## Perceptions of Feedback among Russian Adolescents

A. A. Azbel, L. S. Ilyushin, P. A. Morozova

#### Received in September 2020

**Anastasia Azbel,** Candidate of Sciences in Psychology, Associate Professor, Institute of Pedagogy, Saint Petersburg State University. Email: <a href="mailto:a.azbel@spbu.ru">a.azbel@spbu.ru</a>

**Leonid Ilyushin**, Doctor of Sciences in Pedagogy, Associate Professor, Institute of Pedagogy, Saint Petersburg State University. E-mail: <a href="mailto:l.ilushin@spbu.ru">l.ilushin@spbu.ru</a> (corresponding author)

**Polina Morozova**, Master's Degree Student, Faculty of Liberal Arts and Sciences, Saint Petersburg State University. Email: polina\_2312@bk.ru

Address: 7/9 Universitetskaya Emb, 199034 Saint Petersburg, Russian Federation.

#### Abstract

Despite the obvious significance of the feedback phenomenon for school practice, there is a lack of valid analysis of student perceptions of feedback. This article explores how Russian adolescents conceptualize and perceive feedback as an educational tool. Descriptive research was conducted using an anonymous survey based on a questionnaire composed of open-ended questions. Seven hundred and three adolescents from large cities of Russia were asked questions about how they understood "feedback", what kind of feedback they would like to receive, and what kind of feedback they actually received from teachers. This was followed by a field study that involved an overt observation and analysis of feedback manifestations in a secondary school program for gifted students (n=140). Most senior students understand the range of problems associated with feedback, yet they perceive feedback itself as a tool for teaching, not as a tool for learning. In their beliefs about feedback, adolescents intuitively rely on either "behavioral" or "existential" perspective. In the former case, feedback is perceived only as an external stimulus and the resulting response. In the latter, students regard feedback as a tool for dialogue, support, engaged communication, relationship development, and direct or indirect request for evaluation or assistance. The more complex interpretation may stem from students' prior participation in situations of assistance and cooperation as well as their perceived need for a dialogue with the teacher or tutor.

Since the sample was unrepresentative, the conclusions made in this study should be deemed preliminary. Nevertheless, they allow designing further research of feedback literacy in Russia's school education.

#### Keywords

feedback literacy, feedback in schools, communicative competence, questionnaire interview, field research, adolescents, school education.

#### Citation

Azbel A. A., Ilyushin L. S., Morozova P. A. (2021) Obratnaya svyaz' v obuchenii glazami rossiyskikh podrostkov [Perceptions of Feedback among Russian Adolescents]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 1, pp. 195–212. <a href="https://doi.org/10.17323/1814-9545-2021-1-195-212">https://doi.org/10.17323/1814-9545-2021-1-195-212</a>.

Translated from Russian by I. Zhuchkova. The limits of language determine the limits of experience and perception in present-day school students: the broader the semantic field of the phenomenon of feedback, the easier it is to extend the array of communication tools in the classroom. Modern school students rarely use the term "feedback", interpreting it as assessment in the first place, not as a cooperative exchange of opinions. This study aims at identifying the reasons for such perception of this indispensable component of learning by students.

John Hattie, defining feedback as one of the most powerful influences on learning and achievement, demonstrates that feedback effectiveness is directly associated with communicative competence of teacher and student. In his model of "ideal feedback", teacher motivates student to answer three major questions: Where am I going? (What are the goals?), How am I going? (What progress is being made toward the goal?), and Where to next? (What activities need to be undertaken to make better progress?) [Hattie, Timperley 2007].

As ideas of constructivism and humanistic approach to feedback in education developed, the concept of feedback literacy came into use [Sutton 2012]. Studying the motives behind feedback manifestation or non-manifestation by learners is critical as it allows engaging teachers in the discourse on the changing assessment practices, communication skills, tutorship, and lesson design.

This study is an attempt to answer the following questions:

- How do modern school students overcome behavioral barriers to uptake of feedback?
- Do they want to provide feedback to teachers while doing an assignment?
- To what extent are they prepared for using feedback tools for personal growth?

The general hypothesis of this study is that senior school students perceive feedback mostly as part of formal communication, not as a tool for seeking support or resources in order to optimize their learning behavior and achieve better educational outcomes. We also hypothesize that school students' demand for feedback may be mediated by the quality of educational dialogue in which they are engaged.

1. Current
Discourse on
the Limits of
Feedback in
Learning
1.1. The Role of
Feedback on
Learning and
Education

The term "feedback" is used by contemporary scholars when analyzing the structure of learning process. Having synthesized hundreds of meta-analyses relating to the influences on achievement in schoolaged students, Hattie concludes that not all feedback contributes to positive changes in learning or solves the problems of education quality [Hattie 2017:243.].

The phenomenon of feedback is studied in the context of encouraging interaction in the classroom [Starichenko, Egorov 2011; Rzun

2013; Borovskikh 2011; Chin 2006] and improving the quality of teacher–student communication [Bessonov 2016; Tishchenko 2010; Kuryan 2017]. In the recent years, the idea of "feedback loops", where assessment and comments initiate and promote teacher–student dialogue as well as peer dialogue, has been actively advocated both in research and in teaching [Carless 2019]. In addition, feedback is part of monitoring and evaluation processes in education as well as the academic motivation aspects of subject didactics [Maksimenkova, Neznanov, Podbelsky 2014; Titova 2017; Teleshev, Rezaykin, Blyakhman 2012; Evans 2013; Barabasheva 2017]. The concept of feedback is also actively used in studies analyzing behavioral patterns of participants in the educational process [Hattie 2017; You et al. 2019]. Finally, feedback is addressed in publications relating to educational management tools as a strategy to improve the quality of education [Latova 2011; Sushchenko, Sandler 2017].

Dutch and German scholars demonstrated how widely understanding of feedback and feedback processes may vary depending on the learning theory adhered to: behaviorism, cognitivism, social culture theory, meta cognitivism, or social constructivism [Thurlings et al. 2013]. Russian researchers use reflex (biological feedback), behaviorist, cognitivist, cybernetic, and communicative theoretical models of feedback [Lukyanenko 2007]. Feedback in education is conceptualized as "information received by a learner in response to their learning performance and relating to learning processes and outcomes" [Korenev 2018:118] or as "information provided by an agent (e.g., teacher, peer, <...> parent, self) regarding aspects of one's performance or understanding" [Hattie, Timperley 2007:81]. However, such interpretations do not require the learner to use the information to change their learning behavior [Mapplebeck, Dunlop 2019].

"Interaction" is another key word in conceptualizing feedback as an educational tool [Gamlem, Smith 2013]. In this regard, feedback is described as "the product of analysis, reflection, and observation that teachers receive from themselves and their partners in cooperation" [Bessonov 2016:8] or as "a means to initiate and develop cooperation" [Kuryan 2017]. Quality interpersonal interactions are believed to be critical to feedback in education [Evans 2013; Tanaeva 2010]. In this case, a teacher's job is to articulate comments and advice via dialogue using a tone that encourages learners to correct their own learning behavior [Teleshev, Rezaykin, Blyakhman 2012].

A number of faculty practitioners propose their own models of teacher–student feedback [Carless et al. 2011; Lyster, Saito, Sato 2013; Henderson et al. 2019] with a reservation that every model should be calibrated for specific educational goals and objectives.

1.2. Feedback as a New Literacy Students' inability to receive and use feedback to achieve better learning outcomes is a pending issue in educational practice [Sadler 2010]. Furthermore, a lot of students find it difficult to produce comprehen-

sive peer reviews [Anker-Hansen, Andrée 2019] and are more interested in their grade or mark than in detailed feedback on their performance [Weaver 2006]. On these grounds, researchers emphasize the need to promote feedback literacy in students. Paul Sutton conceptualizes feedback literacy as an integral component of a broader academic literacy, emphasizing that it should not be reduced to the ability to read and write and that it requires teacher's and learner's personal involvement [Sutton 2012].

Following Sutton, Carless and Boud elaborate the idea of feedback literacy by proposing four interrelated features as a framework underpinning this skill: appreciating feedback; making judgments; managing affect; and taking action [Carless, Boud 2018]. Effectiveness of students' feedback literacy depends on the teacher's expertise [Hattie 2017; Evans 2013; Barabasheva 2017; Lyster, Saito, Sato 2013; Oleshchuk 2011].

Along with teacher feedback research, there are also studies examining the potential of student feedback [Borovskikh 2011; Lukyanenko 2007]. In particular, student feedback has been the focus of such initiatives as Student Voices [Korenev 2018; Cremin, Mason, Busher 2011; Halliday et al. 2019]. Student feedback is analyzed more often in the context of higher education than secondary schools [Winstone et al. 2017]. Available findings indicate problems in student perceptions of feedback, which researchers believe to have deteriorating effects on educational outcomes and effectiveness of lifelong learning [Weaver 2006].

### 2. Sources of Empirical Data: Descriptive and Field Research

This study aims at exploring how present-day adolescents conceptualize feedback as an educational tool. Research of two types was performed to achieve this purpose: (1) descriptive research on a sample of 703 adolescents from large cities of Russia and (2) field research of 140 gifted, academically motivated students enrolled in Sirius Educational Center programs. The two studies yield a non-representative, yet large experimental sample that allows using approximate models to formulate conclusions.

# 2.1. Descriptive Research Design

Since 2014, All-Russia Plenary Session of Senior School Students has been conducted within the framework of St. Petersburg International Educational Forum.<sup>1</sup> Most of the schools represented in this conference are ranked among the top 500 schools of Russia. The session was conceived to establish dialogue between adolescents and the teaching community. The format was partially borrowed from Mitchell and Elwood's publication on the development of school democratic communities [Mitchell, Elwood 2012]. Anonymous surveys of senior school students are administered annually as part of the plenary ses-

<sup>&</sup>lt;sup>1</sup> <u>http://www.eduforum.spb.ru/eng/</u>

sion, their results being then discussed by school education researchers and policymakers. One of such surveys was described in a publication on school loyalty [Ilyushin, Azbel, Gladiboroda 2018]. In 2020, the questionnaire consisted of dichotomous questions only and involved 703 school students.

## 2.2. Field Research Design

In March 2020, 140 school students aged 14–18 from 56 regions of Russia participated in the Literary Art dedicated program at Sirius Educational Center. The program consisted of 14- to 16-hour modules, each taking from 3 to 5 days. The whole program was delivered within 24 days. Many students regard participation in this program as an important work experience and as a resource for a more informed choice of further study and career trajectories in literary scholarship, humanities, or teaching [Kuchina 2017]. Therefore, the study was conducted on a sample of adolescents with excellent writing skills and high levels of linguistic awareness who were interested in intensive learning.

Research was administered within the module that developed students' research skills for humanities and taught them to apply the cross-cultural approach. At the end of Day 4, when the module had been completed, students were asked to provide written answers to open-ended questions as part of an anonymous questionnaire survey designed to collect student feedback on the module. The quality of students' responses allowed assessing the comprehensiveness and constructiveness of their feedback on module assignments. The questionnaire also asked how learners understood feedback. In addition, field research involved an overt observation and an analysis of feedback manifestations.

## 3. Is There a Demand for Feedback among Russian School Students?

As part of descriptive research, school students of grades 9–11 (n = 703) were asked to choose between two statements by picking the one that sounded more like them. Figure 1 shows the distribution of students' choices in four feedback-related questions.

Questionnaire results show that most school students would like to receive detailed comments on their performance from teachers. In students' opinion, teachers are much more likely to point out the gaps in their knowledge than focus on their possible growth areas.

The nearly even distribution of answers on Item 4 about the lack of teacher–student and student– teacher's feedback allows assuming that senior school students barely distinguish between these two directions of feedback.

The obvious desire of most students to receive detailed private comments on their performance at the end of the term may indicate a high level of trust in teachers' opinion but at the same may derive from the lack of such experience in the past.

The statement "Teachers tend to point out the gaps in my knowledge" (63.70%, n = 703) deserves special attention. SPSS Statistics soft-

Figure 1. What Russian school students think about feedback, % (n = 703)

#### 1. Teacher's feedback Teachers tend to point out the gaps in my knowledge 63.7 Teachers tend to focus on my possible growth areas 36.3 2. Teacher's feedback I would like to receive detailed comments 75.5 I am normally good with marks as a review of my performance 24.5 3. Private written feedback Such letters would be motivating and helpful to me 74.3 Such letters would be disturbing and bothering to me 25.7 4. Mutual understanding and cooperation In our school, teachers lack feedback from students In our school, students lack feedback from teachers

Table 1. Correlations between questionnaire items on the lack of feedback (n = 703).

	Mutual understanding and cooperation		
Teachers' feedback	In our school, teachers lack feedback from students	In our school, students lack feedback from teachers	
Teachers tend to point out the gaps in my knowledge	29.2%	34.6%	
Teachers tend to focus on my possible growth areas	24.3%	11.9%	

ware package was used to analyze correlations between students' answers to different feedback-related items of the questionnaire as well as between feedback-related and other items. Differences were examined using a chi-squared test at the 99% confidence level (Table 1). Students who report that teachers tend to point out the gaps in their knowledge are more likely to lack feedback from teachers (34.6%), while those regarding teachers feedback as an opportunity to identify their growth areas (24.3%) are more likely to report a lack of student feedback in their school ( $\chi^2$  = 29.63, p < 0.001, n = 703).

Among the students choosing the option "Teachers tend to point out the gaps in my knowledge" (Figure 1), 49.8% would like to receive detailed comments on their performance, and 45.7% believe that private feedback letters from teachers could motivate them to apply more effort (p < 0.005, n = ).

On the one hand, school students admit that their feedback to teachers is insufficient; on the other hand, they perceive teachers' feedback mostly as criticism. We hypothesize that students' demand

perceptions of feedback (n = 137).

Table 2. Examples of statements reflecting student

Perception of feedback	Exemplifying quotes	Proportion of responses
Positive	"A reciprocal response, when someone responds to you by giving you a hand" "Reactions and perceptions of participants aimed at improving per- formance and making progress"	25.7%
Neutral	"A response to an event" "Reply comments and additions"	72.1%

for feedback may be mediated by the quality of educational dialogue at school as such. To further explore and test this hypothesis, a field study was performed, which involved an overt observation and open-ended questions for a more detailed analysis of students' perceptions of feedback as an educational tool.

## 4. How Students Conceptualize Feedback in **Education** 4.1. Validity and Linguistic Characteristics of Students' Responses

Substantive responses were obtained from 97.8% of the participants in the questionnaire survey conducted as part of the education module of the Literary Art program delivered at Sirius Educational Center (n = 140). As 85.8% of the participants reported having enjoyed doing the assignments ( $M = 4.81 \pm 1.029$ ; Me = 5.0), it can be inferred that they perceived critically their learning experience and that a high level of trust was established during the module.

The question "How do you understand feedback?" implied freeform responses. Statements of 78.5% of the respondents contained on average seven words, although they had enough time to ponder on the matter. Meanwhile, 19.3% of the students gave comprehensive answers in the form of complex sentences or short essays, the length of their statements averaging 17–18 words. Thus, a data pool of 1,256 words in 137 responses was available for content analysis.

Students' statements were grouped into two major categories for variable analysis: (1) positive or neutral perceptions of feedback and (2) conceptualizations of feedback in education.

## 4.2. Perceptions of Feedback

No negative connotations were identified in students' responses. Table 2 shows the results of content analysis with examples of relevant statements.

We suggest that predominantly neutral student perceptions of feedback revealed in this study result from the lack of understanding what feedback is, which in its turn stems from rare contextual usage of the term in the learning environment as well as in students' everyday language.

Category	Exemplifying quotes	Proportion of responses
Response	Output, reaction	44.5%
Value judgment	Opinion, review	21.9%
Engagement in dialogue	Discussion of what has happened — a dialogue	21.9%
Request for help	When the person you are talking to, your tutor or teacher is getting back to you, trying to help you, etc.	11.7%

Table 3. Examples of statements in four categories identified for content analysis (n = 137).

## 4.3. Making Sense of Feedback

The 137 student responses to the question "How do you understand feedback?" can be divided into four content categories (Table 3).

Most often, adolescents interpret feedback as variations of "response" (44.5%). Such answers were short, often without specifying the method or objective of response; they can be classified under the behaviorist perspective on feedback.

Meanwhile, 21.9% of students understand feedback as value/critical judgments. Assessment practices of modern Russian schools are often "subtractive", meaning that teachers lower potentially high grades as they detect flaws or mistakes in a student's work. On the one hand, students acquire a solid experience of negative emotions and resistance to low grades; on the other hand, they get used to thinking that any value judgment should first of all contain information on flaws and mistakes in performance.

An equal proportion of students (21.9%) interpret feedback as a tool for a constructive solution of educational objectives. We suggest that adolescents' perceptions of students' and teachers' feedback are largely contingent on their communication experiences, including self-initiated feedback to teachers. Theoretical studies on teacher communication and feedback in the classroom proceed from the dialogue model of feedback [Mapplebeck, Dunlop 2019; Winstone et al. 2017]. Paradoxically though, the present study shows that only a small portion of academically successful adolescents perceive teachers' feedback as a willingness to engage in dialogue and build trust with students, not to make purely "subtractive" judgments.

The "request for help" category of feedback interpretations turns out to be the smallest one, accounting for only 11.7% of all responses. The reason for this could be that in Russian schools, students are usually offered assistance from teachers when they make mistakes or show low performance. Proactive recipience of feedback can be interpreted as learner's autonomy, openness, trust in the source of feedback, and high motivation for improvement. Furthermore, such learners' qualities as confidence and self-efficacy may increase their willing-

Engagement in dialogue

Response

Request for help

Value judgment

0.00 10.00 20.00 30.00 40.00 50.00%

Figure 2. Adolescents' perceptions and conceptualizations of feedback.

ness to expend effort on engaging with feedback [Winstone et al. 2017].

4.4. Relationship
Between
Perceptions
of Feedback
as a Social
Phenomenon and
as a Learning Tool

SPSS Statistics software package was used to analyze correlations between students' perceptions of feedback (Table 2) and their conceptualizations of feedback in education (Table 3) as two independent variables. Differences were examined using a chi-squared test at the 95% confidence level. Figure 2 shows the distribution of responses (n = 137).

Students with positive perceptions of feedback tend to interpret this phenomenon via the categories of "engagement in dialogue" and "request for help" (n =137,  $\chi^2$  =53.371, p <0.001). Given that Russian school students have to deal with psychological barriers in seeking help from teachers, this conceptualization of feedback appears to be an important indicator of students' loyalty and trust. However, motivations behind such requests for help in different educational contexts remain unclear.

4.5. Manifestations of Student Perceptions of Feedback in Real-Life Situations An overt observation of teams of school students participating in the module revealed three types of typical situations in which learners could use feedback to construct their educational experiences. All of those situations were discussed with tutors at the end of every school day so as to identify problems with module content and make pedagogical decisions.

4.5.1. Responding to Mistakes

This is about mistakes detected by students themselves when processing, entering, or extracting data. Normally, such mistakes occurred through haste or misunderstanding of the instructions. During daily discussions, tutors reported that students in such situations preferred not to seek help and remained passive until the tutor asked them about the reasons and motivations for such behavior. Anxiety about "ruining all the job" was a typical emotional manifestation in such contexts. Sometimes, emotions were so intense that tutors had to calm down the students who were afraid to "mess it all up" if they

went on. Probably out of fear of disapproval or public criticism, adolescents would often opt for the strategy of keeping a low profile and "freezing" as a defensive reaction. On Day 2 of the module, after groupwork self-reflection sessions had been organized by tutors for every team, this behavioral response was successfully overcome. In a new pedagogical context, mistakes did not trigger that much anxiety in adolescents anymore.

### 4.5.2. Seeking Feedback in Process

During the overt observation, there was an obvious increase in students' requests for help and expert judgment in every team. Those requests were manifested in the following:

- Raising a hand to attract the tutor's attention;
- · Approaching the tutor in whatever part of the room;
- Contacting the tutor via team chat or social networks.

As adolescents gained experience of communication with the tutor and approached their goals, they exhibited more and more diverse patterns of self-initiated feedback.

## 4.5.3. Peer Assessment: Lifting the Barriers

Participants receiving critical peer feedback on their interim research project results tended to avoid double-checking peer reviews with the tutor. Motivation for goal adjustment in such students dropped to critically low levels, so that the tutor had to insist on giving them advice or assistance. In discussing such situations (which took place in every team) with the tutors, we emphasized that critical peer feedback had the strongest influence on students working individually, not in pairs or small groups.

#### 5. Conclusion

In Russian education, particularly on the level of secondary school, the term "feedback" is used equally rarely by all participants: teachers, students, and parents. Its usage is also extremely rare in research literature, journalistic articles, and oral speech of adults and school-aged adolescents, especially compared to the English-language discourse. The highest usage of the word "feedback" in Russia has been observed in business and organizational management — and yet it is not even translated, being used as a loan word.

Without any purposeful experience of using feedback as an educational tool, students rely on their intuitive interpretations when answering the questions about how they conceptualize and perceive feedback, "response" being their most popular definition, and "request for help" being the least frequent one.

Adolescents tend to apply either the "behavioral" or the "existential" approach in describing their perceptions of the concept and manifestations of feedback. Quotation marks are necessary here, as perception implies not academic knowledge of the definition of feedback

but an intuitive attachment of meaning to this word by learners based on their personal experiences and social horizons. Under the "behaviorist" perspective, feedback is perceived straightforwardly as an obligatory (external) stimulus and a person's response to it. The more complicated "existential" approach interprets feedback as a combination of various tools for dialogue, support, engaged communication, relationship development, and direct or indirect request for evaluation and/or assistance.

Overt observation and analysis of cases involving adolescents with high levels of academic motivation and learning-to-learn skills revealed a few patterns of using feedback in education. The conclusions drawn below are preliminary and will be elaborated as a result of further research on feedback in secondary education.

In situations of data processing mistakes or hardware/software usage failures, a typical behavioral pattern was to ignore feedback opportunities for seeking help from the tutor. Not infrequently, students would stop doing their work and passively wait for the tutor to ask them about the problem.

At the initial stage, one or more adolescents in a team would sometimes vigorously defend their judgments or visions of the team strategy. This relationship scenario was defined as "excessive feedback for emotional domination". Such behavioral patterns were mostly demonstrated by clear intellectual leaders who had probably already acted in this role before. Those patterns changed at the following stages of team work in the module, the leaders adopting more constructive positions in trying to convey their viewpoints to other team members.

On the first day of the module, there were only isolated instances of request for an expert opinion on the project. However, such requests were growing more and more numerous during the following days, and feedback initiated by students often evolved into detailed discussions of specific actions in the learning process. By the end of the module, adolescents' perceptions of feedback exchange between tutors and students had shifted from avoidance to initiation.

An extremely small proportion of school students expressed their feelings and emotions in situations of feedback. This could be due to the lack of relevant experience during the previous years of schooling. In addition, a lot of students probably do not regard emotions and impressions from obtaining new knowledge as a significant educational outcome.

The overall conclusion of this study is that school students mostly understand the range of problems associated with feedback, yet they perceive feedback itself as a tool for teaching in the first place, not as a tool for learning.

This article was published with the support of the University Partnership Project run by National Research University Higher School of Economics.

#### References

- Anker-Hansen J., Andrée M. (2019) Using and Rejecting Peer Feedback in the Science Classroom: A Study of Students' Negotiations on How to Use Peer Feedback when Designing Experiments. *Research in Science & Technological Education*, vol. 37, no 3, pp. 346–365.
- Barabasheva I.V. (2017) Feedback kak sredstvo razvitiya motivatsii k izucheniyu inostrannogo yazyka [Feedback as a Means of Development of Motivation for Foreign Language Learning]. *Tomsk State Pedagogical University Bulletin*, no 6183), pp. 135–140.
- Bessonov K.A. (2016) Obratnaya svyaz v pedagogicheskom vzaimodeystvii prepodavatelya I studenta [Feedback in Pedagogical Teacher-Student Interaction]. *Juvenis Scientia*, no 2, pp. 86–89.
- Borovskikh T.A. (2011) Konstruirovanie uchebnogo protsessa na osnove tekhnologicheskogo podkhoda [Designing the Academic Process on the Basis of Technological Approach]. *Integration of Education*, no 1, pp. 67–73.
- Carless D. (2019) Feedback Loops and the Longer-Term: Towards Feedback Spirals. Assessment & Evaluation in Higher Education, vol. 44, no 5, pp. 705–714.
- Carless D., Boud D. (2018) The Development of Student Feedback Literacy: Enabling Uptake of Feedback. *Assessment & Evaluation in Higher Education*, vol. 43, no 8, pp. 1315–1325.
- Carless D., Salter D., Yang M., Lam J. (2011) Developing Sustainable Feedback Practices. *Studies in Higher Education*, vol. 36, no 4, pp. 395–407.
- Chin C. (2006) Classroom Interaction in Science: Teacher Questioning and Feedback to Students' Responses. *International Journal of Science Education*, vol. 28, no 11, pp. 1315–1346.
- Cremin H., Mason C., Busher H. (2011) Problematising Pupil Voice Using Visual Methods: Findings from a Study of Engaged and Disaffected Pupils in an Urban Secondary School. *British Educational Research Journal*, vol. 37, no 4, pp. 585–603.
- Evans C. (2013) Making Sense of Assessment Feedback in Higher Education. *Review of Educational Research*, vol. 83, no 1, pp. 70–120.
- Gamlem S. M., Smith K. (2013) Student Perceptions of Classroom Feedback. *Assessment in Education: Principles, Policy & Practice*, vol. 20, no 2, pp. 150–169.
- Halliday A.J., Kern M.L., Garrett D.K., Turnbull D.A. (2019) The Student Voice in Well-Being: A Case Study of Participatory Action Research in Positive Education. *Educational Action Research*, vol. 27, no 2, pp. 173–196.
- Hattie J. A.C. (2017) *Vidimoe obuchenie* [Visible Learning]. Moscow: Natsionalnoe obrazovanie.
- Hattie J., Timperley H. (2007) The Power of Feedback. *Review of Educational Research*, vol. 77, no 1, pp. 81–112.
- Henderson M., Phillips M., Ryan T., Boud D., Dawson P., Molloy E., Mahoney P. (2019) Conditions that Enable Effective Feedback. *Higher Education Research & Development*, vol. 38, no 7, pp. 1401–1416.
- Ilyushin LS., Azbel A.A., Gladiboroda I.V. (2018) Loyalnost shkole v usloviyakh obrazovatelnogo vybora [School Loyalty in Conditions of Educational Choice]. *Chelovek i obrazovanie / Man and Education*, no 1 (54), pp. 114–120.
- Korenev A. A. (2018) Obratnaya svyaz v obuchenii i pedagogicheskom obshchenii [Feedback in Learning, Teaching and Educational Communication]. *Rhema. Рема*, no 2, pp. 112–127.
- Kuryan M. L. (2017) Problema dialoga mezhdu uchastnikami obrazovatelnogo protsessa v situatsii predostavleniya prepodavatelem obratnoy svyasi [Establishing Dialogic Relationships in the Education Process Through Teacher's Feedback to Learners]. Vestnik of Minin University, no 3.
- Kuchina T. G. (2017) Pedagogicheskie tekhnologii XXI v.: opyt obrazovatelnogo tsentra "Sirius" [Pedagogical Technologies of the XXI Century: The Experience of the Educational Center "Sirius"]. *Yaroslavl Pedagogical Bulletin*, no 6, pp. 403–405.

- Latova N.V. (2011) Opyt upravleniya kachestvom vysshego obrazovaniya pri pomoshchi elektronnoy sistemy obratnoy svyazi [Electronic Feedback System as a Means of Quality Management System at Higher Education Institution]. Vysshee obrazovanie v Rossii / Higher Education in Russia, no 1, pp. 102–109.
- Lukyanenko O.D. (2007) Obespechenie effektivnoy obratnoy svyazi v didakticheskom informatsionnom vzaimodeystvii pedagoga i rebenka 6–7 let [Providing Effective Feedback in the Didactic Information Interaction between a Teacher and a Child Aged 6–7 Years]. *The Bulletin of the Adyghe State University. Series 3. "Pedagogy and Psychology"*, no 3, pp. 368–369.
- Lyster R., Saito K., Sato M. (2013) Oral Corrective Feedback in Second Language Cassrooms. *Language Teaching*, vol. 46, no 1, pp. 1–40.
- Maksimenkova O.V., Neznanov A.A., Podbelskiy V.V. (2014) O formiruyushchem kontrole i informativnoy obratnoy svyazi pri proektirovanii uchebnykh kursov po programmirovaniyu [About Formative Controlling and Feedback in Projecting Training Courses on Programming]. *RUDN Journal of Informatization in Education*, no 4, pp. 37–48.
- Mapplebeck A., Dunlop L. (2019) Oral Interactions in Secondary Science Classrooms: A Grounded Approach to Identifying Oral Feedback Types and Practices. *Research in Science Education*, May, pp. 1–26.
- Mitchell K., Elwood S. (2012) Mapping Children's Politics: The Promise of Articulation and the Limits of Nonrepresentational Theory. *Environment and Planning D: Society and Space*, vol. 30, no 5, pp. 788–804.
- Oleschuk O.V. (2011) Effektivnaya obratnaya svyaz v obuchenii [Effective Feedback in Training]. Shlyakhi realizatsii kreditno-modulnoy sistemi organizatsii navchalnogo protsesy i testovikh form kontrolyu znan studentiv. Materiali naukovo-metodichnogo seminaru. Vip. 5. Organizatsiya ta standartizatsiya navchalnogo protsesu [Ways to Implement the Credit-Modular System of Organizing the Educational Process and Test Forms of Student's Knowledge Control. Materials of the Scientific and Methodological Seminar. Iss. 5. Organization and Standardization of the Educational Process], Odesa: Astroprint, pp. 84–87.
- Rzun I. G. (2013) Informatsionnye tekhnologii kak sredstvo obratnoy svyasi obrazovatelnogo protsessa [Information Technology as a Means of Feedback Educational Process]. *Natural Humanitarian Studies*, no 2.
- Sadler D. R. (2010) Beyond Feedback: Developing Student Capability in Complex Appraisal. *Assessment & Evaluation in Higher Education*, vol. 35, no 5, pp. 535–550.
- Starichenko B.E., Egorov A.N. (2011) Teoriya i praktika ispolzovaniya auditornoy sistemy obratnoy svyasi v rabote prepodavatelya vuza [Classroom Response System in High School Teaching Process: Theory and Practice]. *Pedagogical Education in Russia*, no 4, pp. 135–142.
- Sushchenko A.D., Sandler D. G.(2017) Kak studenty vovlecheny v mekhanizmy obratnoy svyazi: sistemnaya praktika issledovaniy v UrFU [How University Students Are Engaged in "Feedback": System Research Practice in URFU]. *University Management: Practice and Analysis*, vol. 21, no 2 (108), pp. 176–191.
- Sutton P. (2012) Conceptualizing Feedback Literacy: Knowing, Being, and Acting. *Innovations in Education and Teaching International*, vol. 49, no 1, pp. 31–40.
- Tanaeva Z. R. (2010) Obshchepedagogicheskie printsipy podgotovki budushchikh spetsialistov k rabote s nesovershennoletnimi pravonarushitelyami [Pedagogical Principles Used in Training Future Specialists for Work with Juvenile Malefactors]. *The Education and Science Journal*, no 4, pp. 21–30.
- Teleshev V.A., Rezaykin A.V., Blyakhman F.A. (2012) Optimizatsiya sistemnogo podkhoda v prepodavanii s pomoshchyu kompyuternogo testirovaniya [The Optimization of System Approach in Teaching with the Use of Computer Testing]. *Vyss*hee obrazovanie v Rossii / Higher Education in Russia, no 8–9, pp. 146–148.
- Thurlings M., Vermeulen M., Bastiaens Th., Stijnen S. (2013) Understanding Feedback: A Learning Theory Perspective. *Educational Research Review*, vol. 9, no 1, pp. 1–15.

- Titova S.V. (2017) Kontrol i otsenivanie v yazykovom klasse s pomoshchyu mobilnykh prilozheniy [Mobile Testing Apps for Assessment and Evaluation in Language Classroom]. *The Bulletin of Moscow University. Series 19. Linguistics and Cross-Cultural Communication*, no 1, pp. 24–35.
- Tishchenko V.A. (2010) Obratnaya svyaz v sisteme obucheniya s ispolzovaniem informatsionno-kommunikatsionnykh tekhnologiy [Feedback in the Training System Using Information and Communication Technologies]. *Educational Technologies and Society*, vol. 13, no 2, pp. 388–399.
- Weaver M. R. (2006) Do Students Value Feedback? Student Perceptions of Tutors' Written Responses. *Assessment & Evaluation in Higher Education*, vol. 31, no 3, pp. 379–394
- Winstone N. E., Nash R. A., Parker M., Rowntree J. (2017) Supporting Learners' Agentic Engagement with Feedback: A Systematic Review and a Taxonomy of Recipience Processes. *Educational Psychologist*, vol. 52, no 1, pp. 17–37.
- You X., Li M., Xiao Y., Liu H. (2019) The Feedback of the Chinese Learning Diagnosis System for Personalized Learning in Classrooms. *Frontiers in Psychology*. August 8.