A close-up of a logo

Description automatically generated with medium confidence**A blue letter j on a black background

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**{{student\_name}}**

**Your Profile:**

**Motivation and Student Engagement in Online Mathematics Homework**

Thank you very much for participating in the study on *Motivation and Student engagement in online mathematics homework*! In this document, you will gain insights into your profile based on your motivation and engagement reports during the course{{course}}. Moreover, information is provided regarding the beneficial role of motivation and engagement for learning, as well as regarding evidence-based practices on enhancing them.

|  |  |
| --- | --- |
| 1. **Who participated with you?** | 1. **What are your scores?** |
|  | In this section, you will find graphs with your average scores in motivation and engagement. Moreover, in these graphs, you can find the respective average scores of the whole study population.  ***B1. How are these scores calculated?***  These scores have been calculated based on the average of your responses to the surveys. The responses ranged from 1 “Strongly disagree” to 6 “Strongly Agree”.  Please, note that for the surveys, which you did not answer, you will receive information about the whole study population only. More about the measurement of motivation and engagement can be found [here.](https://docs.google.com/document/d/1B060w0J3Nnjmh13pOi0oXKsR0uLhnCfkyqvF2f9AuKI/edit?usp=sharing) |
| ***B2. Motivation*** | | |
| Motivation was measured at two-time points: at the beginning and the end of Q3. The two following aspects of motivation were examined: a) *Expectancy Beliefs* and b) *Value Beliefs* (for more information about these aspects, please can read **Section C**). Figures 1 and 2 show your scores in comparison with the whole study population. | | |

**Figure 2**

**Figure 1**

***B3. Student Engagement***

{{num\_ae\_MyScore\_timePoint3}}

{{num\_ae\_MyScore\_timePoint2}}

|  |
| --- |
| In this study, engagement was measured during online mathematics homework in Grasple. Engagement was measured at four-time points during Q2 (Weeks 3-7). You were asked to report on your engagement right after you had completed your practice in Grasple.  The three following dimensions of student engagement were examined:  a) Affective Engagement, b) Behavioural Engagement, and c) Cognitive Engagement (for more information about these aspects, please can read **Section C**). Figures 3, 4, and 5 show your scores in comparison with the whole study population.  **Figure 4** |

**Figure 5**

**Figure 3**

***B4. Take a minute to reflect on your scores***

Before you read the next two sections, please take a minute to think about your scores as illustrated in the tables and figures above. In particular, think about:

* How high or low your score is at a specific time point in an absolute scale (0-6)?
* How high or low your score is at a specific time point compared to the average score of the whole study population?
* How does your score change across different points?
* How is this change related to the change of the whole study population score?

1. **What do motivation and student engagement mean and why would I want to improve them?**

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**Value Beliefs**

“Do I Want to Do This Task?”

**Expectancy Beliefs**

“Can I Do This Task?”

*If your score on Values Beliefs is high, then you believe that your mathematics homework is very useful for your studies.*

*If your score on Expectancy Beliefs is high, then you believe that you are able to successfully work and complete your mathematics homework.*

* Strong motivation requires both expectancy and value beliefs to be high.
* High expectancy and value beliefs (thus high motivation) have a positive impact on ***student engagement*** and ***performance***.

**Behavioural engagement**

The extent to which you exert effort during learning activities.

**Affective engagement**

The extent to which you feel activated during learning activities.

**Cognitive engagement**

The extent to which you are absorbed during learning activities

*If your score on Cognitive Engagement is high, then you are very focused and concentrated when solving your mathematics homework. Furthermore, you think about ways to solve the exercises and connect your homework with what you already know.*

*If your score on Behavioural Engagement is high, then you are careful when solving mathematics homework and try hard to complete all the exercises.*

*In case your Affective Engagement is high, then you feel enjoyment and interest when working on your mathematics homework. Moreover, your levels of alertness are high, while boredom is low.*

If your scores on all the engagement components are high, then your engagement is more “powerful” resulting in better performance in your mathematics course.

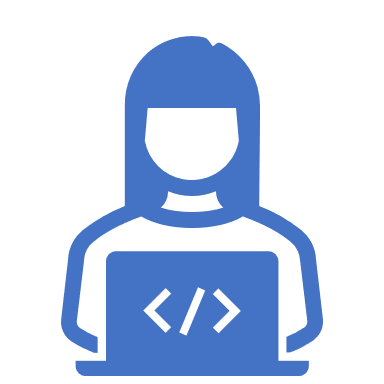
**Mathematics Achievement**

1. **How can you improve your motivation and engagement?**

In this section, you will find some general strategies which -when practiced altogether- have been found effective by previous research for improving motivation and engagement in homework.

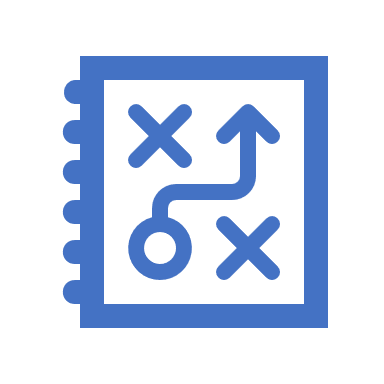
***Set goals***

Setting goals can help you better organize your studying and have more control over your learning progress. Goal setting frameworks (e.g., find a video about SMART goals [here](https://www.youtube.com/watch?v=i0QfCZjASX8&ab_channel=2MinuteClassroom)) can facilitate this process by describing useful features for effective goal setting.

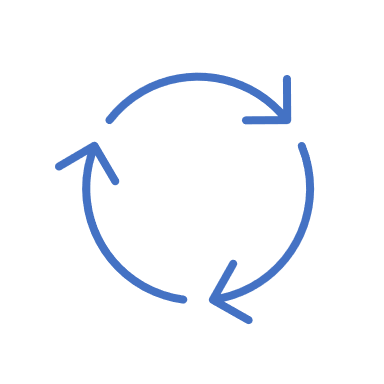
* ******As an exercise, you could think about the next important mathematics topic you will have to learn. Try to set three goals for what to study and three goals for how to study. You could use the SMART framework to create your goals.

***Think about the relevance of the mathematics task***

Understanding the usefulness and relevance of the mathematics task can be beneficial for motivation and behavioural engagement. Research studies suggest that the two following exercises can support this understanding:

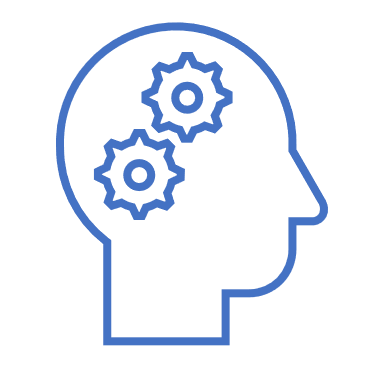
* Ask your mathematics teacher or an older student to share with you information about the usefulness and relevance of the learning material for your studies.
* ******Try to generate your own arguments that prove the usefulness and relevance of the learning material for accomplishing your current and future goals.

***Pursue working on challenging tasks***

Working on new and (appropriately) challenging mathematics tasks and trying to overcome possible difficulties to succeed in the tasks provide you with evidence about your skills and abilities which can boost your motivation.

***Ask for feedback***

Seeking more critical feedback or asking for clarifications on existing feedback can act as a practice that drives enhanced motivation and engagement. Constructive feedback is specific, and includes justifications and suggestions for improvement.

* Next time you study mathematics with your peers you could practice seeking and giving constructive feedback!

***Re-think failure***

Making mistakes is an important part of the learning process. Some students view effort and persistence, asking for help, and adjustment of strategies as necessary steps for growth and achievement. These students adopt a “growth mindset” towards learning and are more likely to successfully respond to academic challenges. You can learn more about growth mindset [here](https://www.youtube.com/watch?v=M1CHPnZfFmU&ab_channel=JohnSpencer) and [here](https://www.youtube.com/watch?v=I2ttL1kgZRk&ab_channel=PearsonHigherEducation).

This report was developed by PRIME Research Group. For more information or questions, please contact E.Papageorgiou@tudelft.nl