

## Examining Off-Task Behaviors as Mediators of Long-Term Educational Interest

**PROJECT DESCRIPTION**

Motivation must be maintained through self-regulation over the long-term. This concept is significant in the contemporarily prevalent online learning settings that lack schedule and supervision characteristic of traditional in-class courses (Artino & Stephens, 2009). Students online face a challenge in regulating motivation to learn and in persisting in tasks required for satisfactory performance: the situation avails opportunities for supplemental learning (i.e., related web links), online “perks,” but also possible distractions (i.e., non-pertinent websites) (Sansone, et al. in press). The Regulation of Motivation and Performance Learning Online (RMAPO) Project takes these observations into account in examining regulation of motivation in online students upon the paradigm of the Self-Regulation of Motivation (SRM) model.

*Theoretical Orientation: Self-Regulation of Motivation (SRM) Model*

SRM departs from most theories of self-regulation and motivation in that it emphasizes the experience of interest in the regulation of motivation over time. Models that define motivation in terms of goals dominate the extant literature. Goals are the driving force behind motivation and regulatory mechanisms have traditionally named “extrinsic:” strategies contributing to the goal-striving process. Motivation furthermore depends upon perceived progress towards a goal, the degree of value of this goal, and the perceived degree of self-efficacy in goal realization. Evaluation of these factors determines whether motivation persists or terminates (Sansone & Thoman, 2005).

The inclusion of the experience of interest, therefore, warrants a theoretical reorientation. First, interest is assumed as a positive affective state accompanied by attention and focus. The term “intrinsic” motivation, for example, implies interest as a mediator in task persistence (Hidi

& Renninger, 2006). In SRM, interest is emphasized in terms of the phenomenological *experience*, rather than any set of cues that predict interest (Sansone & Thoman, 2005). Second, the presence or absence of interest determines the *manner* in which a task is experienced and performed, beyond the preconceived dichotomy of task completion or termination. If a task is interesting, then performance will persist. However, if uninteresting, then an evaluation is made to whether to continue: do potential extrinsic variable(s) that justify continued persistence exist? If no, persistence terminates, but if yes, two outcomes are possible: 1) continue status quo with hope of goal realization, or 2) the uninteresting task will be “made interesting” through regulatory strategies that potentially reconfigure the nature of the activity. In a paradoxical fashion, extrinsic motivators become intrinsic: in other words, the motivational experience becomes a fluid continuum of the “extrinsic” and “intrinsic.” Self-regulation occurs in the process of goal attainment, AND in maintaining one’s motivation itself through an interesting experience; that is, although initial motivation is necessary for self-regulation in task persistence, motivation itself is also regulated over time (Sansone et al., 1992; Sansone & Thoman, 2005).

### *Present Study*

The RMAPO project involved an online HTML lesson in a lab that was modeled on real computer programming course lessons. The lesson session was designed to be of sufficient length (90 minutes) to ensure that students needed to maintain their attention and effort over a period of time. In addition, to emphasize that they were responsible for managing their own time, students were told that at the end of 90 minutes the final survey would start whether or not they had submitted the assignment (which was to reproduce a sample web page). The computer unobtrusively recorded the sites (on-task and off-task) that students accessed while working through the lesson, when they accessed them, and the time spent on each.

The initial description of the lesson either simply described the skills to be learned (control), or further added how these skills could be used when creating personal or organizational web pages (utility value added). Initial results (Sansone, et al. 2010) suggested that, as compared to the control, the added utility value was associated with more active engagement while working on the lesson. Higher levels of engagement predicted greater interest at lesson's end. These results thus suggested that subsequent interest was associated with the use of optional on-task sites that enhanced the experience while working. However, the SRM model suggests that off-task behavior may also be relevant to regulating the experience, if these behaviors enhance the interest experience and thus allow a person to persist longer on the task.

An initial examination (Sansone, Butner, et al., 2011) of the time participants spent on lesson-related web sites (on-task) and on non-lesson-related websites (off-task) indicated that students in value added conditions spent more time on-task AND more time off-task prior to submitting the assignment, relative to the control group. In turn, greater time spent both on on-task sites and on off-task sites (prior to assignment submission) were associated with greater interest. The control group tended to be more likely to access off-task websites after assignment submission, whereas the utility value added groups tended to access off-task websites in a periodic pattern *during* the lesson, as well as after (Sansone, Butner, et al., 2011). Although the control scenario fits prototypical “good regulation” (i.e., “work first, play later”), it was also associated with lower interest, a phenomenon detrimental to motivational engagement over the long-term (Sansone, et al., in press).

Given the counterintuitive pattern that accessing off-task web sites was associated with greater interest for those more likely to value learning, the purpose of the proposed study is to identify and analyze what students were doing when they accessed off-task web sites, and

whether certain sites or patterns of access were more beneficial for interest. It is expected that, likewise with the differing pattern of temporal access of websites, a significant difference in the types of websites visited will be revealed, and moreover a potential interaction between the patterns of temporal access and types of websites accessed. Two potential beneficial patterns will be examined. The first pattern would reflect the use of off-task behaviors as a strategy to replenish diminished psychic resources through the creation of interest (Thoman, et al., 2011), where students were actually taking short breaks to access interesting, non-task sites (e.g., Facebook). The second potential pattern is that the time off-task actually reflects individuals seeking additional knowledge about the topic, but at sites that are not a part of the lesson, as might be the case for developing interest (Hidi & Renninger, 2006).

### **SPECIFIC RESEARCH ACTIVITIES**

The study will use the previously collected data from the RMAPO project. The present project will involve coding the off-task web sites visited by each participant into specific categories, and then examining when and how long participants accessed these sites overall and as a function of condition (control or utility value added).

#### *Participants*

Undergraduates from a large western university ( $n = 108$ , 70% female, 77% Caucasian) were recruited using an online Psychology participant pool in exchange for course credit. Their mean age was 24 (range 18 to 67) and their mean reported GPA was 3.3 (range 1.33 to 4.00). Participants were recruited over the course of two semesters. Three subjects were excluded from analyses due to incomplete measures.

#### *Procedure*

The first portion of the study required a completion of an online survey designed to assess background information and individual differences. Afterwards, participants were assigned an appointment for an in-person portion of the study.

In a lab designed to resemble a typical on-campus computer lab, participants were assigned to a workstation where they would ostensibly evaluate an online lesson in HTML programming. General instructions and procedures of the lesson (i.e. breaks during lesson) were provided by a “lab attendant” (actually a research assistant).

The actual lesson concerning basic HTML programming skills was identical in content and format for all participants, with the exception of an initial differentiation of “added utility values” that categorized participants into three groups: control (no added value), personal value, and organizational value. The possibility to access and use optional examples and exercises was presented, and participants were told that they must submit an assignment (reproducing a web page) before the 90-minute session ended. After the session, a post-lesson questionnaire was administered, which included a quiz on HTML knowledge (to gauge performance) and a measure of lesson interest (optional request for access code to an actual online HTML course).

### *Measures*

*Lesson-related (on-task) websites access*—log of all lesson-related sites visited

*Non-lesson-related (off-task) websites access*—log of visits to all other sites

*Performance*—post-lesson HTML questionnaire (quiz)

*Interest*—measure of interest; optional request for HTML online course access code

### *Analysis*

Websites will be coded as falling into one of the following categories: on-task (e.g., lesson examples), on-task/off-task blend (external HTML-related websites), social off-task (e.g.,

Facebook), personal off-task (e.g., news), and other (e.g., pop-up links). Once completed, this coding scheme will be merged with each participant's off-task website behavior over the 90-minute session. Evidence for each of the two proposed patterns described above will be examined, and whether these patterns are more or less likely to emerge in the utility-value added conditions.

### *Timetable*

*Fall*—initial coding and merging with data set; beginning analyses

*Spring*—finalize analyses; write up results; present poster

### **RELATION TO FACULTY SPONSOR'S RESEARCH**

The proposed project represents a direct extension of the research being conducted in Dr. Carol Sansone's lab regarding self-regulation of motivation in online learning.

### **EDUCATIONAL OBJECTIVES**

My educational objectives in undertaking this project are 1) successfully executing a research endeavor at an independent level, 2) contributing new and useful knowledge to the extant repertoire of learning in terms of motivation, self-regulation, and interest, and 3) to extend my abilities as a researcher by meeting the challenge of a Senior Thesis in Psychology. Moreover, this experience will be crucial in preparing me for future graduate education.

I strongly believe that my experience as a full-time research assistant in Dr. Sansone's lab in the year of 2010 – 2011—which included collectively (as a lab) producing and presenting a poster at the Undergraduate Symposium, College of Social & Behavioral Sciences Research Day, and publication in the Undergraduate Abstracts Journal—has provided with the essential tools, knowledge, resources, and communicative ability, which, in conjunction with my dedication in the field, will allow for success in this project.

## References

- Artino, A.R., & Stephens, J.M. (2009). Academic motivation and self-regulation: A comparative analysis of undergraduate and graduate students learning online. *Internet and Higher Education*, 12, 146-151.
- Hidi, S., & Renninger, K. (2006). The Four-Phase Model of Interest Development. *Educational Psychologist*, 41(2), 111-127.
- Sansone, C., Weir, C., Harpster, L., & Morgan, C. (1992). Once a boring task always a boring task? Interest as a self-regulatory mechanism. *Journal Of Personality And Social Psychology*, 63(3), 379-390.
- Sansone, C., & Thoman, D. B. (2005). Interest as the Missing Motivator in Self-Regulation. *European Psychologist*, 10(3), 175-186.
- Sansone, C., Zachary, J.L., Fraughton, T.B., Heiner, C., & Butner, J. "Initial orientations, interest and online learning: What students do is as important as why." Studying Motivation and Learning Online: Prospects and Challenges [American Educational Research Association]. Denver, CO. May. 2010.
- Sansone, C., Butner, J., Zachary, J., Fraughton, T., & Ripley, S. "Regulating the interest experience over time: The role of utility value, on-task, and off-task behaviors." What Explains the Development of Interest and Intrinsic Motivation for Learning? [European Association for Research in Learning and Instruction]. Exeter, UK. Aug. 2011.
- Sansone, C., et al., Regulating interest when learning online: Potential motivation and performance trade-offs, *Internet and Higher Education* (2011).
- Thoman, D. B., Smith, J. L., & Silvia, P. J. (2011). The resource replenishment function of interest. *Social Psychological and Personality Science*, 2, 592–599.