CONSISTENCY BETWEEN PEDAGOGICAL ASSESSMENT AND SELF-ASSESSMENT OF EDUCATIONAL RESULTS IN THE CONTEXT OF PROFESSIONAL AND PERSONAL DEVELOPMENT OF STUDENTS

N.V. Bordovskaia¹, E.A. Koshkina², M.A. Tikhomirova¹, N.A. Bochkina³

¹ St. Petersburg State University (RUSSIAN FEDERATION)
² Northern (Arctic) Federal University (RUSSIAN FEDERATION)
³ University of Edinburgh and Maxwell Institute (UNITED KINGDOM)

Abstract

This article substantiates the role of assessment in professional and personal development of a specialist and explores the reasons behind inconsistency between pedagogical assessment and self-assessment of students. It describes results of studies of consistency of pedagogical assessment and self-assessment as a stimulus for students to develop professionally and personally (using psychology and pedagogy curriculum of a Russian higher education institution as an example). The sample included 185 students from the Saint Petersburg State University, both looking to pursue a career in pedagogy (92) and those not looking to pursue a career in pedagogy (93). It has been established that adequate self-assessment by teachers-to-be is caused by and, to a greater extent, contributes to further personal development of the future professional. Overassessment, especially in terms of completeness and consistency in apprehending didactic terminology is the basis for further targeted work towards increasing terminological literacy of a pedagogical student, focusing on dedicated professional development. Overassessment of own knowledge and proficiency in didactic terminology demonstrated by students of non-pedagogical lines of studies shows predominant focus on professional development and the strive to apprehend all types of knowledge within one’s curriculum so as to receive quality education not only in fields of specialization, but also in general academic sense. This allows to conclude that adequate self-assessment in a specialized academic area makes future specialists focus on further individual personal development, while inflated self-assessment, regardless of specialization, makes them focus on dedicated professional development.

Keywords: student, terminological competence, professional and personal development, pedagogical assessment, self-assessment.

1 INTRODUCTION

The paradigm of modern higher education focuses on implementation of a competence-oriented approach and on an educational result which is termed "competence" in the higher education institutions (N. Bordovskaia, A. Kasprzhak, Ch. Winch, L. Foreman-Peck, P. Gómez-Gasquet, M.J. Verdecho, R. Rodríguez-Rodríguez, J.J. Alfaro-Saiz). Depending on purposes, different competences - academic, professional, informational, communicative, research, etc - are formed in higher education institutions. Creative work of teachers yields an ever-growing range of methods and techniques of forming and assessing such competences (S.R. Castle, J. Marron, T. Hopkins, P. Reiska, A. Möllits).

Among various pedagogical methods, assessment plays a special role in the educational process, because, being the main component in pedagogical control, it serves as a reference of teacher’s performance and as a stimulus for consolidation of success or for improvement of quality of educational results. The importance of measuring the results of education in a higher education institution has been proven by multiple studies conducted in Russia, Europe, Australia, America (V.S. Sobkin, E.V. Sabelnikova, N.L. Khmeleva, Dewey J. D., Montrose B. E., Schröter D. C., Sullins C.D., Mattox J.R.; P. McPherson, D. Shulenburger; B.A. Naughton, A.Y. Suen, R.J. Shavelson et al.):

- For a student, assessment is a way of social self-affirmation within a group and among professional teachers; it is the indicator of academic success, a measure of self-education and development of personal skills and abilities.

- Assessment of educational results is important for the teacher, as well, as it allows to assess how successfully students are apprehending the curriculum, and how well results of the educational process correspond to educational targets. Objective assessment allows teachers
to improve the quality of teaching, organization of in-class activity of students and ways to interact with them.

Thus, the issue of pedagogical assessment and self-assessment by students has been analyzed in multiple theoretical and empirical studies where pedagogical assessment and self-assessment are classified as systematic factors that have a significant impact on success and development of students.

But are pedagogical assessment and self-assessment by students always consistent with each other? Especially considering that in reality, in the course of a training program, the degree of success in apprehending some knowledge or mastering some competences by students may vary, even if taught by the same teacher. Among the main reasons behind such variations in assessments of students' results, teachers often name insufficiently high quality of teaching (Bordovskaia N.V., Rudenko O.S. et al.), inefficiency of pedagogical methods (K. Solika, P. Reiska), as well as diversity of individual and psychological differences among students (M. Tikhomirova, N. Bordovskaia, E. Koshkina, N. Bochkina, O. Zhebrovskaya) and their motivation (K. McMath, P. Reiska, A. Möllits; G. Pillera et al.). On the other hand, a teacher and a student are the main subjects of the educational process in a higher education institution, and, above all, they are interested in a quality and objective educational result.

However, our analysis of special psychological and pedagogical literature and own pedagogical experience gives us reasons to state that pedagogical assessment and self-assessment of students may match or mismatch when it comes to evaluating results of educational process. Behaviour of students in the situation of monitoring and assessment may be accompanied by:

- a desire to understand their mistakes and to change the teacher's appreciation and opinion of them, to confirm and to secure educational results; a desire to gain more knowledge beyond the curriculum; a sense of satisfaction with the results or due to self-assurance and leadership achieved among students (P. Reiska, A. Möllits);
- dissatisfaction due to unfulfilled expectations and sometimes inadequate reactions, such as conflicts, exams-induced stress, emotional breakdown, fear of the future (S. Kanizsa, G. Mosconi, A. Garavaglia).

Therefore, the issue of increasing the objectivity of assessment of an educational result bears value for a modern higher education institution in its search for new ways to improve the quality of education and to strengthen its functions of stimulation and development.

So when does the assessment act not only as means of control, but can also be a stimulus to deepen and expand one's scientific knowledge and to improve one's professional competence? We have conducted a special study to answer these questions.

Objective of the study was to examine the level of consistency between pedagogical assessment and self-assessment as a stimulus for students to develop professionally and personally (using psychology and pedagogy curriculum of a Russian higher education institution as an example).

Resolution of conflict between objective necessity of assessment in education and its possible negative impact on development of a student can be achieved, in our opinion, by making such assessment the subject of self-analysis and a means of stimulating activity while mastering professional competences.

Our hypothesis was that assessment in educational process acts as a stimulant for:

- professional and personal development of a student, if self-assessment matches pedagogical assessment, regardless of whether the academic discipline is professionally valuable in the framework of education of the student,
- personal development if self-assessment is too low, but academic motivation prevails and academic discipline is not professionally valuable for the student,
- professional development if self-assessment is too high, but professional motivation prevails and academic discipline is professionally valuable for the student.
2 METHODOLOGY

In studying the extent of consistency between pedagogical assessment and self-assessment as a factor that stimulates students for professional and personal development, we used the following scientific provisions as guidelines.

To understand assessment, it is reasonable to be aware of the entire range of parameters of the category itself in the context of educational activity. In this study, our understanding of assessment as a pedagogical method was guided by acknowledgement of how psychologically difficult assessment is for a teacher, since it is almost impossible to avoid subjectivity of individual assessments in any activity. Therefore, in order to reduce subjectivity of assessment in an educational process it is important to identify, take into account and compare assessments of different subjects (teacher and student) relying on differentiation of their competences and on the substantiated system of criteria and indicators (Bordovskaia N.V., Titova E.V., 2005).

Pedagogical assessment and self-assessment is deemed by us for the purposes this study as assessment of terminological competence by a student in the field of didactics. Terminological competence (TC) here implies the ability of a student to use acquired knowledge and mastered skills in the context of familiar or unfamiliar profession-focused situations, tasks, and problems. While studying the level of development of students’ TC in the field of didactics, we relied upon structural and functional model of competence and a system of manifestation indicators, as well as on characteristics of development levels formulated by N.V. Bordovskaia and E.A. Koshkina (Bordovskaia N.V., Koshkina E.A., 2016). The structure of TC includes three components:

- subject-cognitive component (S-C) - a body of knowledge in the form of specific terminology needed to understand requirements of the respective field of professional activity, to give a well-founded explanation of methods of solving typical field-specific problems, to adequately explain the quality of results received. The main function of this component is to form individual active terminological vocabulary, its size indicating the quality of a subject's comprehension of theoretical and applied aspects in professional domain;
- intellectual-reflective component (I-R) – the experience of identifying connection between didactic terms in order to understand, completely and systematically, mastered didactic terminology, and the experience of critical analysis of correctness of its use in professional activities. Its main function is to adequately represent individual professional experience at conceptual and terminological level and to understand grounds for refreshing or expanding one's didactic vocabulary;
- communicative-speech component (C-S) – the experience of selecting scientific vocabulary and lexical units to create a didactic text and of accurately communicating didactic information in the course of professional interaction.

Taking into account the structure of TC, we see the following reasons for its assessment:

- to obtain objective information regarding how well didactic terminology has been mastered by students;
- to determine general trends and to identify differences in actual quality of didactic terminology uptake by students of various specializations - both teachers-to-be and not;
- to determine students' attitude towards results of acquisition of didactic knowledge (with didactic terminology as an example) and the ways to overcome difficulties in mastering and using this knowledge.

In designing the assessment situation in the context of educational process, we were looking to implement the following principles (Bordovskaia N.V., Titova E.V., 2005):

- assessment of educational results must not be substituted with assessment of personal qualities of the subject of assessment. Therefore, all assessment criteria and TC manifestation indicators have been formulated so as to represent characteristics of students' performance in mastering and using didactic terminology.
- assessment of the level of proficiency in TC must not be substituted with assessment of correctness of definitions given to didactic terms, without assessing the experience in using them in the context of professional communications, both verbally and in writing.
level of students' proficiency in TC must be assessed with due consideration of objective differences in the conditions under which TC is mastered and used, as well as with consideration of TC's role in general professional competence of future specialists (whether they are specializing in pedagogy or not). At the same time, the system of indicators and criteria and the assessment procedure must be uniform.

Professional development of a specialist, in the context of educational process, in our understanding, is defined by such actions of a teacher, when they purposefully create conditions that put the student in the position of the subject of professional development, i.e.:

- the one who consciously accepts the contents of educational information being offered in its entirety as professional experience,
- the one who understands that academic information is the most important element of professional competence and professional culture of a specialist,
- the one who perceives the system of requirements imposed by the teacher as requirements of the future professional activity and requirements of a professional.

Personal development of a student, in the context of educational process, in our understanding, is defined by such actions of a teacher when they purposefully create conditions that put the student in a position of subject of self-cognition and self-assessment, the position of finding ways to realize intrinsic potential and to grow personally.

Based on these approaches and principles, we have designed the survey strategy which is detailed in the description of design and logic of implementation of selected methods.

2.1 Design and methods

The survey was conducted based on departments of philology, history, medicine, and applied mathematics and control processes of Saint Petersburg State University. The sample included 185 students. In order to obtain objective data, the sample of respondents was made up of:

- 92 students looking to pursue careers in pedagogy (group A);
- 93 students not looking to pursue careers in pedagogy (group B).

The survey is based on the use of a set of methods that allow for maximum objectivity in determination of consistency between pedagogical assessment and self-assessment of educational results in the context of professional and personal development of students:

- a questionnaire was used to compile descriptions of principal social and professional characteristics of the sample of respondents;
- method of concept maps was used to study experience of identifying existing connections between didactic concepts;
- technique developed by N.Ts. Badmayeva (2004) was used to perform diagnostics of students' motivation for learning.
- content analysis, parametric analysis using Student's t-test, canonical correlation analysis - for processing of survey results.

The survey was conducted in 3 stages.

The first stage covered pedagogical assessment and self-assessment of results of studying the "Didactics" course (with didactic terminology as an example) as part of "Psychology and Pedagogy" curriculum. Pedagogical assessment implied the process of assessing the level of formedness of TC and its components – object-cognitive, intellectual-reflective, communicative-speech. Self-assessment was made at the stage of reviewing results of training in "Didactics" course, considering that for group A students "Psychology and Pedagogy" is the profession-oriented subject, while for group B students it is a part of general humanities training. Using methods of mathematical statistics (parametric analysis using Student's t-test), students with adequate, low and high self-assessment scores have been identified in each group.

The second stage covered studying of motivation of respondents based on techniques by N.Ts. Badmayeva (2004) and using methods of mathematical statistics (canonical correlation analysis) to determine the structure of motivation for groups A and B students with adequate, low and high self-assessment scores.
During the third stage, we determined the influence of adequate, low and high self-assessment results of students on their attitude towards self-improvement in working with didactic information.

3 RESULTS

3.1 Objective 1

To determine levels of development of TC and its components (S-C, I-R and C-S) for groups A and B students, compare obtained data based on adequacy and inadequacy of pedagogical assessment and self-assessment of didactic terminology learning results.

Based on parametric analysis using Student’s t-test, for students not aspiring to follow pedagogical careers in future (group B) statistically significant difference has been found between assessment and self-assessment of intellectual-reflective component (assessment results exceeded self-assessment scores, t= 3.79, \( p \leq 0.001 \)). The results are shown in Fig.1.

![Figure 1. Comparison of assessment and self-assessment scores of group B students.](image1)

![Figure 2. Comparison of assessment and self-assessment scores of group A students.](image2)

Conclusion 1: Obtained data demonstrate that group B students adequately assess their proficiency in didactic terminology and sometimes even underestimate their ability to understand its structural organization in scientific context. But at the same time low self-assessment may demonstrate lack of confidence in consistent knowledge of didactics and its conceptual structure. Considering that teaching theory holds no professional value to respondents of this group, majority of these students may have been undermotivated to complete assignments on usage of didactic terminology or may have done it insufficiently consciously and meaningfully.

Group A students, who are planning to follow careers in pedagogy in the future, were characterized by high self-assessment of object-cognitive and communicative-speech components of TC (t=-2.83, t=-2.54, \( p \leq 0.01 \)) and the general level of TC (t= -2.25, \( p \leq 0.03 \)) (Fig. 2.).

Conclusion 2: Future teachers possess greater terminological competence, demonstrate more confidence in their own knowledge and tend to overestimate in their assessment of completeness, consistency of knowledge and proficiency in didactic terminology. Obtained results demonstrate their willingness and readiness to actively use didactic terminology in professional communications, while majority of them already have some positive experience of successfully using the terminology not only in class, but in direct communication with school teachers and parents of pupils. However, overassessment in general, particularly with respect to completeness and consistency of knowledge of didactic terms, and therefore its usage in class, in teaching and in pedagogical practice suggests insufficiently competent use of didactic vocabulary by group A students in their speech and in writing, which, in turn, suggests necessity of further work on improvement of such competence.
3.2 Objective 2

Studying motivation structure of respondents with adequate, low and high self-assessment of proficiency in TC.

The following differences have been identified between group A and B students in terms of structure of motivation according to adequacy/inadequacy of self-assessment of components development and of general TC level:

For students who plan on following careers in pedagogy (group A):
Identification of one important canonical function in analyses of object-cognitive and communicative-speech components of TC confirmed the difference in motivational structure of students who assessed development of these components differently. Their desire to improve the level of didactic competence (self-assessment score - 0.28, dispersion- 96.4%, canonical correlation - 0.47, level of significance - 0.037, Wilks’ lambda - 0.77) depends on the extent of formedness and predominance of the following motives in the structure of motivation:

- social motives (0.86);
- learning and cognitive motives (0.53);
- motives of avoidance (0.32);
- creative personal realization (0.3).

Values of centroids of the groups (given above in brackets) suggest the following conclusion: the more these motives manifest in behaviour and didactic terminology apprehension by future teachers, the more likely their assessment of their knowledge of each didactic term in the entire aggregate of terms covered in the curriculum will be adequate.

Increase of adequacy of self-assessment of correct use of didactic terminology in analysis of didactic texts and verbal discussions of didactic problems (communicative-speech component of TC) (self-assessment score - 0.16, dispersion - 42.6%, canonic correlation - 0.37, level of significance - 0.045, Wilks' lambda - 0.86) depends on (judging by “centroids” of the groups given in brackets below) predominance of other motives in the structure of motivation of respondents:

- motives of prestige (0.81);
- communicative motives (0.68);
- learning and cognitive motives (0.53);
- social motives (0.50);
- professional motives (0.45);
- creative self-realization motives (0.41);
- avoidance motives (0.28).

For students who do not plan on following careers in pedagogy (group B):
Identification of one important canonical function in analyses of communicative-speech component of TC and general TC development level confirmed the difference in motivational structure for students who assessed development of these components differently. It has been determined that students’ attitude towards improvement of competence in professional vocabulary as teachers (self-assessment score - 0.23, dispersion - 74.8%, canonic correlation - 0.43, level of significance - 0.005, Wilks' lambda - 0.75) is most closely related to professional motives (0.70) and social motives (0.54). Analysis of statistical data showed that the more pronounced the professional and social motives of students who do not plan on following careers in pedagogy in professional and verbal communication regarding issues of didactics, the more likely their overrating communicative-speech component of TC.

Analysis of students’ independent assessment of TC development level showed that the attitude of students in this group to improvement of professional vocabulary as teachers (self-assessment score - 0.22, dispersion - 75.1%, canonic correlation - 0.42, level of significance - 0.008, Wilks' lambda 0.79) is determined by the following motives:

- professional motives (0.91);
- learning and cognitive motives (0.65);
communicative motives (0.64);
- motives of prestige (0.50);
- creative self-realization motives (0.45).

Obtained statistical data showed that students who do not plan to pursue pedagogical careers demonstrate a connection between the intensity of motives associated with professional training in a higher education institution and the tendency to over-assess their level of TC development.

In general students who plan to pursue careers in pedagogy and demonstrate adequate independent assessment of the level and completeness of knowledge of individual terms tend to aspire to achieve a certain social status, to establish relationships in their social environment, while trying to avoid negative assessments from their counterparts. They are interested in learning new things in the field of modern didactics and are prone to more complete display of their practical capabilities in different areas where didactics can be used. Students in this group, who adequately estimate their ability to interpret didactic information and to properly communicate it verbally, have great aspirations to achieve a certain social status and feel the need for communication focused on issues of didactics and educational process. Other motives, that comprise motivational framework of personality of these students, play an auxiliary stimulating role in achieving main aspirations.

For students who do not plan to pursue pedagogical careers in future, professional motives, such as aspiration to acquire necessary knowledge and skills in the selected professional (non-pedagogical) field, dominate. They tend to overestimate their level of proficiency with didactic terms in professional speech and the overall level of their terminological competence in the field of didactics.

**Conclusion:** The data obtained from the canonical correlation analysis allows us to make the following conclusion on the role of motivation in students' self-assessment of their theoretical knowledge of didactics. Students who adequately assess their didactic knowledge, know how to use didactic terms in professional speech, and are planning to become teachers in future, believe that learning and mastering didactic terminology is an important part of mastering the profession. That is why motivational structure of personalities of such students predominantly features motives that stimulate their learning and cognitive activity required to obtain knowledge of didactics directly in the course of the learning process, motives of prestige of the profession they are aspiring to, and the desire to expand their professional-and-lingual and intergroup communication to expand the field of practical use of acquired didactic knowledge.

Students who do not plan on following careers in pedagogy, who aspire to become high-qualified specialists in their dedicated field, tend to overestimate their proficiency in didactic terminology, which for them is mainly a part of general knowledge and an indicator of good education, accomplishment and general cultural level of a modern specialist.

**4 CONCLUSIONS**

1. Adequate self-assessment of didactic competence by future teachers mostly determines social and personal development of a future specialist. Such students aspire to attain a high social status as early as during their studies in a higher education institution, and to acquire social professional contacts required for this purpose, as they consider their studies and professional training to be prestigious.

2. Inflated self-assessment of knowledge and proficiency in didactic terminology demonstrated by non-pedagogy students may suggest their orientation towards professional development and their strive to acquire all knowledge available within the curriculum so as to get quality education and high-level professional qualification, including in terms of general cultural training, which also implies didactics. Therefore, students with inflated level of proficiency with general cultural knowledge are highly professionally motivated. Due to high professional motivation, such students are more successful in mastering professional skills, and therefore they become confident in their knowledge of didactic terminology, because in general, over the time of their studies, they tend to consider themselves successful in all areas of their activities, including learning and terminological field.

3. Inflated self-assessment, especially in terms of completeness and consistency in apprehending didactic terminology is the basis for further targeted work towards increasing terminological literacy of a pedagogical student, i.e. focus on dedicated professional development. Inflated assessment of own knowledge and level of comprehension of didactic terminology

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demonstrated by students of non-pedagogical lines of studies shows predominant focus on professional development and the strive to apprehend all types of knowledge within one's curriculum so as to receive quality education not only in fields of specialization, but also in general academic sense.

This allows to conclude that adequate self-assessment in a specialized academic area makes future specialists focus on further individual personal development, while inflated self-assessment, regardless of specialization, makes them focus on dedicated professional development.

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