

THE LOG AS A TOOL FOR STIMULATING LEARNING MOTIVATION

E.-S. INDREICA¹

C. TRUȚA²

Abstract: *In our teaching, we have been increasingly confronted with phenomenon of student demotivation. Leaving aside the multitude of socio-economic factors, we try to find, at the micro level, viable solution to diminish this phenomenon. Starting from the premise that the creation of a "log" (during a task) would stimulate learning motivation, an experimental type of research was achieved, which took place during the classes from two different subject matters attended by different year students, in the academic year 2016-2017. The obtained results confirmed the hypothesis and constitute a source both for optimizing the didactic approach and for starting other investigation.*

Key words: *learning motivation, the log.*

1. Introduction

Students' demotivation to participate in courses or to accomplish learning tasks has become a worrying phenomenon, as the decline in learning motivation leaves room for "bulimic learning" (i.e. students learn 2-3 days before the exam). This phenomenon, in turn, entails a decrease in the development of professional skills. Less and less students engage in tasks / homework during the semester, most of them making them in a superficial manner before the deadline. The abandonment of the teacher's task is done in favor of another activity, as shown by the studies on the motivational area and on the time management dedicated to the individual study (Indreica & Cazan, 2016).

The literature is abundant in writings that address the concept of motivation, from a variety of aspects - from specific curricular areas (Vaino, Holbrook & Rannikmae, 2012; Lo, Hew & Chen, 2017) to creative proposals (Jelle, 2017). Even though motivation can be determined by learning styles (Remali, 2013; Sengodan, 2012), it can also be cultivated through learning strategies (Cazan & Aniţei, 2010) or through self-regulation of learning (Cazan, 2013), individualized time management program (Indreica, Cazan, & Truţa, 2011), or art therapy program (Magher, 2005). All concerns for optimizing the learning process in order to achieve performance show the need for an individual study.

Motivation studies also demonstrate viable solutions. In the study of Marisa & Putri (2017), the effectiveness of individual counseling has been demonstrated as having a significant impact on improvement of the learning motivation in students. Another study (Indreica et al., 2011) approaches performance optimization by using an individual time

¹ Transilvania University of Braşov, elena.indreica@unitbv.ro

² Transilvania University of Braşov

management program, based on the learning style. But these solutions are difficult to manage, given the large number of students who need motivation to study individually. Other studies show the role of the online environment (Thangagiri, 2016; Chauhan & Upamannyu, 2017; Huang, Hood, & Yoo, 2013). Motivational support in Web 2.0 learning environments: a regression et al., 2013; Cazan & Indreica, 2009) in cultivating learning motivation, but access and use by Romanian students of e-learning platforms is quite low (Indreica, 2014).

2. Purpose of the Study

Motivation for learning is the main resort in achieving performance. The individual study supports motivation of learning. So, what can support the individual study? How does the process of doing homework unfold to support the individual study? Can the simple fact of describing the process of the investigative approach after each work stage can be a motivational incentive to learn more? The assumption of the investigative approach was that the creation of a “Logbook” during the preparation of homework will support the individual study, thus stimulating the motivation of learning and leading to performance on the exam.

General hypothesis: The consistently and complexly preparation of the logbook during the elaboration of homework will be positively associated with the performance in the exam.

Secondary hypotheses: H 1 - there is a positive correlation between log writing and preparation of homework; H 2 - there is a positive correlation between the writing of the log and the performance in the exam; H 3 - there is a positive correlation between the preparation of homework and the performance in the exam.

3. Method

3.1. Sample and Procedure

The participants were 75 students at Transilvania University of Brasov, coming from two groups elected by drawing lots from 11 groups from the courses held between October 2015 and June 2016. The first group included 40 first-year students that attended Developmental Psychology course, who took the exam in the 2016 winter exam session; the second group included a total of 35 students from the Postgraduate Second level of Pedagogical Training Module following the Creative Psychopedagogy course, who took the exam the 2016 summer exam session. Out of the 75 participants, 19 were males (25.3%) and 56 females (74.7%).

3.2. Material and Methods

The Portfolio on which the “Logbook” was compiled included 5 homework tasks, timed over a semester. For group I the tasks were: 1. Application and interpretation of a child's observation sheet (0-10 years); 2. Writing a child's biography (0-10 years) using at least two sources for data collection; 3. Inventory of a child's activities (0-10 years) over a week; 4. Proposing an educational program for a child (0-10 years); 5. Making a psychological age profile of a subject aged 0-10 years. For group II the tasks were: 1. Comparison between creativity as a product and creativity as a process; 2. Making a

3D product from five randomly chosen words, mentioning the phases of the creative process; 3. Developing ten unprecedented ice breaking exercises; 4. The description of at least five ways of attracting attention during an activity on the course subject, arguing their placement in the activity; 5. Re-designing a lesson project (which was supported) in a creative manner.

The participants were informed that the grades received on the portfolios accounted for 50% of the promotion grade, according to the records of the disciplines, and that the “Logbook” would not be noted.

The “Logbook”, different from the Reflective Journal (Henter & Indreica, 2014), consists of notes, made after each stage of the homework task. The dates and time intervals, the sequence of the task, the ways of working, the difficulties encountered, the procedures to be performed without reference to the degree of fulfillment of the task or the expectation are mentioned.

The score assigned to the “Logbook” was in the range of 1-25 points, 5 points were distributed for each task. The following aspects were considered as performance descriptors in the log file for each task: 1 point - the consistency of the notations (to make it clear whether it was written all the time or in stages the diary was written by hand; therefore we could track the print footprint according to the time of writing); 1 point - the complexity of the drafting of the work steps (the details make the difference between a diary drawn up immediately after the sequence or one written from the memories); 1 point - the correspondence between the stages described in the journal and the drafting phases of the task; 1 point - cursivity of drafting; 1 point - evidence of real-world logging (for example: mentioning steps that required their restoration, full screen / photo of the theme stage at the time of recording, surprise moments of jam occurring naturally when solving a task etc.).

4. Findings and Results

4.1. Data on ”Logbook”

Portfolio handing took place on the day of the exam. The portfolio was accompanied by the “Logbook”. Although it was stated that the journal will not be noted, it was written and handed by all students (N = 75). We consider that the presentation of some journals in a superficial form (2-3 phases were mentioned for each task or they were written in a single day containing vague ideas, they were made up for a single homework task of the five tasks required, etc.) was due to the fact that the authors considered them part of the portfolio or saw an opportunity to add some pages to a thin portfolio.

The grades obtained on the homework tasks were in the register 1-10 (1 point ex officio, for statistical analysis this point was given if the homework was missing). The mean values were quite close for all five tasks (N = 75): task 1 - 7.76; task 2 - 7.65; task 3 - 7.84; task 4 - 7.70; task 5 - 7.64. The highest frequencies for all tasks were registered in grade 5 and grades 8, 9 and 10 (Table 1).

There were cases where portfolios were incomplete (missing 1 or 2 task). Missing tasks 1 - 4% of participants (3 portfolios), missing task 2 - 1.3% (1 portfolio), missing task 3 - 1.3% (1 portfolio), missing task 4 - 2.7% (2 portfolios) and missing tasks 5 - 2.7% (2 portfolios). There were no situations where task scoring was inconsistent - for example, in a portfolio to be a high grade (9 or 10) for a task and a low grade (1 or 2) for another. In general, the tasks within the same portfolio were made at about the same level, with a gap

of maximum 2 points.

Results at homework (N=75)

Table 1

	task_1	task_2	task_3	task_4	task_5
% of grades 5	14.7	16	9.3	13.3	13.3
% of grades 8	13.3	12	17.3	18.7	18.7
% of grades 9	17.3	20	20	22.7	24
% of grades 10	32	26.7	28	24	21.3

Regarding the scores obtained on the structure and contents of the logs, the data were scored between 2 and 25, the mean being 15.82 for N = 75. The mean for group I was 15.87 (N = 40) and for group II it was 15.77 (N = 35).

The grades recorded for the exam were between 3 and 10, the frequency of grade 3 being 10.7% and the frequency of grade 10 being 13.3%. The mean exam score was 6.77 (N = 75). The mean of group I was 6.67 (N = 40) while the mean of group II was 6.88 (N = 35).

There has not been a single case in which scores (scores on logbooks or grades) have been recorded in the extreme, for example small score on the journal - high scores on homework / high scores on the journal - small scores on homework; low scores on journal - high exam grade / high score on homework - low exam grade.

4.2. Homework and “Logbook”

The variables are at a scalar measure, recorded on N = 75. Calculating the Pearson correlation coefficients, we obtained positive correlations at a significance threshold of less than 0.01 (Table 2 exceeded the critical value of 0.25).

Pearson Correlations

Table 2

	Score logbook	score homework task_1	Score homework task_2	Score homework task_3	Score homework task_4	Score homework task_5
score_logbook	1					
score_homework task_1	0.81**	1				
score_homework task_2	0.86**	0.75**	1			
score_homework task_3	0.79**	0.73**	0.79**	1		
score_homework task_4	0.79**	0.80**	0.70**	0.76**	1	
score_homework task_5	0.81**	0.82**	0.76**	0.78**	0.83**	1
exam	0.73**	0.72**	0.70**	0.64**	0.66**	0.68**

** Correlation is significant at the 0.01 level (2-tailed).

These results show that the associations between the variables are strongly significant. The score obtained on the elaboration of the journal after each stage in the process of preparing the homework tasks positively correlates with the score for each task. The score of the log, which reflects the consistency and complexity of the homework process, influences exam performance.

5. Conclusions and Discussion

The composition of the “Logbook” was an optional task. The journal, even if it was presented as a distinct piece by all the candidates, was not elaborated for not even one piece of homework by 7 students (9,33%), which could be due to the “belief” that it can be promoted on the basis of the work quantity. From the high percentages recorded for the 5th grade mark, it can be seen that a significant number of students simply expect from themselves to pass the exam.

Based on the obtained results, it can be stated that the preparation of a “logbook” while performing the homework is positively associated with the performance at the exam. It was noted that although the difference between the two groups in the average scores for the journal is insignificant, it has a slight increase in group I (0,10), as opposed to the difference in the average score of the exam obtained by the two groups where it is noted a slight difference of 0.21 for group II. Differences can occur due to the use of a single score grid for the journal and the use of two different grids to score the exam results (each exam grid being tailored to the specific subject). However, objectivity in the assessment led to insignificant differences.

Even if the secondary hypotheses and, implicitly, the general hypothesis were confirmed, the results cannot be extrapolated to the entire student population. This analysis is a preliminary one, as the low number of respondents (N = 75) does not allow the generalization of results. For the groups under discussion there was a strong or very strong association between the variables the log - homework - exam, the increase / decrease of the score in one of them being associated with the increase / decrease of the score to the others.

In order for the motivation of learning to materialize in school performance there must be a sum of intrinsic and extrinsic motivations in an equal weighting. Enhancement of extrinsic motivation was done through the “Logbook” variable. The intrinsic motivation was stimulated by the volitional act on the preparation of the journal (optional, unbounded task) and consisted of the satisfaction of finalizing the homework. Optimization of the performance at the exam was due to the effort to study individually with perseverance. This was due to the preparation of a “Logbook”, and the results can be a source both for optimizing the didactic approach and for starting other investigations.

Other information may be obtained from the address: elena.indreica@unitbv.ro

References

- Cazan, A. M. (2013). *Strategii de autoreglare a învățării* [Learning self-regulation strategies]. Brașov: Editura Universității Transilvania din Brașov.
- Cazan, A. M., & Aniței, M. (2010). Motivation, learning strategies and academic achievement. *Roumanian Journal of Experimental Applied Psychology*, 1(1), 64-73.
- Cazan, A. M., & Indreica, S. E. (2009). Student's motivation and self-regulated learning in a knowledge-based society. In *The 15th International Conference “The Knowledge Based Organization”* (pp. 109-114). Sibiu: Editura Academiei Forțelor Terestre “Nicolae Bălcescu”.

- Chauhan, R., & Upamannyu, N. K. (2017). Assessing The Moderating Relationship For Mobile Learning Apps: A Study Of Students In College Context Prestige International. *Journal of Management & IT-Sanchayan*, 6(1), 141-160.
- Henter, R., & Indreica, E. S. (2014). Reflective journal writing as a metacognitive tool. *Proceedings of The Scientific Conference AFASES*, 2547-553
- Huang, W.-H. D., Hood, D. W., & Yoo, S. J. (2013). Motivational support in Web 2.0 learning environments: a regression analysis based on the integrative theory of motivation, volition and performance. *Innovations in Education and Teaching International*, 51(6), 631-641. DOI: 10.1080/14703297.2013.796718
- Indreica, E.-S. (2014). eLearning platform: advantages and disadvantages on time management. *Proceedings of the 10th international scientific conference eLearning and software for education*, Bucharest, April 24-25, 3, 236-243.
- Indreica, E.-S., Cazan, A.-M., & Truţa, C. (2011). Effects of learning styles and time management on academic achievement. *Procedia - Social and Behavioral Sciences*, 30(1), 1096-1102.
- Indreica, S.-E., & Cazan, A.-M. (2016). Time management, constellation of interests and students' attitude towards e-learning platform. *Educatia 21 Journal*, 14, 32-38.
- Jelle, B. P. (2017). Reviewing the Learning Process through Creative Puzzle Solving. *Creative Education*, 8, 2009-2035; <http://www.scirp.org/journal/ce>
- Lo, C. K., Hew, K. F., & Chen, G. (2017). Toward a set of design principles for mathematics flipped classrooms: A synthesis of research in mathematics education. *Educational Research Review*, 22, 50-73.
- Magher, E. S. (2005). *Motivația intrinsecă. Cultivarea ei la elevi prin intermediul artei* [Intrinsic motivation. Enhancing students' intrinsic motivation through art]. Cluj-Napoca: Todesco.
- Marisa, C., & Putri, A. M. (2017). The influence of individual counseling in improving learning motivation for students. *Terapeutik: Jurnal Bimbingan dan Konseling*, 1(2), 137-144. DOI: <https://doi.org/10.26539/1226>
- Remali, A. M., Ghazali, M. A., Kamaruddin, M. K., & Kee, T. Y. (2013). Understanding Academic Performance Based on Demographic Factors, Motivation Factors and Learning Styles. *International Journal of Asian Social Science*, 3(9), 1938-1951.
- Sengodan, V., & Iksan, Z. H. (2012). Students' Learning Styles and Intrinsic Motivation in Learning. *Asian Social Science*, 8(16), 17-23.
- Thangagiri, B., & Naganathan, R. (2016). Online Educational Games-Based Learning in Disaster Management Education: Influence on Educational Effectiveness and Student Motivation. *IEEE 8th International Conference on Technology for Education*, 88-91. DOI 10.1109/T4E.2016.24
- Vaino, K., Holbrook, J., & Rannikmae, M. (2012). Stimulating students' intrinsic motivation for learning chemistry through the use of context-based learning modules. *Chemistry Education Research and Practice*, 13, 410-419.