social media and

mobile devices and the merging of academic and social worlds through these platform. In line with Aagaard [6], we think it is wise for lecturers and institutions to provide guidelines to students to manage their social media usage. In fact, students should be informed of specific tools to help them manage their social media use: at home students can use internet distraction management tools like OffTime, News Feed Eradicator, Forest or the more recent *Hold* app. By using *Hold* for example, students can earn points for every 20 minutes without social media, to be exchanged for goods and services from partners like Amazon or their app marketplace. *Hold* is already used by just under half of students in Norway, Denmark and Sweden [22]. In our study, most students were not aware of the existence of such apps. Since social media is currently the "norm" (as indicated by one student - *WhatsApp is always there - that's a norm, if you text me now I will reply now*), students should be made aware of the need for self-regulation of social media use during learning activities as well as possible strategies to do it.

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