

How would you like to learn?

Learning preferences, self-regulated learning skills, personality traits, and course satisfaction in the era of post-COVID-19

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Introduction

Up to COVID-19, most university lessons were performed face-to-face. Nowadays, many students worldwide have had to experience learning in an online learning environment. This reality, in which students were required to learn online, is very different from a reality in which a student could choose to do so. This experience may influence students' Self-Regulated Learning (SRL) level (Hensley et al., 2021) and their learning method preference.

➤ Purpose of Study

This study aims to shed light on students' learning-model preferences by identifying their learning model choice and its relationship to their SRL level, personality traits, and course satisfaction.

Derived from the goal are the following research questions:

1. What is the relationship between students' SRL level and their learning model choice?
2. What is the relationship between students' big five personality traits and their learning model choice?
3. How did students' learning model choice affect their course satisfaction?

Theoretical background

➤ The Big Five Personality Traits

In personality psychology, researchers built a taxonomy to examine an individual's personality traits in a simple way. The number **Five** represents the five found factors of personality. **Big** represents the broad number of personality characteristics for each factor. It is known that specific personality traits can predict specific behaviors (John & Srivastava, 1999). This study may provide insight into correlations between these traits to learning-model preferences.

The Big Five personality traits are:

1. **Openness\Originality\Open-minded.** Depth, originality, and complexity of an individual's mental and experiential life.
2. **Agreeableness\altruism\affection.** Prosocial orientation towards others, including altruism, trust, and modesty.
3. **Extraversion\energy\enthusiasm.** Social and material world engagement, including sociability, activity, assertiveness, and positive emotionality.
4. **Neuroticism\emotionality\nervousness.** Negative emotionality like feeling anxious, nervous, sad, and tense.
5. **Conscientiousness\constraint\control of impulse.** Goal-directed behavior by thinking before acting, delaying gratification, planning, organizing, and prioritizing tasks.

➤ Self-Regulated Learning

"self-generated thoughts, feelings, and actions, which are systematically oriented toward attainment of students' own goals." (Boekaerts, 1999; Zimmerman, 1989).

Self-Regulated Learning includes the following processes:

- **Forethought** What happens before the learning?
 - Task analysis.** The student decides what is his learning goals and defines strategies to achieve them.
 - Self-motivation.** Student's belief of his capability to learn, the consequences of the learning, and the value of the task.
- **Performance** What happens during the learning?
 - Self-control.** Student's strategy to learn.
 - Self-observation.** Student's self-observation of how he is learning and what is best for him (like learning alone or with friends).
- **Appraisal** What happens after the task is performed?
 - Self-judgment.** Student's comparison with the standard, and his belief of why he had mistakes or success.
 - Self-reaction.** Student's satisfaction, adaptation to the learning, and adjustments.

(Zimmerman, 2002)

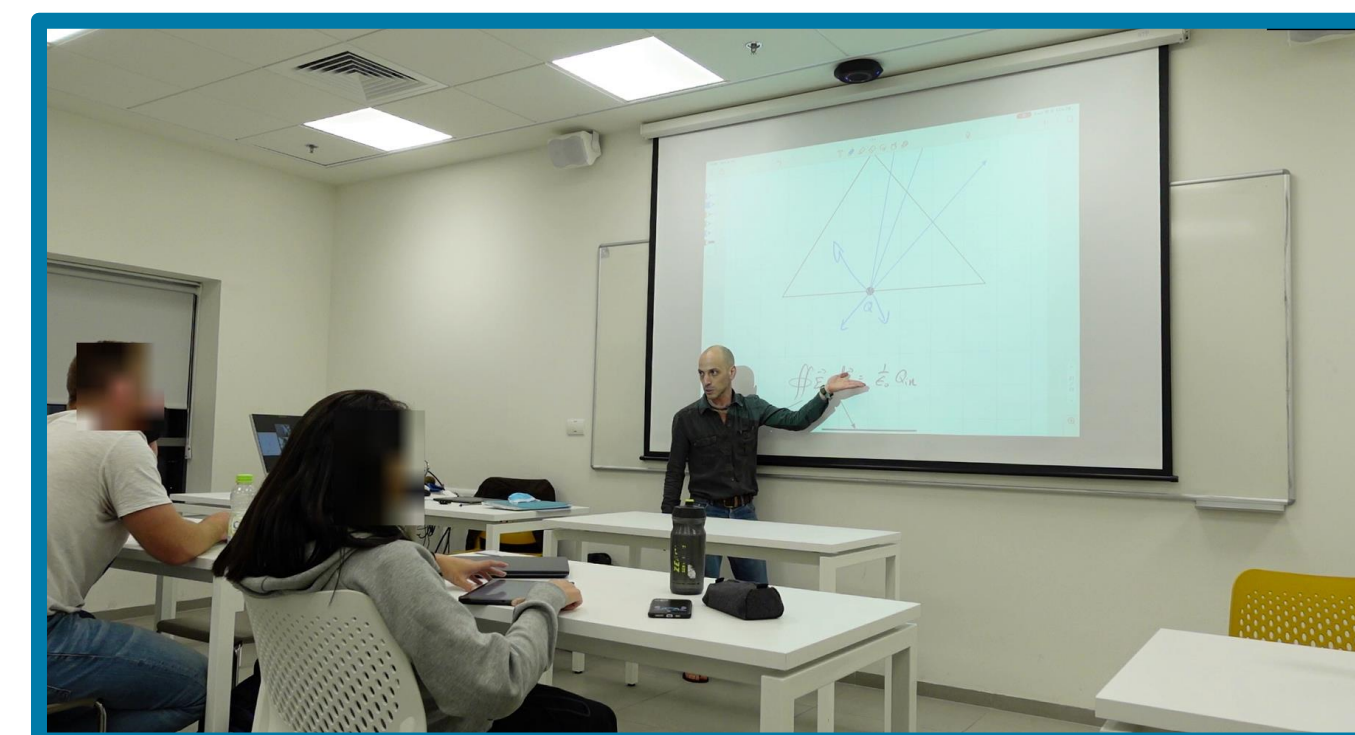
Method

Participants. Sixty university students at the Technion (Israeli Institute of Technology), who are enrolled in one of the hybrid reinforcement physics courses, Mechanics or Electricity & Magnetism.

Research Design. Students are informed that they have three ways in which they can participate. They are not obligated to one of the three ways, and they can change their decision throughout the course.

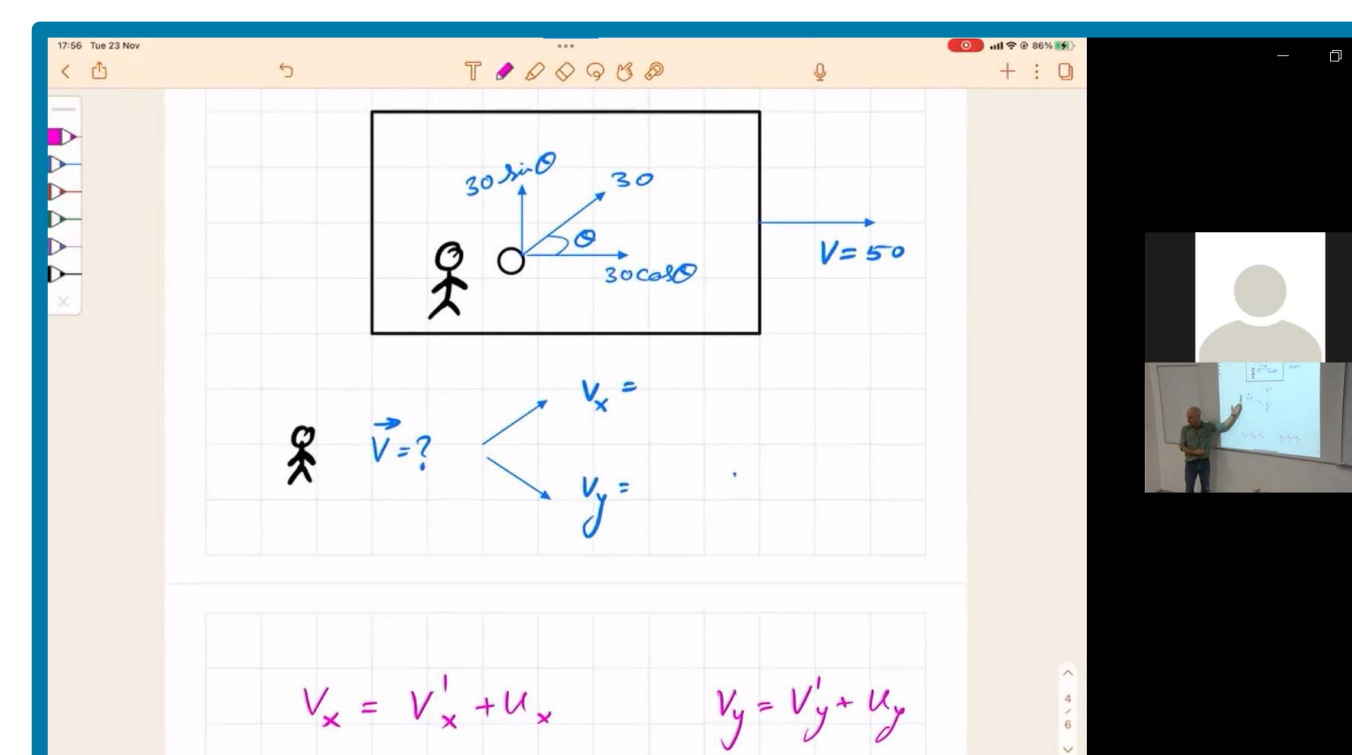
Research Tools include (A) Mini International Personality Item Pool (Donnellan et al., 2006), (2) the motivated strategies for learning questionnaire (Pintrich, 1991), (3) Course satisfaction, and (3) weekly qualitative data and semi-structured interviews.

➤ Learning Modes Offered to the Students



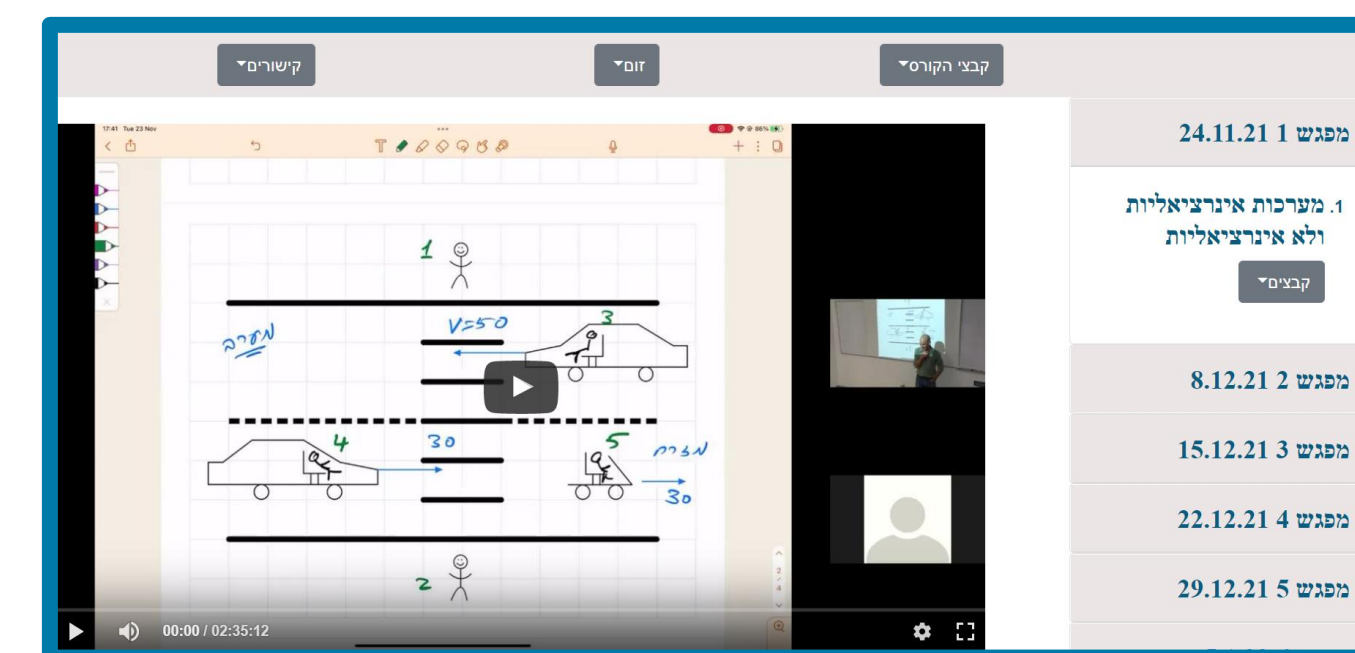
Face to Face

The lessons are held in a classroom, an iPad is used as a "whiteboard" shown with a projector.



Synchronous Online

There is a camera filming the teacher, a remote microphone, and the "white board" is shown with a screen share to Zoom application.



Asynchronous

All lesson's recording is available on the course's webpage, along with all writing given on the whiteboard as a pdf file.

Preliminary results

Students' opinions in the beginning of the course

➤ Reasons for preferring Face to Face learning

- Needed for human contact
 - More focused
 - Comfortable asking questions
- "Learning in the classroom allows contact with the lecturer, whether eye contact to confirm comprehension or verbal contact. Developing a short discourse about questions that make the difference between understanding and building confidence and an appeal regarding the understanding..."

➤ Reasons for preferring Synchronous Online learning

- Time saving.
 - Opportunity to be present if circumstances doesn't allow arrival.
- "... it's better for me to rest at home instead of going to the Technion (live in the area). I can connect to Zoom two minutes before and it saves me time to do other things."

➤ Reasons for preferring Asynchronous learning

- Closing gaps
 - More relaxed in the synchronous lessons, knowing they can see the recording.
- "...Using recordings (in addition to synchronous learning) helps to fill gaps that I didn't understand during the lesson, is a good repetition of important points said (and I did not have time to write), and gives confidence that if I want, I can repeat what was in the lesson easily..."

Significance of study

This study may contribute to the literature on Self-Regulated Learning and personality traits of students learning face-to-face and online in the post-COVID-19 era. This study may provide insights for universities to consider which teaching model they would like to present for future students.

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References

- Boekaerts, M. (1999). Self-regulated learning: Where are we today. *International Journal of Educational Research*, 31(6), 445–457.
- Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The mini-IPIP scales: Tiny-yet-effective measures of the Big Five factors of personality. *Psychological Assessment*, 18(2), 192.
- Hensley, L. C., Iaconelli, R., & Wolters, C. A. (2021). "This weird time we're in": How a sudden change to remote education impacted college students' self-regulated learning. *Journal of Research on Technology in Education*, 1–16. <https://doi.org/10.1080/15391523.2021.1916414>
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives (Vol. 2). University of California Berkeley.
- Pintrich, P. R. (1991). A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ).
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64–70.