Specifics of determination of antimotivation for learning activity in prospective teachers from different countries

Especificaciones de determinación de la antimotivación para la actividad de aprendizaje en futuros profesores de diferentes países

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ABSTRACT:
The aim of present study was to explore the specifics of determination of negative motivation for learning activity in students of pedagogical universities and pedagogical departments of the universities in different countries – Russia, Kazakhstan and Czech Republic. Participants in the study were 463 students of full-time bachelor and master programs in the universities. In order to reach the study goal, we used the questionnaire of antimotivation for learning activity, created by N.V. Ivanova and E.V. Minaeva, which is aimed at students, who obtain pedagogic education in specialized universities or at pedagogical departments of the university. The study employed factor and correlation analysis of the results, which was conducted in the IBM SPSS Statistics 23 software. We analyzed the significance of environmental factors of antimotivation for learning activity in respondents from different countries.
1. Introduction

Perfecting the professional establishment of prospective teachers during their university studies requires considering all factors that determine academic progress, development of professional competencies, subjective activity and psychological well-being of the students. According to multiple studies of the researchers from different countries, one of such factors is motivation for students’ learning activity (Brophy, 1998; Chayka, 2002; Dokutovich, 2007; D’Ornyei, 2001; Gelmont, 2003; Lapin & Yakovleva, 1996; Oliver, 1995; Stipek, 2002). Psychological and pedagogical studies, which address the means and ways of developing motivation for learning activity in students that obtain pedagogical education, are especially significant (Karnaukhov, 1997; Lekerova et al., 2015; Starodubtseva, 2006; Ovchinnikov, 2008; Pavlova, 2005). Significance of these works is defined by the decreased interest towards pedagogic profession, decrease of its popularity and deficit of pedagogic staff.

However, it is necessary to point out that the general attitude towards learning, including learning in pedagogical universities, is defined to only by positive motivation for learning activity, but also by the antimotivation for this activity. Meanwhile, the problem of antimotivation (amotivation, demotivation) for students’ learning activity (Karpova, 2008; Lens, 1991; Gordeeva et al., 2013; Ivanova et al., 2015; Vallerand et al., 1992) is not studied enough and requires complete analysis when it comes to the students of pedagogical universities.

The study of the determination of antimotivation for learning activity in students, who obtain pedagogical education in different universities, presents specific theoretical and practical interest, because the obtained results can be used for comparative analysis of different educational environments, as well as in local programs for optimizing higher professional pedagogic education.

2. Content of the study

2.1. Aims and methods of the study

The aim of the study was to investigate the specifics of the determination of antimotivation for learning activity in students of pedagogical universities and pedagogical departures of universities from different countries – Russia, Kazakhstan and Czech Republic.

We base our definition of antimotivation for learning activity on the Karpova’s approach to this psychological-pedagogical phenomenon (Karpova, 2008, 2009). We define antimotivation for
learning activity as motivation sub-system of a personality, which is presented by an integration of negative motives for learning activity. Negative motive of learning activity is a motive, which has negative valence and opposite direction regarding the learning activity (e.g., tense relationships in a student group, absence of contact with certain teachers, student's laziness). We would like to point out that a negative motive for learning activity can be positive for other types of activity, e.g., student’s serious interest for sport of his hobby.

Methodological basis of the study is environmental approach in education. Based on the works of Yasvin (2001), Deryabo (1997), Laktionova (2013), Baeva (2002) and Panov (2004), we define educational environment as a system of influences, conditions and opportunities for personality development, which are present in social and spatial-objective surrounding. We agree with the position of the abovementioned authors, according to which, an educational environment can affect its subjects both positively and negatively, providing or limiting the opportunities for efficient learning, growth and development.

As the possible determinants of antimotivation for learning activity in students – prospective teachers, we consider all possible components of university’s educational environment (spatial-objective, psychological-didactical, social and subjective), as well as macro-environment (society in general) and micro-environment (family environment).

Spatial-objective educational environment’s component includes spatial and objective “units” (rooms, furniture, technical means, attributes) and their characteristics (architecture of buildings, design and sanitary state of the rooms, possibility to transform them, saturation). Psychological-didactical educational environment’s component represents the content, programs, methods and technology of education. Social educational environment’s component represents the system of interactions between the participants of educational environment. Finally, we define subjective educational environment’s component as an integration of age, personality and psychophysiological traits of its subjects.

In order to reach the aim of our study, we used the questionnaire of antimotivation of students’ learning activity, created by N.V. Ivanova and E.V. Minaeva (Ivanova & Minaeva, 2015), aimed at prospective teachers. This questionnaire was created as a result of a number of diagnostic procedures (written surveys of students and teachers, content analysis of the preliminary data and their ranging); it was validated and checked for reliability. During the questionnaire development, the existing diagnostic inventory for studying motivation and antimotivation (amotivation, demotivation) of students’ learning activity was considered (Karpova, 2009; Vallerand et al., 1992; Gordeeva et al., 2013; Ovchinnikov, 2008). In order to conduct the study in Kazakhstan and Czech Republic, we used the variations of the questionnaire that were translated in the national languages.

The questionnaire of antimotivation of students’ learning activity by N.V. Ivanova and E.V. Minaeva includes thirty negative motives, which are divided in six groups, according to environmental determinants: macro-environment, micro-environment and four components of the educational environment (spatial-objective, psychological-didactical, social and subjective). Each group includes five negative motives for learning activity, which are presented in random order in the questionnaire. The subjects were required to evaluate the negative motives for learning activity by the level of their subjective value on a five-point scale (1 point corresponds to minimal significance, while 5 points – to maximal significance).

For the following presentation of the results, it is necessary to state that macro-environment includes motives number 3, 11, 17, 24, 27; micro-environment – 8, 10, 18, 20, 29; spatial-objective educational environment’s component – 1, 9, 14, 21, 25; psychological-didactical educational environment’s component – 5, 13, 16, 22, 28; social educational environment’s component – 6, 7, 12, 15, 26; and subjective educational environment’s component – 2, 4, 19, 23, 30.

2.2. Results and discussion
Participants in the study were university students of bachelor and master programs from three countries:

1. Russia (Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod State University named after N.I. Lobachevsky (Arzamas branch), Omsk State Pedagogical University);
2. Kazakhstan (Kazakh National Pedagogical University named after Abai);
3. Czech Republic (Charles University in Prague, Masaryk University in Brno, University of West Bohemia in Pilsen and Palacky University in Olomouc).

General sample of subjects included 463 people, considering even distribution of students from each university. Students from 19 to 22 years of age participated in the study.

The experimental study was designed in correspondence with previously defined tasks. In order to solve the first task, we attempted to define the general component within the whole integration of factors. We used factor analysis with significance coefficient $p = 0.001$. The results are presented in table 1.

<table>
<thead>
<tr>
<th>Statistical characteristics of negative-motivational factors</th>
<th>General component, % of dispersion</th>
<th>Number of factors</th>
<th>Total percentage of dispersion</th>
<th>Correlation of factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Russia</td>
<td>39</td>
<td>5</td>
<td>62</td>
<td>28 and 29</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>21</td>
<td>10</td>
<td>71</td>
<td>16</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>25.7</td>
<td>8</td>
<td>67</td>
<td>15.16</td>
</tr>
</tbody>
</table>

The obtained results allowed making the following conclusions.

Students in Russia revealed factors 7, 24, 25, 26, 27, 28, 29, 30, which contribute significantly to the general dispersion. The first general component describes 39%. The model has total of five factors, which describe 62% of the general dispersion. The first factor has a high correlation with 28 and 29, the second factor – with 6 and 4, the third factor – with 1, the fifth factor – with 5. Qualitative analysis of the revealed factors allows stating the significance of all types of determinants for Russian students, because the listed factors represent all types of negative-motivational determinants of learning activity. Therefore, it is possible to suggest not only the significance but also mutual determination of negative-motivational determinants.

Students from Kazakhstan revealed factors 4, 4, 10 and 30. The first general component describes 21%. The model contains total of 10 factors, which explain 71% of the general dispersion. The first factor has high correlation with 16, the second – with 6 and 7, the third – with 12 and 24, while the fourth and the next ones are represented weakly, and the correlation does not exceed 0.5. The obtained results allow suggesting that for the students from Kazakhstan the most significant are macro- and micro-environmental factors and subjective negative-motivational determinant of learning activity. They also determine students’ choosing of other factors, to a large extent.

Students from Czech Republic revealed 1, 2, 3, 9, 11 and 25 factors. The first general component explains 25.7%. The model contains 8 factors, which explain 67%. The first factor
correlates with 15 and 16, the sixth – with 2. The remaining factors are presented insignificantly. Therefore, it is possible to suggest that spatial-objective, subjective and macro-environmental negative-motivational determinants of learning activity are significant for the students from Czech Republic. These factors define students’ choice of other negative-motivational factors.

Comparative analysis of the revealed leading negative-motivational determinants of learning activity in different groups of students allows stating the existence of differences in the influence of educational environment’s components on antimotivation of learning activity in students from different countries. For example, it is not possible to define the leading educational environment’s components that have a priority in the occurrence of negative-motivational factors of learning activity. On the other hand, in students from Kazakhstan, subjective determinant prevails, and in students from Czech Republic – spatial-objective and macro-environmental determinants.

We addressed the question of the general component within each of the determinants. In order to answer this question, we conducted factor analysis with the choice of the general component, with the level of significance \( p = 0.001 \). The results are presented in table 2.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Spatial-objective determinant</th>
<th>Subjective determinant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General component, % of dispersion</td>
<td>Factors</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Russia</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>37</td>
<td>3</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>57</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Micro-environmental determinant</th>
<th>Social determinant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General component, % of dispersion</td>
<td>Factors</td>
</tr>
<tr>
<td>Russia</td>
<td>48</td>
<td>1</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>37</td>
<td>3</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>42</td>
<td>2</td>
</tr>
</tbody>
</table>

Analysis of the obtained results showed the following:

**Spatial-objective determinant.**

In students from Czech Republic, it is possible to highlight the general component 21, which
explains 57%. The model consists of two factors, which explain 77%. The first factor correlates with 9, 14, 25; the second – with 21. In turn, in students from Russia and Kazakhstan, it was not possible to reveal the leading factors.

It possible to suggest that spatial-objective determinant (21 – insufficient methodical support of the lessons (textbooks, workbooks)) is more significant among other factors of this negative-motivational determinant for students from Czech Republic, whereas for students from Russia and Kazakhstan all factors from spatial-objective determinant are equally significant.

**Subjective determinant.**
In students from Czech Republic, the first component explains 42%. The model contains two factors, which explain 63%. The first factor is 30 and 23, the second – 2.
In students from Russia, the first main component explains 42%. The model contains two factors, which explain 61%. The first factor is 30, the second – 2.
In students from Kazakhstan, it was not possible to reveal the leading factors.
These results might point to the equal significance of factors 30 and 2 for students from Russia and Czech Republic (2 – wide range of interests, hobbies; 30 – lack of interest towards learning).
Analysis of the results on *macro-environmental* and *psychological-didactical determinants* did not allow revealing the leading factors in any group of students.

**Social determinant.**
Results of the students from Russia showed that the main component 7 explains 48%. The model contains one component; the correlations are present for 6 and 7.
In students from Kazakhstan, the first main component explains 37%. The model contains three factors, which explain 80%; the first one – 12 and 15, the second – 26, the third – 6.
In Czech students, it was not possible to reveal the leading factors.
The results show higher significance of factor 7 – tense (negative) relationships in the student group – for students from Russia. For students in Kazakhstan, the majority of factors of social negative-motivational determinant are significant.

**Micro-environmental determinant.**
In students from Czech Republic, the first general component explains 42%. The model contains two factors, which explain 62%. The first factor – 18, the second factor – 8.
It was not possible to reveal the leading factors in students from Russia and Kazakhstan.
More significant factors within micro-environmental determinant were revealed only in students from Czech Republic (8 – necessity to earn money (lack of financial support), 18 – expectation or birth of a child).
During the study, using Pearson coefficient with \( p = 0.001 \), we revealed the correlations between the following factors: in students from Russia – 6 and 7, 25 and 21, 25 and 27, 26 and 27, 24, 28 and 29, 30 and 23, 30 and 28, 29 and 30. Students from Kazakhstan did not present high correlations. In Czech students, the correlation was found between factors 9 and 25.

### 3. Conclusion
The revealed correlations allow making a number of suggestions. In respondents from Russia, it is possible to reveal correlations with negative-motivational determinants, in particular, with the social, spatial-objective, subjective and macro-environmental determinants, which might point to mutual determination with the factors of the abovementioned negative-motivational
determinants. We revealed the correlations between the factors of different negative-motivational determinants, namely, spatial-objective and macro-environmental, social and macro-environmental, psychological-didactical and micro-environmental, subjective and psychological-didactical, micro-environmental and subjective. This might point to mutual determination of factors from different groups of negative-motivational determinants. This fact has to be considered during the development of programs for decreasing negative-motivational factors in students from Russia.

The results of students from Czech Republic showed a correlation within spatial-objective determinant. We revealed no correlations between the factors from different groups of negative-motivational determinants.

It is possible to suggest that, during the development of programs for decreasing negative-motivational factors in students from Czech Republic and Kazakhstan, it is necessary to design them for all types of negative-motivational determinants in parallel. For students from Russia such program has to be designed with regard to the revealed correlation patterns between different groups of negative-motivational determinants.

As a perspective for further studies of the specifics of antimotivation for learning activity in students from pedagogical universities or pedagogical departments of the universities of different countries, we propose involving students from other countries (Germany, Finland) in the subject sample, as well as conducting comparative analysis of the manifestation and specifics of antimotivation for learning activity with the type of local educational environment of a specific university.

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4. Minin Nizhny Novgorod State Pedagogical University, Russia, 603600, Nizhny Novgorod, Ulyanova Street, 1
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