

A gamified digital time-management application for tertiary education

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ABSTRACT

A digital gamified study-planner application is being iteratively created for tertiary level students to aid in their time-management. The addition of game elements to the study-planner application are being studied to determine its effect on motivating effective time-management in tertiary level students.

EXTENDED ABSTRACT

Time-management is defined as "*behaviors that aim at achieving an effective use of time while performing certain goal-directed activities*" [1]. For students an ineffective use of time can lead to increased stress, low quality rushed work, missed deadlines and task avoidance [5]. Study-planners are one way of addressing this problem as by taking the time to structure their time students can learn to prioritize important tasks, improve time-estimates, break up complex tasks and are more likely to maintain a structured routine [4, 6]. However students are not currently motivated to create study planners themselves, as it is not regarded as an inherently engaging task. From a survey we gave to 51 students, over 58% of respondents had never used a study planner before with 31% never considering using one before now.

To address this deficit we propose the use of gamification, the "*application of gaming metaphor to real life tasks to influence behavior, improve motivation and enhance engagement*" [7]. The inclusion of game elements has already been found to increase engagement in areas such as health, sport, business, education and the formation of daily habits [3]. However while researchers are already aware of the existing problem of

motivating students to use effective time-management and the engaging power of gamification, there has been little in the way of empirical studies linking these two areas together.

To this end an automated gamified study planner-app is being iteratively designed, with the aim of deploying a fully tested application for the 2017/2018 academic year. We are creating our own application as current gamified time-management applications such as Habitica [2] are focused solely on task completion and do not address students' cognitive attitudes. The prototype design contains an automated calendar showcasing classes and deadlines, recommended study times and estimated project times. Multiple game elements are in consideration including traditional points, badge and leaderboards (PBL), customization, personalized stats, betting, competition and chance. From the results of this study we aim to fill the current gap in academic literature relating to gamification and effective time-management.

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