Teaching Procrastination - A Way of Helping Students to Improve their Study Habits

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Abstract— Procrastination, or to against better judgment postpone a task, is a very common problem in general, and for university students in particular where about 50% procrastinate consistently and problematically. In learning contexts, procrastination leads to cramming strategies, where the major part of studying activities occurs close to the exam instead of spreading the learning over time, which generally is believed to give better learning.

This paper describes a course module on procrastination and the preliminary results from running the module with about 230 students in media technology.

Index Terms—**behavior change, procrastination**

I. INTRODUCTION

P ROCRASTINATION is a very common for university students, where 80-95% report they procrastinate and 50% procrastinate consistently and problematically [1]. In learning contexts, procrastination often leads to cramming strategies, where the major part of studying activities occurs close to the exam, as opposed to spacing the learning activities more evenly in time. The problems become especially visible and difficult in the transition phase between high school and the university, where the students previously generally have had a well-organized structure with frequent deadlines and well-controlled tasks, but when commencing their university studies they face a much higher degree of freedom which can cause procrastination to bloom out in full. Therefore, we have introduced a course module where the causes and effects of procrastination are discussed in order to make the students aware of the phenomena, to provide tools for handling procrastination and in the end to help them get better study habits.

II. THE COURSE MODULE

The course module was given as a part of course DM1578 Program Integrating Course in Media Technology[1]. This course is given as a mandatory course extending over the fist three years in the Masters programme in Media Techology at KTH Royal Institute of Technology. Four times per academic year, the students get together in seminars with about 6 – 8 students and one teacher mentor. The students are mixed so each group consists of students in their first, second and third year (and possibly fourth or fifth), which gives a possibility to have discussions between older and younger students. The seminars covers both a reflection over what and how the students have studied since the last seminar, and other themes which are considered important in their education but which does not fit neatly in other courses [2], [3]. The procrastination course module was such a theme.

At the first seminar the students were introduced to procrastination by reading Wikipedia entries on Procrastination[2], Student Syndrome[3] and Cramming[4] as well as an excerpt from a book on procrastination[5]. This gave a quick and relatively non-academic introduction to what procrastination is, what its causes are and which effects it can have especially for studying.

The students were then required to fill in a standardized procrastination questionnaire [4] which indicated to which extent procrastination was a problem for them, as well as a questionnaire with questions on how different kinds of media, media technology and information technology intrude on time they have dedicated to studying. This questionnaire was answered by 218 of 227 students.

Next, the students were required to, based on the texts they had read and the questionnaires they had answered, write a 400 – 800 word reflection on one or several out of a number of questions, such as if they recognized themselves in the texts, if they have strategies to avoid procrastination and if the texts raised any questions. Finally, the students had the option to formulate a "promise" on some habit they, in light of what they now had learned about procrastination, wanted to change and which should be followed up six months later.

The reflection documents were then distributed to the student's mentor and other group members who were required to read the documents before the seminar. At the seminars the students and their mentor discussed the theme, the documents and the students' own experiences of procrastination.

The second seminar, about 2-3 months later was not related to procrastination, but the third seminar was. During the third seminar, the students were required to read more texts on procrastination and watch related videos. The main text was a scientific text [1], which is a review of the main findings on procrastination from the last decades based on 216 separate

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works. The text includes parts describing the history of procrastination, the effects of procrastination, the main causes of procrastination, a theory on procrastination (TMT, Temporal Motivation Theory) especially interesting for students, and a discussion of different interventions for reducing procrastination tendencies. The students were required to read only some specific parts of the text. The next text was "Is Google Making us Stupid - What the Internet is doing to our brains"[6] by Nicholas Carr, a text which argues that the internet has changed the way we think and makes us less capable to concentrate and easier to distract. This text was deemed relevant since, as shown in the results chapter, computer-related procrastination is a highly relevant topic for this group of students. Furthermore, the students were required to watch two videos, one 4-minute video of more amusing character called "The Meaning of Procrastination"[7], and one TED Talk by Matt Cutts titled "Try something new for 30 days"[8], which shows a method for how to change your behavior by trying something for 30 days. This in combination with a list of suggestions for how to get things done[9] gave the students their final task; to find one habit, study-related or not, which they wanted to add to their lives and one which they wanted to remove from their lives, and try this for 30 days. This was inspired by practice and theories of behavioral change, like "3 tiny habits" [5] and the "Fogg Behavior Model" (FBM-model) [6]. At the fourth seminar there was a follow-up on how well this had worked.

III. DATA COLLECTION AND DEMOGRAPHICS

The questionnaire which most of the results are based on was answered by 218 of 227 students giving a response rate of 96%. Of the respondents, 39.4% were women, 30.7% studied their first year, 26.1% studied their second year, 33% followed their third year and 10.1% followed their fourth year or above. 80.7% of the students owned a smartphone, 11% owned a tablet and 90.4% owned a laptop computer.

The questionnaires and the reflection documents were non-anonymous in order to be able to compare questionnaire results with the corresponding texts, but since the course always involves personal non-anonymous reflections on learning and other relatively personal matters, this has hopefully not biased the material too much.

IV. RESULTS

The initial questionnaire showed that procrastination is indeed a problem for many students, which is in line with previous studies [1]. 38% answered that they see procrastination as a big or very big problem, and only 4.6% of the students don't see procrastination as a problem at all. On a five-grade scale with the options very often, often, now and then, seldom and finally very seldom or never, 48% often or very often regret that they didn't start assignments earlier and
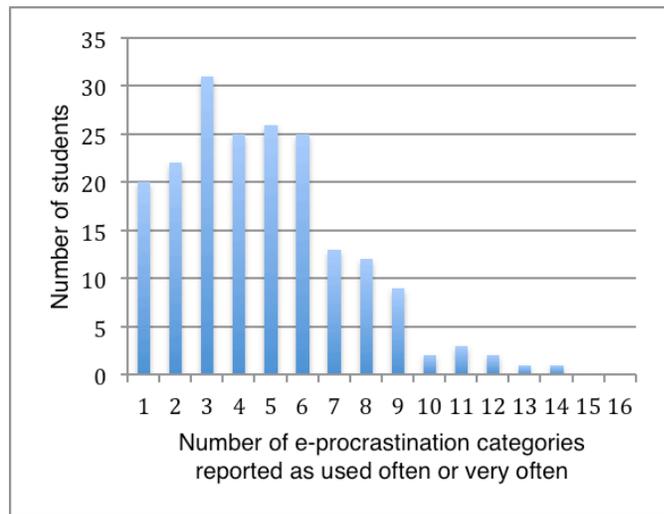
[6] http://bit.ly/PRzg18
[7] http://www.youtube.com/watch?v=37wR_TWdVy0
[8] http://bit.ly/N5l8AM
[9] http://bit.ly/MlQeo5

Fig. 1. The distribution of how many of the 16 listed e-procrastination categories the students used often or very often when they "really ought to study". 192 of 218 reported at least one category.

35.3% often or very often, at the day's end, feel they could have spent their time better. The questionnaire also included questions about the students' e-procrastination habits using computers and mobile phones, where they answered questions of the type "When I really ought to be studying, I sometimes rather spend my time ..." followed by in turn facebooking on computers, facebooking on mobile phones, other social media on computers, other social media on mobile phones, games on computers, games on mobile phones, news sites on computers, news sites on mobile phones, E-shopping on computers, E-shopping on mobile phones, film/TV/DVD etc on computers, film/TV/DVD etc on mobile phones, other surfing on computers, other surfing on mobile phones, email on computers, email on mobile phones and finally SMS on mobile phones. The questions were answered on a scale with the alternatives very often, often, now and then, seldom, very seldom or never, and finally the alternative "I don't use [X]".

The results showed that 192 of 218 students, or 88%, answered often or very often on at least one of the 17 e-procrastination categories, with an average of 4.7 categories per e-procrastinating student (Fig. 1.). If restricting to the nine mobile categories (m-procrastination), the corresponding figures were 143 students or 66%, with an average of 2.45 categories per m-procrastinator. The top three categories for where students often or very often chose e-procrastination instead of studying was "other surfing on computer" (54.6%), "film/TV/DVD etc on computer" (54.1%) and "Facebook on computer" (52.3%). The top three categories for m-procrastination was SMS (50.4%), "email on mobile phones" (28.9%) and "Facebook on mobile phones" (24.8%).

As for evaluating the success of the course module described in this paper, special attention was given to the 38% who considered procrastination a big or very big problem. Of these, 15 were randomly selected for a deeper analysis of their reflection documents after the third seminar of the course, where the students had a chance to see if possible non-procrastination promises they made after the first seminar had succeeded, and where they were required to state whether the

first seminar had made a temporary or lasting impression on them, and whether they had changed their habits.

Of the 15 students, 5 had not changed their habits. 6 had at least to some extent changed their habits in a positive way but not succeded in all ways they hade wanted, and 4 had changed their habits much in a positive way. One of the students who had changed habits much stated "… I have reduced my procrastination very much. It still occurs of course, but not in the same extent. I tackle tasks, and when I succeed in tackling something before I have started procrastinating it feels good – good enough to feel inspired to tackle the next task".

Several students stated that they had started trying to break their procrastination habits enthusiastically, but soon forgotten about their promises and fallen back into old habits. Also, several students mentioned that they were surpised that procrastination was so common, that it felt good to know that they were not alone. One student said "The topic hit me. Ah, there is a scientific term for the behaviour I have. I have had my diagnosis. It is curable." Several students also stated that they are now were more aware of procrastination, and now find themselves in situations when they think about that they are currently procrastinating, and that that can lead them to stop procrastinating. Still, a few students stated that the first seminar did not have any temporary or lasting impression, and that they believe a deeper intervention is needed if they really should change their procrastination habits substantially.

The attitudes to the readings for the third seminar was mixed. The procrastination video was not considered rewarding, rather it was found to be irritating. The academic text was probably a bit too academic, even though especially the part about the causes of procrastination was found interesting by many. The TED talk on behavior change was very appreciated, as was "Is Google Making us Stupid".

The list of 50 tricks to get things done was well received and most students found several of the suggestions to be good and worth trying. The students' choice of behaviors to change the next 30 days varied greatly, where some were related to studying but were more often of the kind "don't buy coffe" or "get more sleep".

In some groups the students were invited to track the progress of their behavior change tasks using a common shared spreadsheet on Google Docs. The idea behind this was to increase two of the three aspects necessary for behavior change according to the FBM model [6]. According to this model, in order to perform a target behavior the person must be sufficiently motivated, have the ability to perform the behavior and finally be triggered to perform the behavior. The idea was to increase the motivation by introducing a gamification [7] factor, where they could visualize their progress and see the progress of, and compete with, their peers. Furthermore, the intention was to cause a trigger effect by reminding the students of their challenge every time they logged in to their Google Docs account. Even though the sample of student participating was too few for drawing definite conclusions, the outcome was quite encouraging where the students actually succeeded quite well in their behavior change activities, as can be seen in Fig. 2.

Fig. 2. Report sheet for the final behavioral change task. Students enter the behavior they want to change and then daily write a follow-up on their success in a shared spreadsheet.

V. DISCUSSION

These results from the questionnaires show that procrastination is a major problem among this group of students, and that the possibilities to procrastinate using computers and mobile phones has opened up two completely new category of procrastination: e-procrastination and m-procrastination. This is highly important since internet connected computers are so commonly used in learning activities, and since smartphones are rapidly becoming ubiquitous, and both provide seducive procrastination activities available anywhere, anytime.

The course module has helped many students to reduce their procrastination. However, many more want to change their habits but find it hard. The use of techniques for behavioral change, like the gamification part included in this study, are therefore highly relevant, and should be explored further in the development of this course module.

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