# *A Study of Learning Motivation of Current and Prospective School Teachers in Online Psychology Classes*

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## Abstract

In this work, a method for quantifying learning motivation (LM) has been developed and the nature of LM in online students was explored. One hundred eight graduate students which were current and prospective school teachers and took the author's online psychology course in 2011-2012, participated in the study. The research methodology included the analysis of students' coursework and collecting info about students' experience as on-line learners via a brief online survey. The 100-score scale of LM for representing the individual and collective data was designed. Criteria for recognizing unmotivated, motivated, and overmotivated students were developed. Two co-existing components of LM – pragmatic (grade-oriented) and cognitive (knowledge-oriented) – were discerned. Further analysis showed that a) motivated students constituted an overwhelming majority 83% of the total population, b) most motivated students were rather pragmatically than cognitively oriented in their learning, c) enthusiastic individuals that is, cognitively active, curious, and eager to get knowledge without being encouraged or rewarded constituted only 10% of the population. Considering these results in a wider socio-cultural context, the author suggests that further study of teachers' motivation seems to be helpful for understanding and treatment of the much discussed problems in the modern US primary school education.

## Introduction

Indifferent and careless school teachers cause much harm to a society. That is why the study of teachers' motivation is one of the key points in educational psychology. This line of study receives a new incentive in the present epoch of intensive development of informational technologies and Internet based distance educational programs. Thus investigations of motivation in the educational process expand to a new learning environment. In this work an attempt is made to study learning motivation (LM) in online psychology classes.

## The Concept of Learning Motivation

The phenomenon of LM has been explored in modern psychology and educational practice since the beginning of the last century. However, there is no agreement in how it should be termed. Often the concept of *interest* is used to describe a stimulating role of motivation in learning (Krapp, 1999). LM is also defined as a factor arousing, persisting, sustaining, and directing behavior in school (Skinner, 1947). Authors use *desire* and *drive* as synonyms for LM. Motivation is posited as a synthesizing factor for human cognition and affect known as fundamental aspects of any functioning including learning. In the last few decades, the term *academic motivation* became very popular (Vallerand et al., 1992; Frontier et al., 1995; Green et al. 2006). Despite of the variety of terminology, the actual subject being studied is LM.

"Motivation is a desire for and movement toward special goal. It is more than a wish or a day dream: true motivation awakens and sustains actions that propel a person closer to a goal. At its base, motivation is also a search for personal meaning and a reflection of a person's deepest values" (Mwenda, 2012). This definition emphasizes that motivation determines not only what people do, but also how they reason what they do. Such a multifaceted understanding of motivation is important because it exposes its specifics in learning. And LM can be defined not only as the student's desire to reach some educational goals, but also as his/her acceptance and perception of the educational goals, tasks, and requirements as his/her own personal and meaningful values.

Scholars distinguish between intrinsic and extrinsic motivation, "based on the different reasons and goals that give rise to an action" (Thoonen et al., 2011). When describing students' motivation to learn, they define intrinsically motivated students as undertaking an activity "for its own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes" (Lepper, 1988). Extrinsically motivated students perform in order "to obtain some reward or avoid some punishment external to the activity itself" (Lepper, 1988); they "do something only because it leads to a separable desired outcome" (Thoonen et al., 2011). Intrinsic behavior does not require a reward, and it results in high-quality learning (Ryan & Deci, 2000).

Along with the concept of motivation, the concept of amotivation was introduced, although later. In the last decades the new phenomenon has been actively researched (Vallerand & Bissonnette, 1992).

To study LM, specialists tend to use interviews and surveys measuring students' perceptions and opinions (Fortier et al., 1995; Pakulina & Ket'ko, 2010; Thoonen et al., 2011). Another method is based on the analysis of products of human labor and creativity which reflect in-depth personal characteristics. Being more direct, the latter is at least as, or even more objective and efficient than the prior. This method (sometimes in a combination with a survey) is fruitfully used by educators nowadays (Hartnett, 2010; Hartnett et al., 2011; Dadach, 2013). We also use this method for our study of LM. One's activity is the best projection of one's personality and motivation, and among many human activities learning is probably especially significant.

# Research

The purpose of this work was to develop a method for quantifying LM in on-line classes and, using it, to study LM in online students. In particular, this method examined LM of graduate students who are current or prospective school teachers. Additionally, it was studied how participants' LM influenced their academic achievement within a new and unusual learning environment.

The investigated population consisted of 108 students, all of them current and prospective school teachers, who took the author's online psychology course *Child Development and Learning in the Cultural Context.* The study was conducted within three consecutive semesters: fall of 2011 with 40 participants, spring of 2012 with 48, and fall of 2012 with 20. We shall name them the A-, B-, and C-groups.

The research methodology included creating rules of coding the data, designing a scale of LM, analyzing the students' coursework submitted to the course site, and mathematical analysis of the collected data. Also a brief online survey collecting info about students' experience as on-line learners was conducted. At the end of the semesters, students' final course grades were collected.

The hypothesis consisted in the following. There were certain requirements determining the way in which the coursework should be done to be accepted and graded. If a student met those requirements, we concluded that s/he had LM; a failure to meet these requirements was interpreted as lack of LM.

## Quantification of Learning Motivation

### The Online Course Content and Requirements

***Homework assignments (HM).*** Each assignment consisted of two parts: reading the textbooks or Internet articles provided by the instructor and use this information to answer questions also provided. There were eleven homework assignments; each of them typically included three questions. The activity was mandatory. Requirements for this activity included:

1. Timely submission: each assignments should be submitted by a due date scheduled
2. Sufficient quantity: all questions should be answered completely

3. Sufficient quality: all answers should be brief (no longer than 60-80 words), clear, to the point; key words/phrases in every answer should be formatted as bold face.

***Group discussions on the Discussion Board (DB).*** There were five discussions; each of them was devoted to one psychological or educational issue related to the course topic. Students were expected to respond to a question posted by the professor, share their experience, and exchange opinions with classmates. The activity was mandatory. Requirements for this activity included:

1. Timely submission: responses should be posted by a due date
2. Sufficient quantity: at least two responses ought to be posted for each discussion – one response to the professor and the other to any classmate; at least two references should be provided for each discussion forum
3. Sufficient quality: responses were expected to be substantial, supported by the student's personal educational experiences and the references found in e-libraries or e-data bases.

***The Final Research Paper (RP).*** One research paper had to be written on the topic "Comparative Analysis of Different Theoretical Approaches to Child Development and Learning". The activity was mandatory. Requirements for this activity included:

1. Timely submission: research papers must be submitted by a due date
2. Sufficient quantity: bibliography and the paper outline should be submitted preliminary
3. Sufficient quality: the paper content should correspond to its topic, and the topic should be developed in full

***The Educational Forum (EF).*** A special forum on the DB was open, and current educational, scientific, and administrative news in articles and on videos about children without and with special needs were presented there. There students could place their own findings. Participating in this activity was optional. No requirements were given.

## The Principles of Coding Data

All students' learning activities and actions that comprise them were recorded in the course site, analyzed and coded accordingly to their correspondence to the course requirements. Three characteristics of students' coursework were measured: temporal, quantitative, and qualitative; each allowed values 0, 1, or 2.

***Coding homework assignment*:**

1. Temporal characteristic: a missing homework received 0; a timely submission received 1; a submission done in advance (more than a week before a due date) received 2.
2. Quantitative characteristic: homework with two missing answers received 0; homework with one missing answer received 1; homework with all answers received 2.
3. Qualitative characteristic: homework with at least one incomplete or incorrect answer received 0; homework with all complete and correct answers received 1;

homework with at least 2 answers out of 3 expressed "briefly, clearly, and to the point" received 2.

***Coding DB post:***

1. Temporal characteristic: missing responses received 0; timely responses received 1; responses posted in advance (more than a week before a due date) received 2.
2. Quantitative characteristic: one or less responses received 0; two responses received 1; more than two responses received 2; one or less reference received 0; two references received 1; more than two new references (not found by classmates) received 2.
3. Qualitative characteristic: a response missing or not including a personal experience received 0; a response presenting a personal experience received 1; if a student expressed a new idea stimulated by references or the discussion, his/her response received a "2".

***Coding the Final Research Paper:***

1. Temporal characteristic: missing paper or a late submission received 0; timely submission received 1; advanced submission (at least a week before a due date) received 2.
2. Quantitative characteristic: missing preliminary bibliography and paper outline received 0; bibliography and outline that needed revising received 1; complete bibliography and correct paper outline received 2.
3. Qualitative characteristic: missing paper received 0; paper needed revising received 1; complete and rich in content paper received 2.

***Coding participation in the Educational Forum*:**

1. Quantitative characteristic: no attendance received 0; one attendance received 1; two and more attendances received 2
2. Qualitative characteristic: no participation received 0; participation in discussions without sharing personal experiences received 1; active participation with sharing personal experiences and contributions in a form of new Internet resources received 2.

## The Scale Design and Data Representation

The 100-point scale of LM was designed for the author's specific course with its unique content and certain requirements. To develop it, four hypothetical students were invented. Two of them were called *perfectly motivated* and *perfectly unmotivated* students; they determined the left-most and right-most points of the scale. These individuals do not exist in reality; they with their highest and lowest scores were needed for mathematical transformations of the real students' data. Two other imaginary individuals were *the lower boundary* and *the upper boundary* students. They were supposed to separate results of motivated, unmotivated, and overmotivated students from each other.

The data of four hypothetical students was coded according to principles described above. The row data were calculated and scaled. First, all the four values representing four types of the coursework were normalized: in each category the score was divided by the maximum possible score, and then a weight of 25% was attributed to all of them.

The course work of each participant of the study was coded identically. So, after these necessary mathematical transformations, every student hypothetical as well as real could be characterized by a tuple of four values, and their sum represented his/her LM manifested in the course.

***The perfectly motivated student*** does everything in the best way. He is not just always on time, he is consistently ahead of the course work' due dates. He not only meets requirements regularly, he always exceeds them. He has the best scores for each type of the coursework. LM of this student is 100% and determines the right-most points of the scale.

***The perfectly unmotivated student*** systematically violates all aspects of the course policy, does not study, and fails. He has a 0 for each type of the coursework. LM of this student is 0% and determines the left-most point of the scale.

***The lower boundary student*** is modeled according to the college's policy determining which academically underachieving students should still be given a chance to eventually complete the coursework and receive a passing grade. Such a student should submit the maximum of assignments required (except the final paper) and complete at least 50% of the coursework by the end of the semester. This students' row and scaled tuples of four values are shown in the Table 1. The sum 23% should be considered the boundary on the scale separating results of unmotivated students from motivated ones.

***The upper boundary student*** is designed according to the author's pedagogical experience: if something not quiet ordinary occurs in a student's activity once, it might be random. However, if it happens twice, it points, rather, to a possible consistency. Such a student overexceeds every requirement for every type of coursework at least twice. Also, such a student prepares bibliography, the paper outline and the final paper that are accepted from the first attempt. This student's LM and all corresponding data are shown in the Table 1. The sum 69% is the boundary separating results of motivated students from overmotivated ones.

Table 1

*The Hypothetical Students' Raw and Scaled Data*

| Hypothetical Students: | Raw Data | | | | Scaled Data | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | HW | DB | RP | EF | HW% | DB% | RP% | EF% | Total |
| Perfectly Motivated | 66 | 40 | 6 | 4 | 25% | 25% | 25% | 25% | 100% |
| Perfectly Unmotivated | 0 | 0 | 0 | 0 | 0% | 0% | 0% | 0% | 0% |
| Upper Boundary | 48 | 28 | 5 | 2 | 18.2% | 17.5% | 20.8% | 12.5% | 69% |
| Lower Boundary | 44 | 15 | 0 | 0 | 16.6.0% | 9.4% | 0% | 0% | 26% |

Note: HW = homework; DB = discussions; RP = research paper; EF = educational forum

On the Figure 1, the results of the C-group of students are distributed on the scale. Points 26 and 69 show the lower and the upper boundaries for results of motivated students. Twenty participants are displayed as stick-figures next to the corresponding locations on the axis with their individual LM scores on the "faces." Most students of the C-group are motivated and located in the middle part of the scale. Three student (with their scores 70, 74 and 88) located to the right of the middle area's upper boundary are overmotivated, and two students (with their scores 16 and 20) located to the left of the lower boundary are unmotivated.

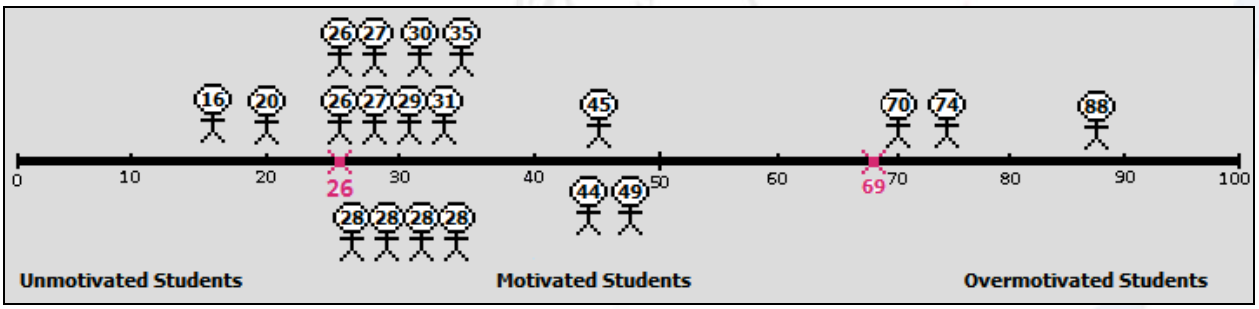


*Figure 1.* Graphical representation of the C-group students' scores distributed on the scale of Learning Motivation

## The Results

### Operational Indicators of the Major Students' Categories

*Motivated students* basically followed all requirements and properly did their course work.

*Unmotivated students* could be easily identified via their systematic violation of requirements. One indicator of their very low motivation was *late submissions of homework assignments* including *missing final research paper.* Such students were not ready to write the paper because, unlike their classmates, they lacked knowledge and skills which they had not accumulated. The other indicator was *ignoring the*

*optional course activity.* Unmotivated students did not even find out that such an activity was available.

*Overmotivated students* could be easily identified through their *submissions of the coursework in advance* (one-two-three weeks before the due dates). If there were no special circumstances for establishing such a schedule (delivery, surgery, or vacation forthcoming during the semester), and additionally, their work quality was high, then the combination of three factors served as an ultimate proof of the students' enthusiasm in learning and becoming a good specialist. Another indicator was their active *participation in the optional course activity*.

**Analysis of the Investigated Population**

Motivated but not outright enthusiastic students were a majority in all three investigated groups. Accordingly, they constitute a majority (73%) of the investigated population. Together with overmotivated (enthusiastic) individuals they represented an overwhelming majority (82%) of the population participated in the study. It is shown on the Figure 2.

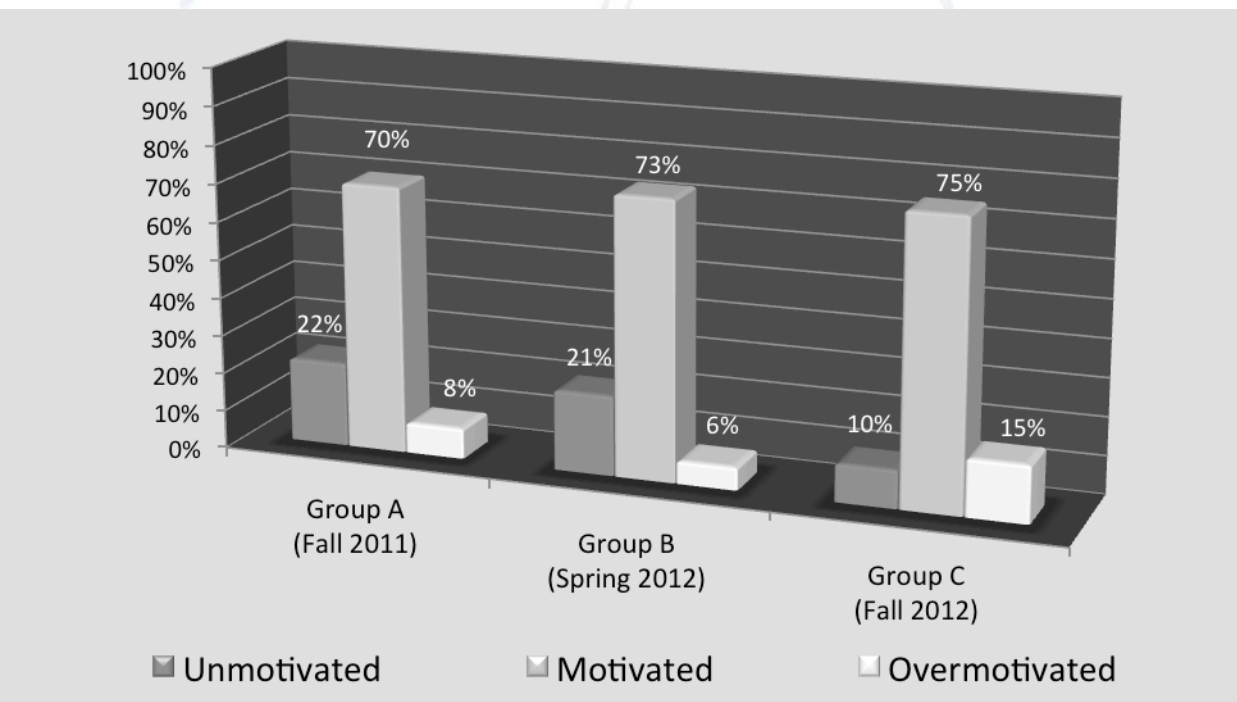


*Figure2.* Percentage of unmotivated, motivated, and overmotivated students in the investigated A-, B-, and C-groups during three semesters in 2011-2012 academic years.

**The Correlation between LM and Academic Performance**

To find out how students' academic performance depended on their LM manifested in the course, we studied the correlation of their motivation with final course grades. The Pearson's Correlation Coefficient was calculated with the use of the formula:

$$K = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}},$$

where $x = (x_1 \ldots x_n)$ and $y = (y_1 \ldots y_n)$ are distributions of the two chosen variables; and *n* is the number of students in the group (How to Compute Pearson's Correlation Coefficient).
The study revealed a high correlation coefficient $K_{LM,FG}$=0.61 between students' learning motivation and their academic achievement. Correlations are high for all three groups of students participated in the study as well. These data are shown in the Table 2.

Table 2

*The Correlation Coefficient Between LM and Final Course Grades Listed by Group Type*

| The Correlation Coefficient $K_{LM,FG}$ | | |
|---|---|---|
| The A-group | The B-group | The C-group |
| 0.66 | 0.57 | 0.61 |

**The Correlations between Components of LM and Academic Performance**

To clarify the nature of dependence between the students' academic performance and their LM, we studied the correlation of the final course grades with the scores in each of the four components of LM. The Pearson's correlation coefficients were calculated using formula presented above. The results of the analysis are shown in the Table 3.

Table 3

*The Correlation Coefficients Between Components of Students' LM and Final Course Grades*

| $K_{FG,HW}$ | $K_{FG,DB}$ | $K_{FG,RP}$ | $K_{FG,EF}$ |
|---|---|---|---|
| 0.61 | 0.51 | 0.74 | 0.46 |

*Note.* $K_{FG,HW}$ = the correlation coefficient between final grades (FG) and motivation for doing homework (HW); DB=discussions on the Discussion Board; RP = research paper; EF = educational forum.

The results show that the three components of LM representing mandatory course activities have high correlations with students' academic achievement. The correlation coefficient between final grades and students' motivation for performing the optional course activity is also positive but relatively low: $K_{FG,EF}$ = 0.46. It means that academic performance and motivation to participate in the optional activity are somewhat independent.

**The Standard Deviations of LM**

Then it was determined if the student's performance of the optional assignment differed from performing mandatory assignments. With this purpose the standard deviations for each of the four components of LM were calculated using the following formula:

$$\sigma = \sqrt{\frac{\sum(x-\bar{x})^2}{n}},$$

where $\sigma^2$ is the variance, $x = (x_1 \ldots x_n)$ is a distribution of the chosen variable, $\bar{x}$ is the mean, and n is the number of students in the group (Weisstein, 2013). As usual, we assumed that the higher the deviation, the more is spread apart the data. We found that the optional course activity had the highest data variance $\sigma = 0.34$. The results for the C-group are presented in the Table 4.

Table 4

*Scaled Scores of LM, All Its Components, and Standard Deviations in the C-group of Students*

| Student # | The course activities | | | | | | | | Learning Motivation (LM) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Homework (HM) | | Discussions (DB) | | Research Paper (RP) | | Educational Forum (EF) | | | |
| | α | β | α | β | α | β | α | β | α | β |
| 1 | 30 | 0.45 | 14 | 0.35 | 2 | 0.33 | 0 | 0.00 | 28 | 0.28 |
| 2 | 47 | 0.71 | 33 | 0.83 | 4 | 0.67 | 3 | 0.75 | 74 | 0.74 |
| 3 | 25 | 0.38 | 22 | 0.55 | 2 | 0.33 | 2 | 0.50 | 44 | 0.44 |
| 4 | 27 | 0.41 | 17 | 0.43 | 2 | 0.33 | 0 | 0.00 | 29 | 0.29 |
| 5 | 20 | 0.30 | 14 | 0.35 | 2 | 0.33 | 0 | 0.00 | 26 | 0.26 |
| 6 | 21 | 0.32 | 17 | 0.43 | 2 | 0.33 | 0 | 0.00 | 27 | 0.27 |
| 7 | 30 | 0.45 | 20 | 0.50 | 3 | 0.50 | 2 | 0.50 | 49 | 0.49 |
| 8 | 25 | 0.38 | 20 | 0.50 | 2 | 0.33 | 0 | 0.00 | 30 | 0.30 |
| 9 | 24 | 0.36 | 14 | 0.35 | 2 | 0.33 | 0 | 0.00 | 26 | 0.26 |
| 10 | 25 | 0.38 | 17 | 0.43 | 2 | 0.33 | 0 | 0.00 | 28 | 0.28 |
| 11 | 53 | 0.80 | 36 | 0.90 | 5 | 0.83 | 4 | 1.00 | 88 | 0.88 |
| 12 | 42 | 0.64 | 18 | 0.45 | 2 | 0.33 | 0 | 0.00 | 35 | 0.35 |
| 13 | 27 | 0.41 | 20 | 0.50 | 2 | 0.33 | 0 | 0.00 | 31 | 0.31 |
| 14 | 26 | 0.39 | 21 | 0.53 | 1 | 0.17 | 0 | 0.00 | 27 | 0.27 |
| 15 | 19 | 0.29 | 14 | 0.35 | 0 | 0.00 | 0 | 0.00 | 16 | 0.16 |
| 16 | 30 | 0.45 | 27 | 0.68 | 1 | 0.17 | 2 | 0.50 | 45 | 0.45 |
| 17 | 25 | 0.38 | 16 | 0.40 | 2 | 0.33 | 0 | 0.00 | 28 | 0.28 |
| 18 | 27 | 0.41 | 15 | 0.38 | 2 | 0.33 | 0 | 0.00 | 28 | 0.28 |
| 19 | 43 | 0.65 | 30 | 0.75 | 4 | 0.67 | 3 | 0.75 | 70 | 0.70 |
| 20 | 23 | 0.35 | 18 | 0.45 | 0 | 0.00 | 0 | 0.00 | 20 | 0.20 |
| | σ =0.14 | | σ =0.16 | | σ =0.20 | | σ =0.33 | | σ =0.19 | |
| | Standard Deviations | | | | | | | | | |

*Note*. N= students' sequential ID-s in the study; α = the first column for representing each component of LM that shows the raw scores; β = the second column for each component of LM that shows normalized scores for the α column, so that maximum is converted to 1.0 (what makes standard deviation values comparable and convenient for computing). The last column shows the calculated Learning Motivation (LM), and its normalized value.

### Reliability and Validity of the Results

In each of three semesters, the category of motivated students constituted the highest percentage (see Figure 2); it proves reliability of the result. The result reflects the fact that students enroll into educational programs for certain reasons: some have already worked in school system, some others were preparing for that, – and obtaining the Master's degree is an important step for their professional growth and career.

It was found that students' academic achievement positively correlates with their LM. The correlation coefficients are high for three groups of students studied the same subject with the same professor in different semesters (see Table 2). Similarity of this result for three consecutive semesters proves its reliability. Additionally, the result is supported by discoveries made in other studies of LM (Fortier et al., 1995; Singh et al., 2002; Broussard & Garrison, 2004; Greeen et al., 2006).

The issue of validity of the results is crucial to any research. When investigating LM in a new learning environment we realized that participants of our study could be differently prepared as computer users: some were experienced online learners, while some others were online beginners. It was natural to suppose that lack of special skills needed for using the Black Board could affect students' learning and interfere with the data on LM.

To prove that results obtained in this study reflected individual qualities of the students' LM rather than their status as online learners, we calculated the correlation coefficient $K_{LM,FG}$ and standard deviation $\sigma_{LM}$ twice: once with the entire C-group of students, and then with on-line non-beginners only. It was found that the correlation between LM and the final course grade is slightly lower in the main population $K(_{LM,FG)\ mp} = 0.61$ than in the subset group of non-beginners $K(_{LM,FG)\ sg} = 0.70$; standard deviations in both the main and subset populations were identical $\sigma(_{LM)\ mp} = \sigma(_{LM)\ sg} = 0.20$.

According to this data, online non-beginners in the C-group did not actually change the picture. Their computer skills, whether sufficient or not, practically did not affect their LM. Now, we are continuing to verify the validity of the results for entire students' population.

## Discussion

Two components of students' LM – grade-oriented and knowledge-oriented – were found in our study and received names *pragmatic* и *cognitive*. In essence, they link back to the familiar *intrinsic* and *extrinsic* motivation. Although for our specific study terms *cognitive* and *pragmatic* seem to be more adequate. This result is consonant with some other authors' ideas about the content of LM (Csikszentmihalyias, 1975; Whitney & Hirch, 2007).

The components are co-existing, interrelated, and both are necessary for fruitful learning. However, unlike the pragmatic motivation that everybody (even unmotivated students) had, the cognitive motivation was noticed in a few. The ratio of the grade-oriented students to those who were both grade- and knowledge-oriented was approximately 3:1 (see α column for Educational Forum in Table 4). Indeed, many participants ignored the optional educational forum offered in the online course considering it a waste of time; they neglected it because the activity was not rewarded. Pragmatic interests prevailed in them, and their main guiding principle was maximizing the grade and avoiding learning that did not contribute to the grade. Oppositely, some other students performed the optional assignment because they wanted to receive knowledge relevant to their professional interests even if it was not rewarded. Like everybody they appreciated grades, but curiosity had a higher priority for them.

The optional activity had the highest variance $\sigma = 0.33$ (see Table 4). It means that the students differed from each other much more in cognitive LM than in pragmatic LM. This is understandable because cognitive LM is a less frequent phenomenon. The explanation is analogous to A. Maslow's interpretation of the hierarchy of motives. Physical needs (for food, shelter etc.) and the need for safety are located at the bottom of the hierarchy and are applicable to everyone. The more spiritual a motive is, the higher it is located, the less frequent it is. Thus, the motives for self-actualization or knowledge are a privilege of a few (Maslow, 1970). Similarly, the cognitive component of LM, as non-materialistic and spiritual by its nature, is at a higher position in the structure of LM and exhibited by a few.

The students' final grades highly correlated with their LM (see Table 2). However, a further analysis of the data showed that the dependency was only unidirectional. That is, highly motivated students tended to have good grades, but a good grade did not always indicate a high LM. According to our online course policy, for being successful it was enough to follow the instructions, meet requirements, and timely provide correct and informative mandatory assignments. That's why students lacking cognitive LM also could have good grades.

Three categories of students – unmotivational, motivational, and overmotivational – differed in intensity of their motivation. The more complex LM was the stronger it was. Students combined pragmatic and cognitive types of LM had the higher scores on the scale.

*Unmotivated* students constituted 17% of the investigated population (see Figure 2). They turned out to be poorly adjusted to a new learning environment and had no ability or desire for acquiring new learning skills; their enrollment into this online course was probably a mistake. A more detailed analysis of this category of students can be found in another paper by the author (Toom, 2013). *Overmotivated* students constituted 10% of the population. They were enthusiasts: cognitively active, curios, and eager to get knowledge without being encouraged or rewarded.
*Motivated* students constituted an overwhelming majority 73% of the population. However, about 2/3 of them were primarily pragmatically oriented in their learning: they performed only the coursework for which they were graded and ignored optional activities offered for their professional growth.

Actually, an attitude found in many our students corresponds to the values of modern society: «time is money», and people prefer not to spend their time and effort on anything that does not bring immediate profit (USA – Language, Culture, Customs and Etiquette). The question still arises if this philosophy is appropriate for an educator.

Beginning in the early 1990's in the American educational periodic and on educational forums in the electronic networks, specialists have been actively discussing failures of national primary school education. Conducting the cross-cultural research, scholars repeatedly state the American school students' poor preparation in natural disciplines, especially, math (Stigler & Hiebert, 1999). In the recent years, there appeared articles about school students' underachievement in other subjects as well (Hood, 1993; Albada, 2010; Report: Half of U.S. Schools Fail Federal Standards, 2011; Crotty, 2012; Khazan, 2012).

Considering the results of this study in a wider socio-cultural context, the author suggests that the issues of teachers' motivation can, possibly, be tied to the much discussed failures of the US primary school education. We cannot exclude a probability that one of the causes of school students' poor preparation in various disciplines is a shortage of cognitively motivated enthusiastic instructors.

## Conclusions

The method of analysis of online students' motivation through their learning activity and products of their intellectual labor had shown to be fruitful. Therefore, the distance learning programs have a great potential for the study of LM.

Two different, interrelated, and co-existing components of LM observed in the study link back to the familiar *intrinsic* and *extrinsic* motivation. Students' LM within the context of online learning environment was found to have the nature similar to that which was described by the theorists and explorers of traditional class settings.

Motivated and overmotivated participants constituted an overwhelming majority of the total investigated population. They were responsive, responsible, and successful individuals. However, most of them were pragmatically motivated learners. The author suggests that the shortage of enthusiastic teachers can be one of the possible causes affecting today's school students' academic performance. In either case, a further study of teachers' motivation seems to be a promising scientific direction.

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