The European Proceedings of
Social and Behavioural Sciences
EpSBS

www.europeanproceedings.com
e-ISSN: 2357-1330

DOI: 10.15405/epsbs.2020.11.02.94

PSYRGGU 2020
Psychology of Personality: Real and Virtual Context

ASSESSMENT OF META-SUBJECT OUTCOMES OF STUDENTS' EXTRACURRICULAR ACTIVITIES: FOREIGN AND DOMESTIC EXPERIENCE

Natalia V. Tarasova (a)*, Irina P. Pastukhova (b), Alexander A. Popov (c)
*Corresponding author

(a) Federal Institute for Educational Development RANEPA, Chernyahovskogo 9/1, Moscow, Russia, tarasova-nv@ranepa.ru
(b) Federal Institute for Educational Development RANEPA, Russia
(c) Federal Institute for Educational Development RANEPA, Russia

Abstract

World history has convincingly proved and constantly confirms that the most important tool for the sustainable development of any government and the well-being of its population is education, the quality of which stimulates a country's social and economic growth, the introduction of innovations, and the empowerment of people. In its turn, responding to one or another challenge of time and society, education is constantly being modernized. This process is accompanied by various, sometimes revolutionary transformations in pedagogical theory and practice, which relate not only to subjects and the content of education (whom and what to teach?), teaching methods (how to teach?), but also the assessment of the results achieved by students (what and how to assess?). In the XXI century, human ability to organize their own activity, to design and implement a life strategy, for which specific, private knowledge is a resource, yet not a determining factor, is at the forefront. It is these abilities in the domestic practice of recent decades that are designated as meta-subject educational outcomes. If the task of educational activity is still the formation of specific normalized and verified subject (and, rarely, practical) knowledge, then extracurricular activities are increasingly becoming a space for solving educational problems, developing communicative abilities and skills, formalizing personal cognitive and activity interests, gaining experience by solving complex practical problems. The article considers international and domestic approaches to the assessment of meta-subject (key non-subject) educational outcomes achieved by students in extracurricular activities.

Keywords: Approaches to assessment, extracurricular activities, meta-subject educational outcomes, students.

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

In most foreign countries, the term "meta-subject educational outcome" is not actually used. This usually refers to areas of personality activity which may include one or another result of educational activity (for example, cognitive, motivational, emotional, social), and, thus, to results in these areas (abilities, skills, attitudes). The term "meta-subject educational outcome" appeared in the context of the domestic educational practice where students mastering cognitively and empirically organized subjects has been and remains a systemically important process of education. In the domestic tradition, there are several approaches to the definition of the concept of "meta-subject competence" and, accordingly, the concept of "meta-subject educational outcome". This article continues a series of development of methodological foundations for assessing meta-subject educational outcomes in accordance with the requirements of the Federal State Educational Standard of general education, considering this phenomenon both as a pedagogical problem and as a condition for the development of students' personality at secondary school (Tarasova & Pastukhova, 2019).

2. Problem Statement

The term "meta-subject educational outcome" appeared and became widespread in Russian pedagogy as a way of representing the sphere of scientific knowledge: "subject' and 'meta-subject". In foreign practice, educational outcomes are differentiated by the degree of their standardization: "hard skills", "soft skills". Moreover, the concept of "soft skills" takes its roots in the pragmatic philosophy of Dewey (2009), and "meta-subject competences" – in the philosophical tradition of transcendental idealism, starting with Plato (1971). "Meta-subject competences" are defined by a certain normalized "meta"-knowledge which is embracing and structure-forming in relation to knowledge about a specific, verified sphere of reality, be it knowledge related to one or another ontology, or methodological knowledge that allows perceiving and displaying the universal laws of the world functioning.

The key meta-subject outcomes of extracurricular activities in foreign educational practice are not actually systematized and are reduced to the formation of personal characteristics that increase individual life comfort and allow successfully solving personally significant tasks. In the domestic practice, the concept of "meta-subject educational outcomes" has several different substantive contents: acquisition of specific framed units of knowledge that provide solutions to the corresponding cognitive tasks on fundamentally different subject materials (scholar schools of Gromyko (2001), Khutorskoy (2012) and others); the development of methods for solving problems that are invariant with respect to a specific educational material (A.G. Asmolov and G.V. Burmenskaya (as cited in Asmolov, 2011), Vorovshchikov, (2016) and others); building individual strategies and models for solving problems on the basis of both specially organized study of academic subjects and solving tasks that use the material of several different subjects (didactics of open education by Popov and Ermakov (2019) and others). Nevertheless, any of these approaches assumes that meta-subject educational outcomes are achieved by students not only during classes, but also during extracurricular time, and therefore should be assessed in a certain way. A comparative analysis of international and domestic experience in assessing meta-subject educational outcomes achieved by students in extracurricular activities will clarify: the object and subject of assessment;

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

the degree of regularity and institutionality of assessing meta-subject educational outcomes; forms and methods of assessment.

3. Research Questions

Traditionally, the task of educational activity was the formation of specific standardized and verifiable subject (and, less often, practical) knowledge, while extracurricular activities were a space for solving problems of education, the formation of communicative abilities and skills, the design of students' personal cognitive and activity interests. Thus, identifying the characteristics of meta-subject educational outcomes achieved by students in extracurricular activities will make it possible to identify specific forms, methods and tools for their assessment.

4. Purpose of the Study

Comparative analysis of international and domestic approaches to assessing meta-subject educational outcomes achieved by students in extracurricular activities.

5. Research Methods

In the course of the work the methods of theoretical research are used: systematization, classification, comparison, matching and generalization of information and the obtained results.

6. Findings

In the domestic tradition there are several approaches to the definition of the concept of "meta-subject competence" and, accordingly, the concept of "meta-subject educational outcomes".

1. "Cognitive approach". Scholar schools of Gromyko (2001), Khutorskoy (2012) distinguish methodological categories as meta-subjects: "Sign", "Knowledge", "Problem", "Task", etc. In each case, in order to obtain a meta-subject educational outcome, it is necessary for students to master some objectified ideas about 'meta-subjects' and build an image and method of their own actions based on these ideas. The problem is that objectified description of meta-subjects is difficult due to their mainly methodological nature, which implies their high degree of "attachment" not only to specific cultural traditions, but often to specific situations of analysis and practical actions. In general, this approach assumes mainly a rational and cognitive way of forming meta-subject competences.

2. "Instrumental approach" according to Menchinskaya (2004), Talyzina (1984), meta-subject educational outcome assumes the appearance of abilities that allow successful solution of problems of the same or similar class in different subject areas (to analyze, build a model, reconstruct the genesis of a phenomenon, etc.). In fact, this approach does not contradict the previous one, but it does not imply that "meta-subject" and "basic subject" are relatively equally structured knowledge systems. "Meta-subjectness" here is reduced to the possession of universal methods and models of activity that can be equally successfully applied to solve tasks in any field. Thus, meta-subject outcomes in this approach can and should be formed by a specially organized study of certain "standard" academic subjects followed by a

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

specially organized "transfer" of the designed methods to solve problems in a fundamentally different material basing on a certain initial standard of correct application of appropriate thinking techniques.

The authors of this approach suggest the following basic algorithm for the formation of meta-subject competences:

- formation of students' needs for rationalization of mental activity;
- learning the rules according to which a particular operation is performed (forming an indicative basis);
- organization of activities in accordance with the rules;
- exercise of self-control by students.

Certainly, this is not the only model for using this approach. An alternative to it involves, for example, obtaining an activity experience, reflecting on it, and reconstructing and constructing rules of activity for oneself on its basis. However, it is essential that, firstly, the starting point in this approach is the design of a personal need for the appearance of a universal method (tool) for solving tasks of a certain class; secondly, the subject of interiorization is no longer a complex and systematic representation of reality, but an extremely instrumentalized order of actions.

3. "Management approach". Meta-subject educational outcome is actually associated with a special variant of managerial competence with the ability to use both universal principles and concepts and the material of specific sciences and practices to achieve a specific project goal in given circumstances. This approach corresponds, in particular, to the basic principles of didactics of open education (Popov & Yermakov, 2019), where an organizing principle is not so much a certain objectively existing "meta-subject" and not so much individual grounds and will of a particular emerging subject, as a socio-cultural object, reconstructed and created by a subject and serving as a basis for its self-construction and constitution. At the same time, a socio-cultural object is a reproducible objectified (also verifiable) phenomenon that generates new worldviews and intentions in people interacting with it (in this sense, socio-cultural objects equally include a temple of any religion, a project of technological modernization of a region, practices of social assistance, and so on). It is due to the reconstruction and construction of a particular socio-cultural object that a person develops the ability to configure various knowledge and turn them into bases and tools for their own activities, which can be considered an aggregate (integrated) meta-subject competence.

It is important to note that for all three approaches to meta-subject educational outcomes, a relatively "homogeneous" list of diagnostic and assessment methods can be identified. Within each of them, meta-subject competence is considered in connection with the solution of practical tasks. Therefore, it is possible to assess them only in the mode of performing activity tasks that involve both a verifiable result and the ability to determine a specific sequence of students decisions and actions that led to its achievement. In the first, "cognitive" approach, the test will be the implementation of a "meta-subject" as complex knowledge in the process of solving the corresponding task. In the second approach, the optimal form of assessment can be considered to be the proposal of an algorithm for solving a particular problem on the material that is obviously different from the one in connection with which the meta-subject competence was formed and developed. In the third case, the best way to assess a problem will be solving a specially prepared management task. All these forms and ways of assessment can be summarized in two basic types: a case

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

study (reconstruction and/or designing a solution for a problem that was actually solved in certain conditions, for which there is a solution that showed its efficiency) and a problem-solving activity task (designing solutions for problems posed as unsolvable).

However, none of the above-described domestic approaches to meta-subject educational outcomes presupposes the ability to "decompose" them into private activity manifestations and characteristics. In all these approaches (even the "instrumental" one) the meta-subject competence is obviously an integral characteristic based on the self-image of a person and the deriving foundations, intentions, purposes; implemented in the course of solving complex tasks. Therefore, test forms of assessing educational outcomes, which are often used in pedagogical practice, can only give an indirect idea of the presence of a meta-subject educational outcome. Moreover, often particular personal characteristics identified by test methods are the result of "natural" circumstances of a person's life, their randomly formed individual experience, and not a purposeful educational impact, so that their consideration when assessing meta-subject educational outcomes is likely to distort the picture.

In general, the typology of approaches to determining the content and functional purpose of extracurricular activities can be considered as the same for foreign and domestic practices – although, of course, in foreign countries it is possible to distinguish a specific, appropriate to their conditions focus of extracurricular activities, which corresponds to most of their practices. Here are some examples of this specialized focus:

- USA: comprehensive competence development of students' personality, increase of students' self-confidence, development of students' leadership skills, increase of students' knowledge of the curriculum subjects, which goes beyond the limits set by this plan (all these areas can be reduced to the formation of the grounds for practical activities, the purpose of which is to raise the social status).

- Germany: students orientation in life, general cultural development, in fact - the formation and development of the personal basis for making decisions and actions.

- Sweden: most productive way for students to spend their free time.

- Spain: compensation for basic education system's deficits, socialization and enculturation of students needing it, cultural education.

- Brazil: mastering areas of activity that are not part of main academic subjects (sports, languages, art), solving specific problems of specific students development and socialization.

- China: integration of educational activities and students' primary vocational training; specialized work on the development and appropriation of national and social values by students.

The results of the analysis of international and domestic approaches to the assessment of meta-subject educational outcomes achieved in extracurricular activities by students are presented in table 01.

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Table 01. International and domestic approaches to assessing meta-subject educational outcomes achieved in extracurricular activities

Comparison parameter	Foreign experience	Domestic experience
What is considered a 'meta-subject educational outcome'	'Soft skills': ways of activity that ensure the successful performance of functions in various systems of co-organization. A set of world outlooks that determine goal setting and ways of acting in various situations (including 'team spirit')	Mastering the cultural way of acting in normalized situations that are not tied to specific subjects and practices, including solving problems arising from these situations. Ability to integrate and apply ideas from various subject and practical areas to solve personally significant problems
Role and place of extracurricular educational activities in the general educational process	- either actually 'merges' with the main educational activity and turns into a space for testing the acquired knowledge and concepts, formed competences; - or traditionally serves as a space for the formation of motives for educational activities, social and communication skills, and the development of daily life and communication skills	The sphere of meaningful leisure time The sphere of satisfaction of individual educational needs, including the expansion of views on the main academic subjects. The sphere of formation of social competences (separate from the main educational and subject competences)
Basic approach to educational performance	The outcomes are of a physiological, cognitive, and instrumental nature	The outcomes are of a physiological nature and/or the nature of the formation of an integral ability to a given type of activity
Regularity and institutionalization of outcomes assessment	Assessment is not institutionalized, it is conducted sporadically	Assessment is not institutionalized, it is conducted regularly
Degree of integrality/fractionality of the outcomes measurement	Specific characteristics formed in extracurricular activities are measured	Measured comprehensively
Outline of the use of assessment outcomes	Construction/adjustment by students of their own educational strategies and trajectories	Program and management developments in the field of education
Role and place of various intellectual and other games in extracurricular activities	Used as a tool for the functionalization of knowledge and concepts. Used as a tool for getting new knowledge and concepts Used as simulators of individually significant abilities (competences). Used as an analogue of traditional team games - tools for forming microsocial involvement and co-organization	Used as a tool for illustrating the main educational program. In a relatively limited number of cases used as simulators of individually significant abilities.
Forms and methods of assessment	Complex testing systems Results of presentation and defense of individual projects Passing through additional (short-term) digital simulators	Simple tests that identify particular characteristics Reflexive interviews; working with objectified tools of reflection (maps, self-projections, etc.) Working with cases/execution of problem-solving tasks

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

7. Conclusion

In the practice of most countries of Europe and America and, by analogy with them, in recent decades the countries of East and South-East Asia, educational outcomes that are not directly related to the quality of mastering a specific subject of educational material, and in this sense similar to domestic meta-subject educational outcomes, can be divided into three main categories:

1. Specially formed or enhanced individual characteristics that are manifested in everyday activity regardless of the solution of vital tasks, which nevertheless provide high advantages for a person when solving such tasks, as well as generally provide a high level of emotional and psychological comfort (for example, self-organization, low level of anxiety, the capacity for more flexible thinking).

2. Ensuring the solution of specific tasks by modeling the appropriate thinking and subject and practical actions in the educational process and the subsequent design of the method of corresponding activities.

3. Forming basic life attitudes and value preferences that ensure people's goal-setting and their inclusion in certain practices.

The study identified the following approaches to determining the meta-subject educational outcomes:

Foreign approaches:

- formation of key cognitive skills and skills for converting information received that are not related to a specific subject area;
- formation of general common skills and abilities (or abilities and competences that ensure competitiveness in the market) that do not necessarily follow from mastering educational subjects;
- formation of abilities in areas that are not traditionally considered as a subject of development at secondary school (artistic creativity, sports).

It is obvious that foreign approaches to the definition of meta-subject (non-subject) educational outcomes are mainly formal and application-oriented (meta-subject outcome is any result that does not follow from mastering a specific academic subject). The scope of application of the abilities and competences that constitute an educational outcome becomes the basis for classification.

Domestic approaches:

- mastering special knowledge of a methodological nature (‘meta-subject’), which allows successful solving of problems in a wide range of knowledge and practice fields;
- mastering specific knowledge, skills, and competences that predeterminedly allow solving problems of a similar class in various subject and practical areas;
- ability to design, instrumentalize and apply knowledge, concepts, and methodological units from predeterminedly different fields of knowledge and practice to solve complex research or project tasks related to self-determination.

It is obvious that doemstic approaches to determining meta-subject educational outcomes are mainly ontological in nature. They assume the presence of certain types of knowledge other than subject

https://doi.org/10.15405/epsbs.2020.11.02.94
Corresponding Author: Natalia V. Tarasova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

knowledge, or procedures for operating and managing knowledge that are implemented in a different logic than working with subject knowledge. Here the basis for classification is the type of knowledge that is not reduced to the subject one (methodological, instrumental, managerial).

The approaches to assessing meta-subject educational outcomes identified in the course of the study in foreign and domestic practice are generally identical and do not have any significant diversity today:

- assessment of the efficiency of students' specific subject and productive actions, which predeterminedly suppose the possession of meta-subject competences (the validity of this method of assessment is extremely doubtful, since the indicator in this case replaces the outcome);
- monitoring of psychological innovations as the basis for meta-subject educational outcomes (mainly in the mode of testing of their different types);
- checking the ability of students to solve certain types of tasks (case studies, problem-project tasks, game modeling, etc.).
- assessment of students' personal bases and priorities (through interviews, implementation of individually significant projects, preparation of reflexive analytical essays on fundamental value topics by students, etc.).

Extracurricular activities, both in foreign and domestic practice, in general are not the subject of targeted assessment, and even more so, certification, even in the case of implementing the approach associated with the transmission of normative values and concepts (performance is determined by a sample survey, usually compiled situationally and without compliance with the requirements for validity). It is considered that, since extracurricular activities satisfy personal interests and needs of students or their parents, it should be their task to assess their efficiency. However, in the case of extracurricular activities of the subject type, the form of certification and assessment of outcomes is the graduation work (artwork, sports performance, etc.). In extracurricular activities that involve meta-subject educational outcomes, assessment is either not performed, or is reduced to surveys and to the simplest, and therefore not valid, testing of new abilities.

It seems correct to suggest optimal types of assessment of meta-subject educational outcomes provided by extracurricular activities:

- parameterized observation of an expert teacher involved in the educational process;
- balanced mutual assessment of a student's contribution to the common goal, conducted by other students involved in the interaction;
- preparation of a reflexive essay describing the experience gained during extracurricular activities, with answers to a significant number of pre-prepared and presented substantive questions;
- passing a case study in the mode of not only presenting the solution version for the proposed situation, but also in the mode of analytical comparison with similar or comparable situations present in a student's own experience.

Acknowledgments

The article is prepared as part of the research work of the state assignment of the RANEPA for 2020 "The Development of the Personalized Support System for Teachers in the Framework of the National System of Teachers' Professional Growth".

References

Asmolov, A. G. (2011). Proektirovaniye universalnykh uchebnykh deystviy v starshey shkole. [Designing universal educational actions in high school.] In Asmolov, A.G., Burmenskaya G.V., Volodarskaya I.A. and others. *National Psychological Journal, 1*(5), 104 – 110.

Dewey J. (2009). *Ot rebenka k miry, ot mira k rebenky* [From a child to the world, from the world to a child]. Karapuz.

Ermakov, S. V., & Popov, A. A. (2019). *Didaktika otkrytogo obrazovaniya: Monografiya.* [Didactics of open education: Monograph]. National Book Center.

Gromyko, Yu. V. (2001). *Metapredmet 'Znak'. Skhematizatsiya i postroyeniye znakov. Ponimaniye simvolov* [Meta-subject 'Sign'. Schematization and construction of signs. Comprehension of symbols]. Pushkin State Russian Language Institute.

Khutorskoy, A. V. (2012). Metapredmetnoye soderzhaniye i rezultaty obrazovaniya: kak realizovat federalnye gosudarstvennye obrazovatelnye standarty (FGOS) [Meta-subject content and outcomes of education: how to implement Federal State Educational Standards (FSES)]. http://eidos.ru/journal/2012/0229-10.htm

Khutorskoy, A. V. (2012). *Metapredmetny podkhod v obuchenii: Nauchno-metodicheskoye posobiye*. [Meta-subject approach to education: Scientific and methodological guide.] 'Eidos' Publishing House.

Menchinskaya, N. A. (2004). *Problemy obucheniya, vospitaniya i psikhicheskogo razvitiya rebyonka* [Problems of education, upbringing and mental development of a child.]. Moscow Psychological and Social Institute (MPSI).

Pastukhova, I. P., & Tarasova, N. V. (2019). Metapredmetnye obrazovatelnye rezultaty i kompetentsii XXI veka kak predmet otsenivaniya. [Meta-subject educational outcomes and competencies of the XXI century as a subject of assessment.]. *The Journal of Secondary Vocational Education, 7*, 16-22.

Pastukhova, I. P., & Tarasova, N. V. (2019). Otsenivaniye metapredmetnykh obrazovatelnykh rezultatov kak pedagogicheskaya problema i usloviye razvitiya lichnosti uchashchikhsya obshcheobrazovatelnoy shkoly. Razvitiye lichnosti uchashchegosya: novye podkhody i resheniya: kollektivnaya monografiya. [Assessment of meta-subject educational outcomes as a pedagogical problem and a condition for the development of secondary school students' personality. Student personality development: new approaches and solutions: a collective monograph.]. Zebra

Plato (2016). *Gosudarstvo* [State]. https://fictionbook.ru/author/platon/gosudarstvo_andreyi_egunov-/read_online.html

Talyzina, N. F. (1984). *Upravleniye protsessom usvoyeniya znaniy (psikhologicheskiye osnovy).* [Managing the process of learning (psychological foundations)]. Publishing House of Moscow University.

Tarasova, N. V. (2019). Teoreticheskiye aspekty otsenki metapredmetnykh obrazovatelnykh rezultatov. [Theoretical aspects of assessment of meta-subject educational outcomes]. In *Eurasian educational dialogue materials of the International forum* (pp. 225-229). GAU DPO YaO IRO.

Vorovshchikov, S. G. (2016). K voprosu o proektirovanii teorii metapredmetnogo obrazovaniya [On the issue of designing the theory of meta-subject education]. *Bulletin of the Institute for Human Education*. http://eidos-institute.ru/journal/ 2016/100/