

AN EXPLORATORY INVESTIGATION OF COMPUTER SIMULATIONS, STUDENT PREFERENCES, AND PERFORMANCE

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ABSTRACT

Previous studies have found no correlation between general student performance (GPA, exam performance) and performance on computer-based simulations. Additionally, there have only been limited examinations of how student learning preferences affect their performance. This paper describes an exploratory study of these two issues. Our results find a relatively strong correlation between exam performance and simulation performance. Surprisingly, we find a *negative* correlation between student preference for working with others and performance on the group simulation exercise. Implications are discussed.

BACKGROUND

There have been mixed results for the relationship between simulation performance and cognitive outcomes, generally measured as exam performance. Research by Wellington and Faria (1996) supports the idea that good simulation performance is consistent over time but found no significant relationship between GPA or team cohesiveness and performance.

The objective of the exploratory study described here was twofold. First, we were interested in exploring the relationship between simulation performance and exam performance. It is reasonable to expect both simulation performance and exam performance to be driven by some of the same factors. Simulations require extensive reading and cognitive effort not only in quickly learning the "rules" of the simulation, but also how to integrate the marketing information into "real" decision making dynamics. Student motivation and effort is essential for success in a simulation. This variable, of course, should be a strong determinant of exam performance too. While it is possible to argue that simulations and exams test different skills, the lack of a relationship between the two is problematic in the sense that it suggests that "being a better student" in traditional terms (better

exam performance) does not translate to better simulation performance. Strong evidence that simulations are developing other skills (other than developing marketing knowledge) are needed before this issue can be laid to rest. Second, we wanted to explore the impact of some student characteristics (learning preferences, motivation, etc.) on performance¹. A simple study was conducted to examine these two issues.

RESULTS & DISCUSSION

Unlike many previous studies, this exploratory investigation suggests that simulation performance is correlated with exam performance. And those students that do perform better are those with a higher preference for learning by reading.

These results raise several questions. Do students perform better because they must still rely heavily on reading in order to understand the "rules" of the simulation, to interpret the results, and to gain sufficient marketing background and knowledge from the text? Are we as educators kidding ourselves by thinking that we provide a more "kinesthetic" learning experience when those who seem to perform the best have a low preference for working with others and a high preference for reading? Surprisingly, students with a high preference for working with others seem to perform more poorly. Is this a situation where the student recognizes their weakness and attempts to compensate for it by working with others? What impact does this have on the better performing student that has a low preference for working with others?

REFERENCE

Wellington, William J. and A.J. Faria (1996) "The Use of Simulation Games in Marketing Classes: Is Simulation Performance Due to Luck or Skill?" *Journal of Marketing Education*, Summer:50-61.

A copy of the full paper is available from the authors on request.