

## 1.2. Improving learning in technological-advanced societies

### **SP - (18574) - AN INVESTIGATION OF THE POTENTIAL OF PERSONALISED NUDGING TECHNIQUES ON; AMOTIVATION STATE, ASSOCIATED NEGATIVE BELIEFS AND SUBSEQUENT OUTCOMES OF AMOTIVATION IN FIRST YEAR UNDERGRADUATE STUDENTS**

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#### **Short Abstract**

#### **Introduction**

Corpus, et al., acknowledge research into motivational decline in the first year of college is critical for understanding retention issues, (2020). For new undergraduates, motivation to study has shown to be an issue, Baik et al. report over a third expressing difficulty in the area (2015). Leroy & Bressoux echo the sentiment, calling for investigation into academic amotivation and the relationship to performance (2016). Amotivation consists of four subsets of negatively held beliefs around, Ability, Value, Effort and Task Characteristics (Legault et al., 2006).

This research is an experimental intervention into the potential of short support messages, designed leveraging motivational research, to operate at the module level. The targeted messages leverage 'nudging techniques' focused on academic amotivation.

#### **Research Questions/ Research Goals**

An investigation of the potential of personalised nudging techniques on; amotivation state, associated negative beliefs and subsequent outcomes of amotivation in first year undergraduate students.

#### **Objectives**

1. A literature review to explore the current state of the art in educational amotivation research, the use of nudging technologies in education and intervention studies in both areas.
2. Through initial experiment investigate the potential of amotivation focused nudges targeting amotivation levels and subsequent outcomes.
3. Develop a model of personalised amotivation-focused nudges based on student profiles to investigate the potential to impact on individual's personal amotivation profile.
4. Develop a framework to support the intervention process, artefacts and instruments to allow further development and analysis of focused nudging interventions on amotivation. Deploy the framework and analyse outcomes.

#### **Methodology**

The goal is to investigate the potential of personalised nudges as a technique to alleviate aspects of amotivation. According to Denscombe, "An experiment is an empirical investigation under controlled conditions designed to examine the properties of, and relationship between, specific factors" (2017). In this case the factors are level and type of amotivation, nudging interventions and outcomes. A two phase approach is being taken, an initial pilot study with approx. 60 students investigated if targeted nudges have an impact on general amotivation. Subsequently, with approx. 400 first year undergraduates, to investigate if the 'ability' and 'value' sub-components of amotivation can be targeted with appropriately designed nudges leveraging motivational research.

#### **Results**

At this time the first experiment is complete and has shown statistically significant impact on reducing amotivation. A framework has been designed to match nudge types with specific aspects of 'ability' and 'value' amotivation and related performance. This framework is to be deployed, as discussed above, in late January 2022 for four weeks and will provide further results for the conference.

### **Final Considerations**

To date this experiment has shown significant results in an area of extreme importance for higher education. Significant amotivation reduction in amotivated students while not impacting non-amotivated students. The second experiment in early 2022 will see if targeting can be further extended to the sub-categories of amotivation, 'value' and 'ability'. I believe understanding the model alone is of value to the ICET 2022 audience and would welcome the opportunity to share it.

### **References**

#### **References**

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