

Managing Time Through a Self-regulated Oriented ePortfolio for Undergraduate Students

Aikaterini Alexiou^(✉) and Fotini Paraskeva

Department of Digital Systems, University of Piraeus,
Karaoli & Dimitriou 80, 185 34 Piraeus, Greece
katialex@webmail.unipi.gr, fparaske@unipi.gr

Abstract. A self-regulated oriented ePortfolio as a dynamic social networking tool, orchestrated along the processes of Self-Regulated Learning (SRL) with career management skills was designed. The aim of this study is to examine how time management can be positively influenced through the implementation of the ePortfolio. We conducted a quasi-experimental research with comparison groups in pre/post-tests in order to examine time management as a behavioral self-regulatory process for academic performance. The findings revealed that students tend to manage time effectively, make schedules and allocate time after the completion of the ePortfolio. Further research should measure students' SRL and the relations among cognitive, affective, behavior and context processes.

Keywords: Time management · Self-Regulated learning · ePortfolio · Social networking tool · Career management skills

1 Introduction

Research in academic context indicates relationships among time management, academic achievement, goal setting, self-efficacy beliefs and achievement emotions and suggests that scholarly productivity is maintained [1]. Furthermore, it is stated that many undergraduate students often complain about the lack of time to deliver all the programmed learning tasks, prepare for exams in last-minute cramming, and most of them cannot estimate the study time needed [2]. This means that students should, therefore, be engaged in life designing and building processes that help them acquire skills and knowledge they value throughout their academic and career development [3]. A self-regulated oriented ePortfolio, as a dynamic social networking tool, orchestrated along the processes of Self-Regulated Learning (SRL) with career management skills was, thus, designed to support learners in regulating their learning. We suggest open source code-based with elements of social networking, ePortfolios that are adaptable for modification or distribution and provide various benefits such as web-data sharing, collaboration, reflection and can combine informal and formal education. Following pedagogical considerations, ePortfolios should be able to accommodate learner-centered pedagogical models like Self-Regulated learning (SRL) [4]. SRL is defined as an active, constructive process whereby learners set goals and then attempt to plan, monitor and

control their cognition, motivation, and behavior [5, 6]. Time planning and management constitute a self-regulatory process where individuals’ attempt to control their own overt behavior so as to bolster their performance.

2 The Method: $\alpha\text{pt}^2\text{iMySelf ePortfolio}$

We introduce $\alpha\text{pt}^2\text{iMySelf ePortfolio}$, which is part of an on-going research aligns the aspects (cognitive, affective, behavior and context) of SRL with career management skills with the aim of developing specific aspects and instilling a learning culture in students [7, 8]. $\text{Apt}^2\text{iMySelf ePortfolio}$ is based on open-source social networking engine Elgg, which enables students to construct and update their profile, articulate a list of other students with whom they share a connection, and build their own pages. This tool fosters a sense of community between users, strengthens interactions and supports academic and career management (Fig. 1).

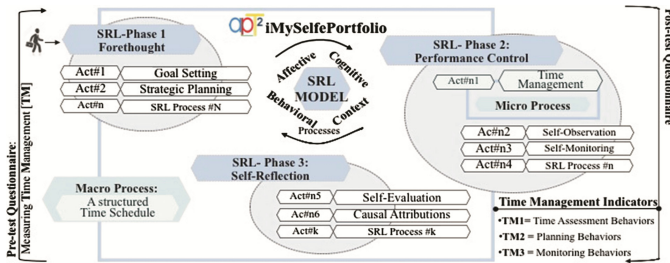


Fig. 1. The rationale of $\alpha\text{pt}^2\text{iMySelf ePortfolio}$

We conducted an experimental research (one group only) within a computer science department of a Greek university, throughout a course titled “IT -centric Professional Development”. The sample of the study consisted of 41 undergraduate students (30 males and 11 females) who participated voluntarily. The research question was: “How can time management be positively impacted through the implementation of $\alpha\text{pt}^2\text{iMySelf ePortfolio}$ in order to enhance academic and career skills? Participants completed a self-developed questionnaire (The self-report based on an adapted version of the Motivated Strategies for Learning Questionnaire – MSLQ. It is used the scale of resource management strategies which includes time management) [5] as a pre and post-test to render the measurement of their time management skills on ePortfolio plausible. Through this process, an attempt to shed light on the participants’ beliefs about their use of strategies for time management (monitoring, setting goals, prioritizing, planning, delegating, and analysis of time spent) was made [1]. The self-report consists of 23 close-ended divided in sub-scales (three-fold categorization of Time Management (TM): TM1: time assessment behaviors, TM2: planning behaviors and TM3: monitoring behaviors). During the experimental procedure, students engaged in the $\alpha\text{pt}^2\text{iMySelf ePortfolio}$ activities following a structured time schedule and attempting to learn how to manage their time (macro-process). In more detail, participants followed the SRL

phases for structuring α^2 iMySelf ePortfolio [6] (Fig. 1): **'Forethought' Phase:** Students enter the SRL cycle for planning their learning efforts (goal setting, strategic planning activities). In this phase students organize their learning path for constructing the content and context of their ePortfolio. **'Performance Control' Phase:** Students get engaged in specific learning activities such as familiarizing with learning strategies, note taking and activities for recognizing their capacity to manage time. Especially, students participated in a time management activity entitled 'Be an effective manager of your time' (micro-process) so as to engage in a set of strategies for time management: time assessment behaviors, planning behaviors, and monitoring behaviors. **'Self-Reflection' Phase:** Whilst in the third phase, students reflect on the learning activities performed to evaluate their performance. They evaluate their ePortfolio, performance and time management.

3 Results

A paired-samples t-test was taken to explore statistical differences (pre and post-test) on participants' time management. Results indicate that the experimental group appeared to have a significant increase on the means across the sub-scales of Time Management (TM). In detail, the contrast in Time Assessment Behaviors (TM1) between the pre-test and post-test was significant, $t(40) = -6.927$, $p < 0.01$. Results show that after the completion of ' α^2 iMySelf ePortfolio', students' time assessment behaviors improved, the mean score of the post-test (3.699, $SD = 0.575$) was greater than that of the pre-test (2.890 $SD = 0.526$). This means that students engaged in learning activities, which advance their ability to manage time effectively and realize the difficulties they may face unless they follow a well-organized time schedule. The contrast in Planning Behaviors (TM2) between the pre-test and post-test was significant, $t(40) = -5.280$, $p < 0.01$. Results reveal that after the completion of the procedure students' planning behaviors also improved, the mean score of the post-test (3.829, $SD = 0.654$) was greater than that of the pre-test (2.878, $SD = 0.927$). This is also an important finding, as TM2 can be directly linked to SRL processes (cognitive, affective, behavioral and context). Students succeed in understanding the advantages of a well-organized time schedule and engaged in the process of setting goals and planning their study time. Finally, the contrast in monitoring behaviors (TM3) which is divided in TM3.1: Monitoring Schedule and TM3.2: Monitoring Behaviors between the pre-test and post-test was significant, $t(40) = -9.240$, $p < 0.01$ (TM3.1) and, $t(40) = -3.517$, $p < 0.01$ (TM3.2). Results depict that the mean score of the post-test (3.670, $SD = 0.554$) was greater than that of the pre-test (2.682, $SD = 0.521$) which shows that students engaged in a time management activity and realized the potential of monitoring time schedule (TM3.1). Participants are convinced that the process of monitoring the time spent offered them the opportunity to conceptualize specific strategies such as prioritizing and delegating time spent. Furthermore, students monitor their behaviors (For TM3.2, the mean score of the post-test (4.120, $SD = 0.630$) was greater than that of the pre-test (3.569, $SD = 0.757$) and try to identify whether they engage in procrastination, minimize opportunities for interruptions and have lack of discipline.

4 Conclusion

The process of $\alpha\text{pt}^2\text{iMySelf}$ ePortfolio urged learners to realize the need of effective time management, recognize their own patterns of planning and managing time and learn how to utilize time management strategies and applications (evernote, remember the milk, google calendar, notes, reminders etc.); it encouraged learners to, engage in structured and unstructured time management activities so as to apply their knowledge and create feasible time schedules. Finally, the implementation of $\alpha\text{pt}^2\text{iMySelf}$ ePortfolio has a positive impact on participants' time management strategies such as time assessment, planning, and monitoring behavior, setting goals, prioritizing, planning, delegating, and analysis of time spent. Considering that this study is part of an on-going research, our future intentions entail testing the reliability and validity of the proposed conceptual framework in prospective experimental procedures. Further research should focus on measuring students' SRL and career management skills as well as the relations among cognitive, affective, behavior and context processes of SRL.

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