Adding Life to Your Calendar

Students often complain about the lack of work-life balance in graduate school. One suggestion for resolving this issue is to schedule time off, in a similar manner to how one might schedule a work meeting. The question I want to answer is, how much does regulating a student's work-life balance impact their level of happiness? If we were to force a student to block off a specific amount of time where they are not allowed to work, would the lack of control in the situation make them unhappier than any benefits they would get from the break? Or would these short, forced vacations improve student satisfaction? Aside from this question being highly relevant to the students in Info 290-005, surveys on student life have demonstrated that an overly intense workload can impact well-being (Panger et al., 2014). Higher workload is correlated with burnout in students, though the *feeling* that one's workload is too heavy matters more than the objective level of work (Jacobs & Dodd, 2003). It's possible that students forget to take time for themselves, or they feel guilty for doing so (Aziz et al., 2013).

Graduate students' mental health is currently a worldwide issue. The First International Conference on the Mental Health & Wellbeing of Postgraduate Researchers took place in Brighton, UK. just this year in May 2019[1]. A recent survey study across 26 countries and over 2,200 students showed that graduate students are six times more likely to experience depression and anxiety when compared to the general population (Evans et al., 2018). This study also showed that students who experience moderate to severe anxiety and/or depression are more likely to believe they do not have good work-life balance (Evans et al., 2018). Though this study did not demonstrate a causal effect, it suggests that there is the possibility of a strong relationship between work-life balance and well-being.

Prior work has noticed that students with families are more able to achieve work-life balance than students with no children (Martinez et al., 2013). It is possible that when a student is highly encouraged by the circumstances of their personal life to partake in non-school-related activities, it results in them managing some actual balance between work and life. With the existence of family obligations, life and work become segmented into specific times of day. Thus, Martinez et al. (2013) found that "purposeful management" of time was key to balance. For example, one of their interviewees stated, "But you just make the time; set a plan, there's definitely a balance between work, school, and helping family, even though my brother is an adult himself. It's really just about time and planning."

The goal of our study is to experimentally investigate how making time and setting plans, which would force some degree of work-life balance, could improve student happiness. The subjects in this experiment would ideally be graduate students randomly sampled from many universities around the world so that we can be more certain that any conclusions we find are generalizable, but this is not feasible within the constraints of our course. Instead, the subjects of this experiment would be graduate students randomly sampled from Berkeley's School of Information. Since we have students in different programs (e.g. PhD, MIMS, MIDS, MICS), we should block students based on their degree type. Students in the same program likely have

[1] "Being a PhD student shouldn't be bad for your health" https://www.nature.com/articles/d41586-019-01492-0

similar potential outcomes in our experiment. The type of work they do and classes they take is determined by the requirements of their program. So, it is possible that some programs tend to have less of a work-life balance than others, or at least, different schedule patterns. Also since there are different numbers of students in each program, if we had simply sampled across the entire I School graduate school population, we may end up with unequal numbers of each student type in the treatment group or accidentally place all PhD students in one group.

In this experiment, students in each degree program would be randomly placed into three different treatment groups over the same time period. This time period would be chosen so that it is as similar to a student's average school experience as possible, which rules out unusual weeks, such as Thanksgiving break, the first week of classes, or finals week. One group would be the control, where students continue on their lives with no intervention whatsoever. Another group would be asked to block out a Monday, Tuesday, Wednesday, or Thursday evening from 6 pm to 9 pm, where they are not allowed to do any academic or job-related work. Which evening out of these four that is chosen is also determined randomly for each participant in the second treatment group, so one could think of the second treatment group as an umbrella group for smaller treatment variations. A third group would be allowed to choose which evening out of the four they'd like to block out, while the time, which is 6 pm to 9 pm, would be the same. The difference between this group and the second one allows us to investigate how having some sense of control impacts students' happiness outcomes. This is inspired by previous work that has shown that perceived flexibility on the time and location of one's job improves work-family balance (Hill et al., 2004). Students would undergo treatment for four weeks.

Happiness and well-being is difficult to operationalize or define. Thus, we attempt to quantify it through numerical ratings on statements that ask about emotions and life satisfaction. Students would be provided a happiness survey that is similar to the one given by Panger et al. (2014). Some example questions are provided below.

- Indicate your agreement or disagreement with each statement by selecting the appropriate response (Strongly Disagree, Disagree, Slightly Disagree, Neither Agree nor Disagree, Slightly Agree, Agree, Strongly Agree). Please be open and honest in your responding.
    - In most ways my life is close to my ideal.
    - I am satisfied with life.
    - I have good work-life balance.
    - I am satisfied with the amount of time I have for my social life.
    - I don't get enough sleep.
- Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the past week by selecting the appropriate response (less than 1 day, 1-2 days, 3-4 days, 5-7 days).
    - I felt depressed.
    - I was happy.
    - I was unhappy.
    - I felt stressed.

This survey would be given at both the beginning and end of the experiment, because it is possible that resulting happiness levels matter less than *the amount of change* students

experience in happiness during the experiment's duration. These pre- and post-experiment surveys will also include questions on how students spend their free time. As examples:

- What are some activities you did during your free time in the past four weeks? Please separate each activity by a comma. _____
- Did you spend more of your free time indoors or outdoors in the past four weeks? (Choose one: indoors vs. outdoors vs. about equal)
- Did you spend more of your free time socializing or alone in the past four weeks? (Choose one: socializing vs. alone vs. about equal)

Finally, for students who were asked to block out the weekly 3-hour period for leisure, an additional free-response question will ask how they spent those times, whether they stuck to their assigned treatment, and if not, what challenges they faced. We can employ word or phrase clustering techniques on written responses to see how people tend to utilize free time. Previous work has shown that different settings and activity types can affect psychological well-being differently; for example, one study suggested that walking outdoors improves mental health more than surfing the Internet (Weng & Chiang, 2014). It is possible that students who spend their free time on certain activities experience more of a change in happiness than others, so these additional questions would bring in covariates that we can include in our analysis. Students who were unable to follow through with their assigned treatment and ended up working during the 3-hour period are excluded from later statistical analyses, but their reasons as to why they failed to follow through would still provide insight into the difficulties of having work-life balance.

There are some ethical considerations to think of here, because it's possible that these changes could negatively affect a students' ability to complete assignments on time. However, it is hoped that the time being used by the experiment, which is only 3 hours per week, is short enough that it would not be too disruptive if it were to have a negative effect on student productivity. We would also collect information on gender, financial stability, degree program type, age, and number of years spent at the I School. Happiness has been previously shown to vary across genders and age (Fortin et al., 2015), and in particular, the amount of satisfaction one experiences from leisure activities also varies across social class and age (Francken & Raaij, 1981). In addition, Berkeley PhD students have lower life satisfaction than Berkeley professional and master's students (Panger et al., 2014). Still, it is possible that what matters as well is the amount of time spent at the I School already. For example, it's possible that a first-year PhD student is more optimistic and naive than a jaded sixth-year PhD student, which allows them to overall be happier. Or inversely, a sixth-year PhD student does not have to take classes, which allows them more flexibility with their schedule than any student in their first two years at the I School.

Through a randomized study of I School graduate students, we can investigate the emotional impact of banning work from three hours in each students' week. The results of this experiment would illuminate whether structured time for "play" or activities unrelated to work, would improve students' happiness. A broader goal of this study would be to better understand ways we can improve graduate student mental health. It's possible that in the future, we will create events on our electronic calendars for breathers the same way we schedule meetings with our advisors.

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