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Personalised Study Time Plans, and Study Time Management: A joint responsibility of staff, students, and university administrators

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Abstract
There is widespread concern that students at transition (from school to university) face many challenges with time management being one. Accordingly, the authors developed a framework labelled as REST to assist students to achieve study success through study time management; the notion that a course of study was similar to a construction project (as in project management) underpinned its development. Having measured students' abilities using the REST concepts (Success, Scope, Strategy, Sequence, Schedule, Synthesis, Review, and Reflect), *Strategy* was found to be the weakest: A *personalised study time management plan* is fundamental to be *strategic* which is also useful for demystifying *Scope*. Such plans including the REST framework may assist all students to achieve academic success particularly for less conscientious and self-regulated students. Embedding the REST framework in discipline-specific courses and incentivising the process is advocated. Rationalising lecture-timetables by clustering lecture times (as against scattering across a study-week), optimising exam timetables, time audits of study workload, de-concentration of high-intensity assignment submission periods (particularly for first year students) and inducting students on time management may facilitate study time management and study success. Accordingly, the responsibility for assisting students with study time management including the development of *personalised study time management plans* rest not only with students but also with academics and university administrators.

Keywords: construction management, personality traits, project management, success, strategy, time management

1. Introduction

Time is a resource that cannot be controlled, but strategies can be developed to be in control. Inspired by a growing a body of knowledge in construction management, and project management in general, authors have explored the notion of 'study as project' metaphorically in synthesising a way forward to assist students to be in control of time (Abeysekera & Abeysekera, 2007, 2015). In fact, they have even gone further by developing a time management framework that not only would assist the students to be successful with their studies but do so strategically. The issue of whether the responsibility for study time management should only be with students or whether academics and university administrators also have a role to play in assisting students to develop a life-long skill is relevant too.

2. Aims and objectives

In 2006, the first author was successful in securing a competitive research grant in response to a call for research proposals to assist students in transition from school to university as it was reported that many

students at the Victoria University (Melbourne, Australia) were facing difficulties in their first year of study. To quote:

> *Typically, the school calendar consists of 40 weeks of lectures per year whereas the university has only 24 [with a maximum of 30 weeks including exams]. This is a substantial change. Moreover, the course structure is different as they have to now complete a course over a shorter period (i.e. a semester) as against a year at school. As such, the change is harder, and altogether a new experience in relation to the availability of 'time' to learn, reflect and respond to a different pace and a new rhythm of learning. It is not surprising therefore that new students are confronted with a tight schedule which must be managed carefully to cope with a demanding workload over a shorter period of study. It is this issue that this project aims to investigate from a time management perspective with the hope of facilitating students to make this transition an easy one by developing a tool that they can depend on for their learning as they venture into more independent learning. It is rarely realised that 'time' is a special kind of resource over which there is no control!*

While it is true to date that time is somewhat a special resource, as noted before, it is possible to be in 'control of time' according to Macan, Shahani, Dipboye, and Phillips (1990). They studied the relationship between time management and academic performance in addition to other variables and concluded that 'students who perceived control of their time reported significantly greater evaluations of their performance, greater work and life satisfaction, less role ambiguity, less role overload, and fewer job-induced and somatic tensions'. However, the art and science of being in 'control of time' by breaking work into tasks, setting deadlines, evaluating progress, etc. (as noted by these authors) are all useful and align well with construction management theory and practice. Nevertheless, it has been reported that students find it difficult to 'regulate their self-study and keep up with the work' and that 'they were also not always sure how they were to organise their self-study' (van der Meer, Jansen, & Torenbeek, 2010).

It was reasoned that to respond to the above concerns, students would benefit from a growing body of knowledge on construction management. It was argued that a construction project was similar to a course of study in that, courses had a definite start and finish date similar to construction projects. Accordingly, seven concepts were synthesised that would amount to encapsulating project management knowledge relevant for study time management: *Planning, and Control* (two important functions of a project manager), and five other concepts (referred to as the 5Ss), *Success*, *Scope*, *Strategy*, *Sequence*, and *Schedule*. These were fundamental to choreographing *project logic* so as to be used as a diagnostic tool to assess areas that need improvement on personal and project time management. It was decided to survey the Bachelor of (Civil) Engineering students enrolled in the first year to the final year (i.e. fourth year) using seven uni-dimensional scales to measure the uptake, knowledge, and behavioural implications of the above concepts. Results of the final year student surveys showed that *planning and control* functions were not carried out often enough. Moreover, of the other five measures, *Strategy* was found to be the weakest suggesting the need to provide further assistance to improve time management skills. A separate case study conducted with these students following a special course validated the above results. Accordingly, a new framework using the 5Ss were developed as an integrated approach to both personal and study time management with a message to academics to re-examine engineering curricula to develop a core skill that students perceive as

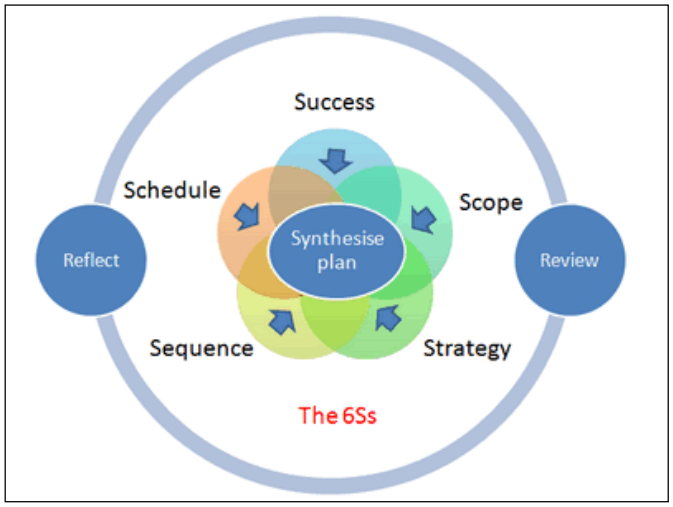

Figure 1:
REST Framework (see, Abeysekera & Abeysekera, 2007; Abeysekera & Abeysekera, 2015)

very important (Abeysekera & Abeysekera, 2007). Further reflection identified the need to add two other concepts, i.e. *Review* and *Reflect*. The **time management framework** as it stands today is shown in Fig. 1 appropriately named as the REST framework (simplified from RRESSSSSST which includes the two Rs, the 5Ss described above, and additional S to denote Synthesise with T at the end denoting 'time').

Accordingly, the aim of this paper is to (a) explain what an integrated, personalised study-time management plan is, (b) its relevance for assisting all students whether conscientious, self-regulated or not, (c) how strategies may be developed using such plans, and (d) explain how academics can facilitate study time maangement, and (e) ecommend institutional initiatives that may help students with study time management.

3. Theory and Practice of Study Time Management

There is widespread concern that new entrants to university face many difficulties in adjusting to work-and-life demands. Many authors have expressed the importance of time management to achieve study success (van der Meer et al., 2010). To understand how this may be achieved, various authors have examined the relationship between study success and time management. In one study, it was concluded that time management is more important for part-time than full-time community college students who have greater temporal demands (MacCann, Fogarty, & Roberts, 2012). They also examined the relationship between *conscientiousness* (a personality trait characterised by organisation, purposeful action, self-discipline, and a drive to achieve) and *time management* with *study success* (achievement) hypothesising that time management will mediate the relationship between *conscientiousness* and *study success* (grade point average). They noted that students who are 'high on conscientious, use more and better strategies for time management and therefore achieve better grades'. In this regard, it is worth noting that 'management' involves two broad functions, *planning* and *control*. Accordingly, one could hypothesise that those who plan and control their study tasks conscientiously would be in a better position to achieve study success. No doubt, understanding the mechanics of study time management is useful and necessary while taking into account of both the nature of students and the universities although complex as noted by Dipboye and Phillips (1990). Additionally, understanding time management behaviour about how students feel about the time available for their studies would also be useful to avoid *role overload* (too much work to do in the time available) and *study induced stress* (tensions and pressures growing out of work requirements). Perhaps, students experience these due to ineffective time management, or due to the lack of time management training (see Häfner, Stock, & Oberst, 2015). Additionally, investigations into the time-related behaviour of high achieving students, differences between men and women students, may provide interesting insights.

While there are a number of publications describing the benefits of time management as quoted by MacCann et al. (2012), it would be useful to examine studies that do not indicate so. In a study by Sansgiry, Bhosle, and Sail (2006), the authors examined whether factors such as time management, strategic studying, academic competence, etc. could distinguish differences among pharmaceutical students, particularly about their academic performance. They found that the cumulative GPA was not associated with time management and strategic studying. However, no detailed information was provided for the scales used for measuring time management and strategic studying. Moreover, strategic studying could be argued as falling within the gamut time management. However, in yet another study by Swart, Lombard, and de Jager (2010), they found that no statistically significant relationship exists between time management and the academic achievement of African engineering students. However, this study focussed on students enrolled in a unique course (which is different to many other courses in the engineering curriculum) with success measured using the grades received by respondents (enrolled in this course) which was inadequate to isolate the impact of time management practices on academic success. Furthermore, in another study by Bembenutty (2009), the authors found that there was no evidence of a correlation of course grade with time management. They also noted that students had 'low academic skills and ineffective college preparation' and therefore it would be difficult to confirm whether the result of no

correlation between time management and study success was due to the special nature of the sample. To understand the relevance of time management to academic success, it would be useful to understand how students utilise non-instructional time. According to a study by Ogonor and Nwadiani (2006), it was found that undergraduates in Southern Nigerian universities manage 'non-instructional time poorly in favour of social and economic activities and in disfavour of academic work' with as much as four-fifths of their non-instructional time spent on such activities. Based on this observation, it seems that a conscientious effort was not being made by students to attain academic goals. In the absence of details on study success rates, grade point averages, and academic goals, unfortunately, it is not possible to understand the impact of such behaviour. For example, whether such practices were leading to stress, work overload, etc. cannot be discerned. An interesting concept on how much time should be utilised for various tasks that build up non-instructional time is captured within the notion of 'time budgeting'. McFadden and Dart (1992) studying business management students concluded that the surveyed students were 'quite skilled in budgeting their time' although indicating that the results must be 'treated with caution'. No details were provided on how exactly they were able to budget time for different tasks from a project management perspective.

Reference was made to the personality trait of conscientiousness (a trait characterised by organisation, purposeful action, self-discipline, and a drive to achieve) and the role of time management in achieving success. Another personality trait that seems relevant is *self-regulation of learning*. As explained by Bembenutty (2009), self-regulation is 'self-generated thoughts, feelings, actions for attaining academic goals'. To a lay person, both these approaches seem similar and appear to be concerned with students' motivation for learning. These traits contrast two types of learners according to Bembenutty (2009), i.e., 'those who are skilled and those who are less-skilled at self-regulation': Skilled learners have high self-efficacy beliefs (cognitive judgement about the capability to perform a designated task) and use effective learning strategies. They are content with delaying gratification, i.e. a 'willingness to postpone opportunities to satisfy impulses in favour of academic goals' such as receiving a degree and working towards a high distinction. They are also reported to engage in good time management (Bembenutty, 2009).

In contrast, 'less-skilled learners adopt maladaptive behaviour, are not as effective in using cognitive and other learning strategies, and are more focussed on ability and competition… Often, [they] feel less effective in the world, experience low effectance-motivation [tendency to explore and influence one's environment], and focus primarily on extrinsic motivation…Often they are unwilling to delay gratification and show poor time management'.

The above inform how time management know-how could be introduced into academic courses such as by providing incentives (allocating some marks for preparing a time management plan as a gratification mechanism) particularly for the benefit of those with low self-regulation skills, or those who are less conscientious and self-regulated. In fact, one might point out that it would be quite useful to provide a **personalised study time management plan** for such students as trialled by Abeysekera and Abeysekera (2015) understanding the relevance of the REST framework where Scope and Strategy are two important elements for Success.

4. Developing Strategy vis-a-vis an Integrated Personalised Study Time Management Plan

It was mentioned earlier that understanding Scope could be quite challenging. An on-line course of study in construction and engineering (in distance or on-campus mode of study) may typically include some or all of the following time-consuming tasks: going through study notes (including web-based resources), recommended readings and textbooks, quizzes, self-assessment questions; developing skills on course related computers software; watching videos, class presentation files, recorded lectures and making notes; attending laboratory sessions, site visits; completing different types of formative and summative

assessments (concept check questions and quizzes, reports, essays, presentations, etc.), past exam papers, along with literature reviews, data collection, data analysis etc. and many other activities that needs to carried out to achieve Success. Questions such as: 'What do I need to do to achieve success? How can I manage scope? What is success?' does naturally arise for students who have been introduced to the REST framework.

While conscientious and self-regulated students may find their way through these maze of activities and develop good responses to such questions they may still face many challenges understanding Scope. For example, questions such as 'when can I start on assignments? Has enough been covered in the lectures? Should I wait till the last week before an assignment is due to start an assignment? How much time should I spend on assignments and various other tasks? When should I start working on past exam questions?' do arise. While students may find difficult to respond to some of these questions, an academic can certainly assist students with helpful responses.

The total time allocation for most courses is 150 hrs which include both instructional and non-instructional time. If a study project is to be managed successfully (on time), students need to fit all the tasks within the time available. As to how much time can be invested per task is challenging particularly when a student is enrolled in four courses (as is the case in the example discussed). This attempt is akin to time budgeting referred to earlier. While the responsibility for ensuring students can complete all academic activities within the set time is the responsibility of the university (by undertaking a time audit), students need to allocate time budgets for activities they have identified, but in the first instance, students may need to prepare a study time management plan.

Such a plan cannot be prepared without understanding **Scope:** What does a course consist? What needs to be done to achieve success? What activities need to be undertaken? How much time should I budget? Answers to such questions can be facilitated by providing study plan. Abeysekera and Abeysekera (2015) in their publication 'Sowing the Seeds of Success: The Provision of a Personalised Study Time Management Plan' explain how to create such a plan. They highlight its usefulness, improvements to presentation style of a simple study time plan, adaptability, integration with various information requirements along with further improvements required based on a survey of construction and engineering students suggesting the value of automating this process.

In 2015, authors sought the assistance of USQ's Learning and Teaching Systems (LTS) Section to provide a computerised (and personalised) study time management plan to students. This plan as to be made available to students through the StudyDesk (the on-line portal used for interacting with students) incorporating the changes students had wanted based on the findings of the study mentioned above. However, LTS were unable to assist on an annual basis due to lack of resources.

Given this setback, i**n 2016,** further work was undertaken in an attempt to see whether information on the StudyDesk calendar (with dates for assignment submissions, etc.) could be integrated with electronic mail calendars (in Gmail and Outlook). This was achieved using the Export function available in Moodle (i.e. the on-line software system used for the Study Desk) and a handout on how to create one was made available to students. Additionally, it was also possible to export Moodle data to a bar chart-style milestone plan using WinCalendar. However, the Moodle calendar included many other types of information such as deadlines for courses to be dropped off without penalty, etc. so data had to be filtered for the sake of clarity which was not ideal. Although this was introduced both at the Orientation Program and later during the second semester of a first-year course, no attempt was made to assess usage or impact. Perhaps, electronic templates for semester 1 and two courses similar to the one shown in Fig.2 could be given to students in the future as an incentive to create their plans although sub-optimal in nature as students' needs explained in Abeysekera and Abeysekera (2015) cannot be fully achieved. Nevertheless, the intention herein is to examine how some of the challenges facing students could be communicated by reflecting on a typical study time plan for students undertaking full-time study.

The maximum number of courses that a student can enrol per Semester at USQ is four, and that is only for full-time students. Undertaking four courses is similar to working on four projects - challenging task no doubt. The integrated study plan developed using Excel is broken into two figures (for display efficacy), i.e. as Figures 2 and 3. The four courses are shown in Figure 1 with activities shown up to the first-semester break, i.e. up to study-week 4 with a two-week semester break. In all, there are 13 study-weeks with two weeks for the exam period in a 15 week long semester. Note that rows 4 to 8 provide additional information students need to be aware of, such as public holidays. What is also useful to note is that lecture schedule has also been shown (see information below Week 1). The lecture schedule is mainly for on-campus students but is relevant for external students (those who study at a distance) as recorded lectures would be made available on the following day (when there aren't live broadcasts). It can be seen that lectures are spread throughout the week with Wednesday being the only day without any lectures. It should be pointed out that from a time management perspective, it would have been highly efficient and beneficial if all first year lectures could have been scheduled on Mondays and Tuesdays; the responsibility for timetabling is with the institution and not with the student. If this were possible, students would be able to utilise the rest of the days for some form of employment or other activities easily. Additionally, not shown in the time plan are the weeks before the official commencement. These are important weeks particularly because all resources are available for student two weeks before the official commencement. Experience shows that most students aren't aware of this. They could use this period to commence their studies earlier and hence be strategic about their studies.

As noted before, a semester is 15 weeks long and this can be broken down into two distinct periods, i.e. Weeks 1 to 13 (Study-Period) and Weeks 14 to 15 (Exam Period). One wonders whether there should be one week without any schedule of lectures or assignment deadlines before the exam week to serve as a buffer (a construction management concept) and make a semester 16 weeks than 15 weeks although it might impact on the time available for academics for marking etc. Furthermore, the Study Period from weeks 1 to 13 can be subdivided into few more periods as per the time plans shown in Figures 2 and 3 noting that this may be different for different students. The first period marked as 'Period A' in Figure 1 is sandwiched between the start of the semester and the first break (which may vary depending on the semester with the break in the second semester usually being around the 10^{th} week). The assignments due during this period seem to be concentrated over a two week period with no two assignments falling on the same day. While this is encouraging, a good start would be helpful to ensure that deadlines are not missed, and marks for assignments are noted. Clearly, it would facilitate students to set priorities and to set new deadlines for completion of assignments. Moreover, if there are any pressing social commitments during periods with a high submission rate, they could be circumvented by taking suitable action. Accordingly, it would help students to be strategic in their approach towards study.

As for the next period, i.e. Period B (Semester break), it could be seen that three assignments are due on the same date. By being aware of this, students would be able to give thought to such challenges in advance and be ready to face them by developing suitable strategies. As for periods C and D, Weeks 5 to 9 (period C; see Fig. 3) has only one assignment to be submitted with period D being quite heavy. Understanding when assignments can be started and finished will certainly help. Additionally, many other tasks necessary for academic success (such as revision, going through past exam papers, etc.) can all be scheduled during this period. At the end of the day, success will depend on how conscientiously such strategies are implemented understanding whether such strategies are suitable, acceptable, and feasible (Johnson & Scholes, 1999).

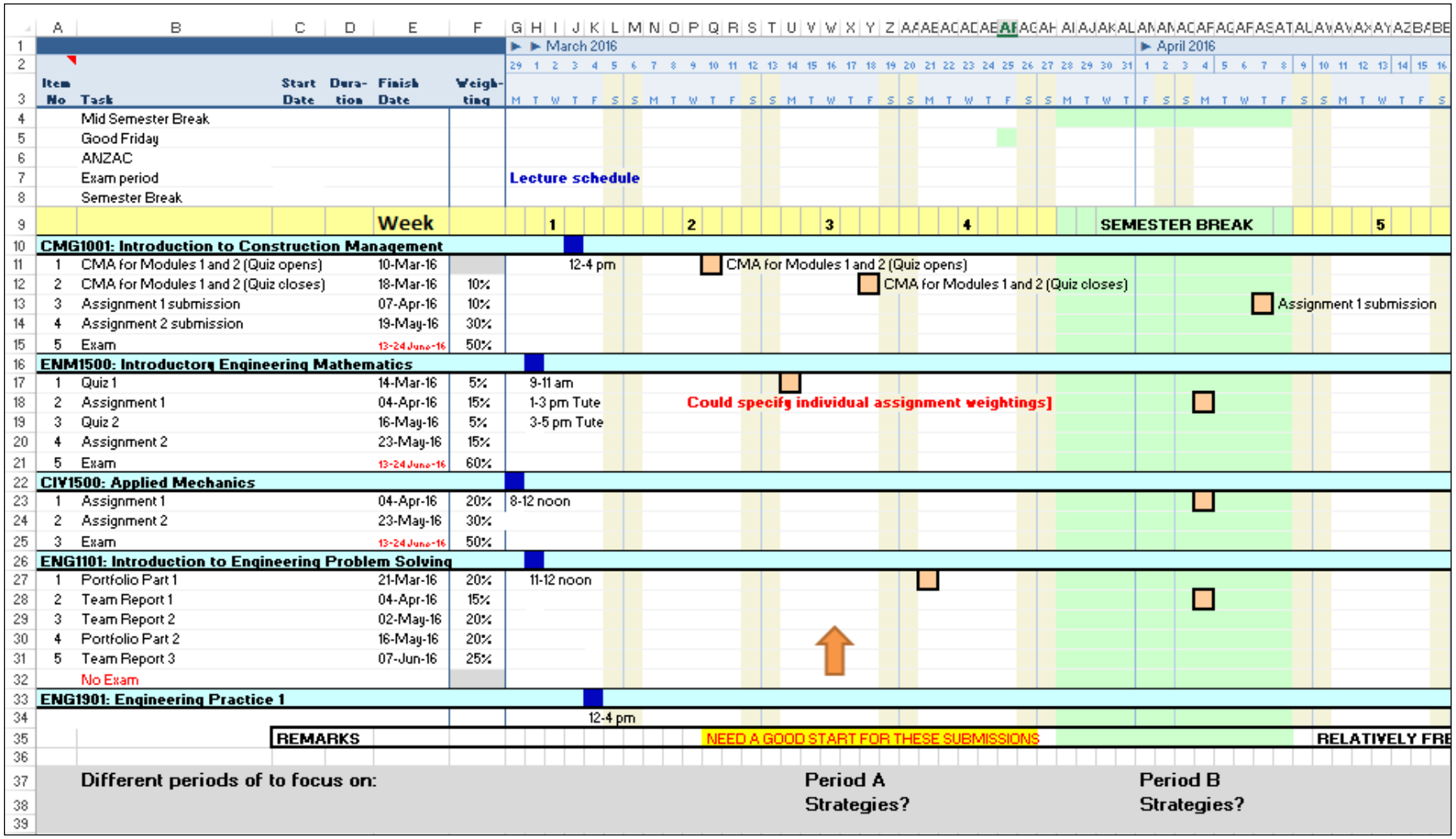

Figure 1: Integrated study time management plan (from Week 1 to semester break)

Note: All programs go live two weeks before so it would be useful to include 'Week -1' and 'Week -2' as well to improve strategic focus.

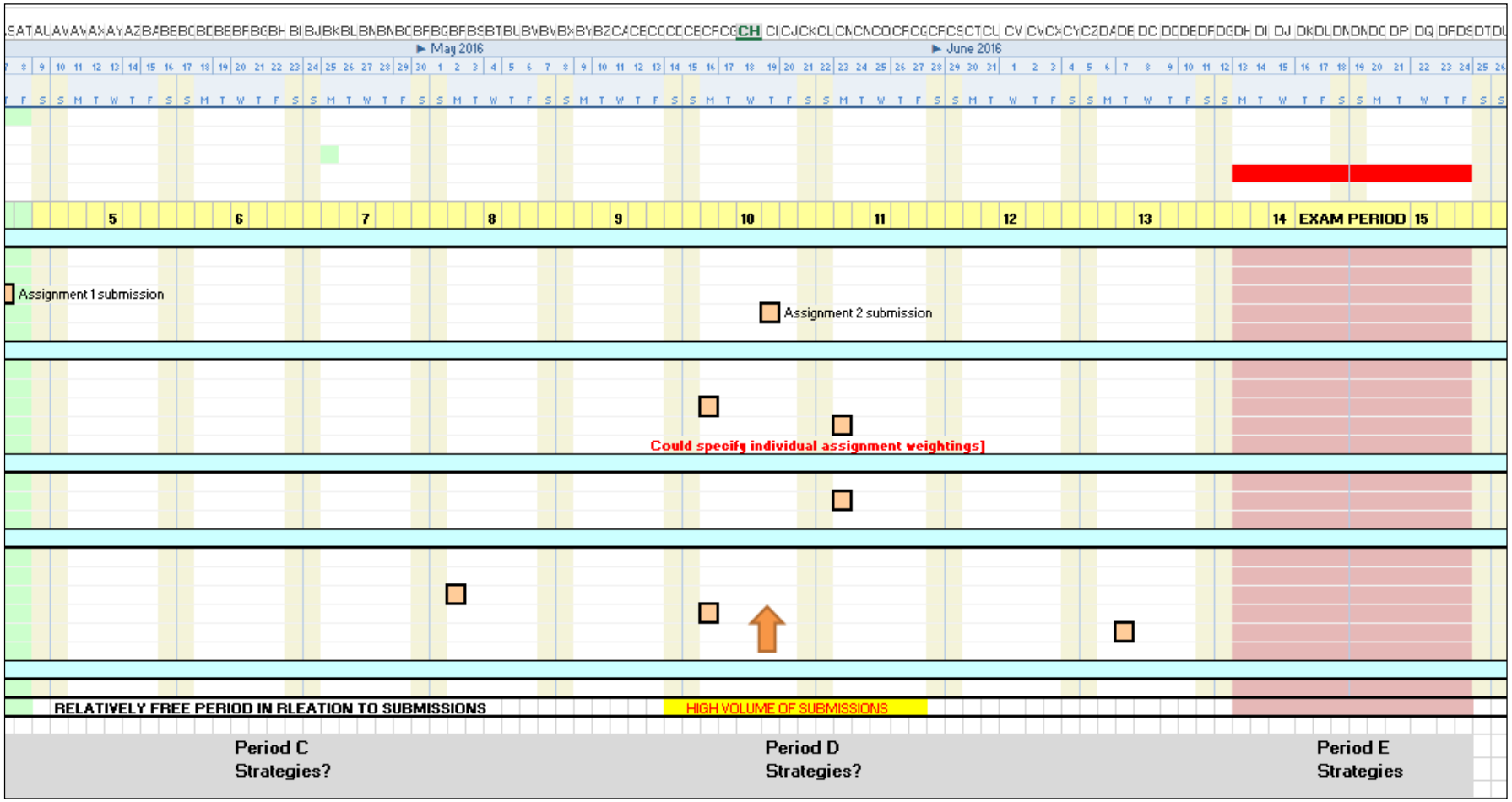

Figure 3: Integrated study time management plan (from Week 1 to semester break)

Note: Having a one week buffer before the exam period may help with study time management; in the alternative, there may be a need for at least one between exam papers

Finally, during the Exam period, ideally, it would be helpful if there is at least one free day between exam papers. This would call for a challenging optimisation exercise; the responsibility is with the university. The buffer of a week before the exam period starts extending the semester to 16 weeks as noted earlier may be helpful. One point to note is that exam timetables are rarely available in advance; this needs to be rectified for ease of time management.

5. Conclusions

According to the REST framework, students need to understand Scope as well Strategy to achieve Success when managing study time. The provision of a **personalised study time management plan** would be beneficial not only for students with good personality traits such as conscientiousness, self-regulation, etc. but also to students who are less inclined. Incentivising the process would assist particularly those who are less inclined to be conscientious and self-regulated. Early gratifications such as few marks for submission of a time plan would assist particularly in discipline related courses (such as those studying construction management). In this regard, academics have a role to play in incorporating such strategies when designing course curricula and summative assignments particularly in courses where time management is a learning objective. They could also help students to be better time managers by demystifying Scope. Additionally, in programs where such initiatives are not possible, students need to be inducted on time management (say by introducing the REST framework or otherwise).

Students need to pay attention to periods with a high intensity of assignment submission deadlines. They will need to develop appropriate strategies for overcoming such challenges by attempting to live through their study projects in advance. It would be necessary to take into consideration personal and family commitments (work, social events, extra-curricular activities) and other constraints (attendance at weddings, caring for the sick, religious events, etc.). Additionally, academics could design programs to avoid such high-intensity periods. Furthermore, students need to be encouraged to think strategically and bring about a change in their mindset that a semester is not just 15 weeks long but is 17 weeks if study portals and packages are made available to them (say two weeks) before the formal commencement of a semester. Perhaps, this pre-preparatory period is embryonic in nature as planning for the course could start early and strategies can be developed early. In fact, those who think strategically may be able to have a head start by being able to complete a substantial section of a course even before the start of a semester!

In summary, academics and university administrators can facilitate study time management by:

- providing a personalised study time management plans similar to the one shown in Figures 2 and 3;
- in the event a personalised study time management cannot be provided, a study time plan template could be provided to assists students to prepare their plans and develop suitable strategies for success;
- lecture timetables need to be rationalised clustering lecture schedules over a day or two rather than scattering across the whole week;
- optimising exam timetables so that at least a day or two is left between exam papers; in the alternative, a semester can be increased to 16 weeks with a week's buffer before the exam period;
- undertaking a time audit as part of the course curriculum design to check whether the scope of works is such that it does not exceed specified time commitment called for from students;
- eliminating high-intensity assignment submissions periods for first-year courses by judiciously de-intensifying submission dates of summative assessments; and
- inducting students on study time management by introducing the REST framework particularly in discipline-specific courses and preferably in time management programs for all students.

Accordingly, the responsibility for study time management is not necessarily in the hands of the students but should be jointly shared by the academics and the university administration by assisting

students to live through a project in advance and thereby facilitate academic success.

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