

## **Abstract**

The Covid-19 crisis has shifted much student learning onto online platforms such as online discussion boards. Building on a growing body of literature, this paper investigates how students' intrinsic versus extrinsic motivation to learn and learning versus performance orientation affect their behaviours, experiences and quality of work in an online discussion board, Perusall. The results of this preliminary piece of research shows that intrinsic motivation is positively related to number of posts students make, the quality of the posts, and student engagement. Furthermore, having a learning rather than performance orientation increased their collaborative learning online. These findings suggest that instructors can aim to shape their students' learning motivation and orientation to maximize learning opportunities and benefits from an online discussion platform.

Keywords: Online learning, student motivation, learning orientation

## **Extended Abstract**

Impact of Student Learning Motivation on Behaviours, Experiences and Performance in Online

Discussion Board

## **Introduction**

The Covid-19 pandemic has shifted traditional face-to-face learning to be moved to the online space (e.g., Miller, 2020; Burke, 2020). The online discussion board has become one of the key asynchronous online learning platform given that face-to-face classes have been limited. Much research has documented the role of students' individual learning motivation in their

online learning behaviours and learning strategies. Building on this growing body of literature, this paper investigates how students intrinsic versus extrinsic motivation to learn and learning versus performance orientation affect their behaviours, experiences and quality of work in an online discussion board, Perusall.

We propose that understanding students' underlying motivation and inclinations is important as we design more effective online pedagogies. In fact, if we can shift students' underlying learning motivation and inclination before the start of the course, we may be more able to create better learning experiences online, and maximize student learning in online discussion boards.

## **Methods**

64 undergraduate students enrolled in a leadership development course had to read a short excerpt on leadership on Perusall, and post their thoughts based on a discussion prompt on Perusall. They also participated in a pre-course survey tapping into their learning orientation (intrinsic versus extrinsic), and a post-course survey measuring their online learning behaviours and experiences on the online discussion platform Perusall.

The learning motivation measures are adapted from DeRue & Myers (2011). The "intrinsic self" learning motivation measure tapped into participants' own individual motivation to learn, and includes items such as "I learn because I find it intrinsically satisfying. The "intrinsic other" learning motivation measure includes items such as "I learn because it will make me more effective in helping others. The "extrinsic other" learning motivation tapped into participants' extrinsic motivation to learn to meet others expectations, and included items such as "I learn because others expect me to". The "extrinsic self" learning motivation tapped into

participants' extrinsic motivation to learn for career and image enhancement. And included items such as "I learn because it will make me look good to others".

We also adapted learning versus performance orientation measures and measured 3 different constructs: learning orientation, performance orientation and avoiding performance failure orientation. Items under the learning orientation includes "I like learning because I like the challenge", "I like learning because I appreciate the opportunity to develop new skills". Items under the performance orientation includes "I like to prove my ability to others", "I want to show my ability others". Items under the measure for avoiding performance failure includes "I avoid a task if I will appear incompetent" and "I believe that avoiding risk of failure is more important than learning".

The dependent variables measured were:

- 1) Number of posts students made on the discussion forum
- 2) Quality of posts as graded by the instructor based on a grading rubric
- 3) Self-reported engagement levels on the discussion forum
- 4) Self-reported experience of collaborative learning on the discussion forum. Sample items are "I felt part of a learning community in my Perusall group", "I was able to develop new knowledge from other members in my group", "collaborative learning in my group was effective on Perusall".

## **Results**

Regression analysis was used to test if intrinsic versus extrinsic learning motivation predicted the number of posts students made. The results of the regression indicated that two of the predictors marginally explained 25.5% of the variance ( $R^2 = 0.255$ ,  $F(4, 63) = 5.047$ ,  $p =$

0.01. Particularly, it was found that intrinsic self motivation ( $\beta = .0.73$ ,  $p = 0.079$ ) and intrinsic other motivation ( $\beta = .0.75$ ,  $p = 0.063$ ) was positively related to the number of posts students made.

Regression analysis was used to test if intrinsic versus extrinsic learning motivation predicted the quality of posts students made. The results of the regression indicated that two of the predictors marginally explained 26.7% of the variance ( $R^2 = 0.267$ ,  $F(4, 63) = 5.36$ ,  $p = 0.01$ ). Particularly, it was found that intrinsic self -motivation ( $\beta = .0.241$ ,  $p = 0.012$ ) was positively related to the quality of posts students made. Interestingly, extrinsic learning self motivation was negatively related to quality of posts ( $\beta = -0.166$ ,  $p = 0.005$ ).

Regression analysis was used to test if intrinsic versus extrinsic learning motivation predicted the self-reported engagement levels. The results of the regression indicated that one of the predictors marginally explained 26.5% of the variance ( $R^2 = 0.265$ ,  $F(4, 63) = 5.31$ ,  $p = 0.01$ ). Particularly, it was found that intrinsic self -motivation ( $\beta = .0.502$ ,  $p = 0.001$ ) was positively related to the engagement levels.

Regression analysis was used to test if learning versus performance orientation predicted the students' collaborative learning experience. The results of the regression indicated that two of the predictors marginally explained 31.5% of the variance ( $R^2 = 0.315$ ,  $F(3, 63) = 9.206$ ,  $p < 0.001$ ). Particularly, it was found that learning orientation ( $\beta = 0.767$ ,  $p < 0.001$ ) was positively related to the collaborative learning experience. Performance orientation ( $\beta = -0.632$ ,  $p < 0.001$ ) was negatively related to collaborative learning experience.

## **Discussion**

The overall pattern of results indicated that intrinsic learning motivation, both learning for the sake of the self or for others is positively related to the number of posts students write on the online discussion board. Intrinsic learning motivation for the self also explains the quality of posts that students make, and explains their self-reported engagement levels on Perusall.

This preliminary piece of research also demonstrated that students with different motivations (learning versus performance versus avoiding failure), experience the online discussion experience differently. Specifically, students scoring higher on learning orientation reported that they experienced more collaborative learning, whereas students scoring higher on performance orientation reported that they had experienced less collaborative learning on Perusall.

The practical implications for teaching and learning are profound. The findings suggest that instructors can devise ways to trigger intrinsic rather than extrinsic learning motivation before the start of an online course which incorporates an online discussion board. They also suggest that instructors can shift students from a performance oriented mindset to a learning oriented one to maximize the experience and benefits of collaborative learning.

## References

Burke, L. (2020). Colleges move online amid fears. *Inside Higher Ed*.

<https://www.insidehighered.com/news/2020/03/09/colleges-move-classes-online-coronavirus-infects-more>

Miller, M.D. (2020). Going online in a hurry: what to do and where to start. *The Chronicle of*

*Higher Education*. <https://www.chronicle.com/article/Going-Online-in-a-Hurry-What/248207>