The Future of Distance Learning as Perceived by Faculty Members

D. M. Rogozin

Received in June 2020

Dmitry Rogozin, Candidate of Sciences in Sociology, Leading Research Fellow, Institute for Social Analysis and Forecasting, Russian Presidential Academy of National Economy and Public Administration; Senior Research Fellow, Institute of Sociology, Federal Center of Theoretical and Applied Sociology, Russian Academy of Sciences. Address: Bld. 1, 11 Prechistenskaya Emb, 119034 Moscow, Russian Federation. Email: rogozin@ranepa.ru

Abstract

A questionnaire survey of 33,987 faculty members in April 2020 revealed predominantly negative evaluations of learning effectiveness in the context of distance learning, as compared to in-person instruction, and a rather pessimistic vision of the future of higher education in Russia. This article formulates hypotheses about the reasons of such attitudes among faculty members and provides arguments for possible opinion shifts and alleviation of resistance to technological change. The paramount problem consists in the contradiction between the acceptance of the idea and value of digital innovation and the rejection of such at the level of personal teaching practices. During expert interviews, faculty members were offered alternative scenarios of the future. The data obtained was then used to analyze the attitudes and beliefs behind their resistance and to find out which perceptions of the future correlated with negative and positive evaluations of distance learning.

Keywords

higher education, distance learning, defensive pessimism, organizational change, in-person instruction, extramural learning, ICT, academic freedom of faculty members, resistance to change, COVID-19.

For citing

Rogozin D. M. (2021) Predstavleniya prepodavateley vuzov o budushchem distantsionnogo obrazovaniya [The Future of Distance Learning as Perceived by Faculty Members]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 1, pp. 31–51 https://doi.org/10.17323/1814-9545-2021-1-31-51

A strong belief that modern education development is inextricably connected with digital solutions, the ever-complicating world of software products, Internet technology, distance communication, and massive open online courses dominates today in publications and analytical reports [Basak, Wotto, Bélanger 2018; Faisal, Kisman 2020; Polat, Ekren 2020; Reinertsen 2020; Rye 2013; Vasilyeva, Fefelova 2019; Voytsekhovskaya 2019; Center for Strategic Research, Higher School of Economics 2018; Zakharova 2016; Martynov 2013] as well as in administrative laws and journalistic articles. Yet, skepticism about this sce-

nario persists as well: in private conversations, interviews, and public speeches, professors give rather negative remarks about the ongoing technological and organizational change.

Exceptions are rare and rather reflect peculiarities of respondent sampling than opinions of any specific group of faculty members. A fairly positive perspective of adaptation to self-isolation and emergency transition to distance learning during the coronavirus pandemic is presented by Evgeniy Terentev and Ulyana Zakharova [2020:77–79]. In their opinion, professors successfully mobilized to work under the new conditions, and models for choosing communication platforms emerged during the very first weeks. Nevertheless, the authors mention serious mental health issues, increasing social isolation, challenges of working from home, heightened uncertainty, and indeterminacy in planning. It remains an open question whether mobilization is the right word to be used in the context of this mental crisis.

In spring 2020, the Covid-19 pandemic forced nearly all academics to move online [Tesar 2020:557]. From a hypothetical and auxiliary format, distance learning became everyone's Hobson's choice overnight. The absence of alternatives was spiced by feelings of uncertainty and fear of the future which can take unpredictable turns. Counter-measures against the spread of infection were implemented from above, and the transition to distance learning came to be associated with administrative command. Grassroots innovations, autonomy, and initiative fell by the wayside, superseded temporarily by the urgent and quite aggressive imperative of rapid adaptation to a force-majeure situation.

A giant leap in the spread of distance learning has happened, inevitably encountering an equally powerful wave of resistance and antagonism. No learning support measure [Klyagin, Makaryeva 2020] can substitute for the habitual face-to-face communication. Without understanding and accepting the distance learning practices, emergency transition to online education only meets irritation and an urge to come back to familiar formats as soon as possible[1].

Any significant change to information technology will encounter resistance [Bauer 1991; Hirschheim, Newman 1988; McCabe, Ciuk, Gilbert 2019]. However, not every change is accepted in essence, ideologically, while being renounced effectively, in practice—and yet this is exactly how distance learning is perceived by most faculty members. While being open to information technology and distance learning formats in theory, they are reluctant to use them in teaching, unwilling to immediately give up on their decades-old analog instruction practices. This article seeks to explore the dualism in faculty's perceptions of the ongoing changes and the ambivalence of their values and attitudes.

---

[1] Fedoruk M. "Talking to the Box": Rector of Novosibirsk State University on the Challenges of Online Learning. ***RBC-Novosibirsk***, June 5, 2020: https://nsk.rbc.ru/nsk/05/06/2020/5ed8b03e9a79477260724ceb

Simply acknowledging the resistance to distance learning and the undeniable preference for in-person, classroom-based instruction is not enough. It is necessary to figure out the reasons for such resistance, explore the attitudes and expectations associated with eliminating face-to-face communication or radically reducing it, and assess correlation between the evaluations of distance learning and the expectations and perceptions about the future of higher education as such. The main research question is thus the following: which expectations increase, and which reduce resistance to distance learning? A field for further social research will be constructed by answering this question.

Method of Data Collection and Analysis

A survey of university instructors was conducted by The Ministry of Science and Higher Education of the Russian Education and the Russian Presidential Academy of National Economy and Public Administration (RANEPA) on April 10–15, 2020. Originally, 58,612 people participated in the survey, of whom 20,273 failed to meet the sampling criterion (faculty membership). Only 6% of the initial faculty sample refused to participate, and 5% of completers interrupted the questionnaire. The final set of data consisted of 33,987 fully completed questionnaires.

A river sample (for more on non-probability sampling, see [American Association for Public Opinion Research 2016]) was formed using three techniques: (i) asking university management to organize a blanket survey of faculty members; (ii) chain-referral (snowball) sampling; and (iii) targeted sampling by placing banners on the social networking websites Facebook and VKontakte[2].

Unlike probability sampling, there is no single framework that adequately encompasses all of non-probability sampling [American Association for Public Opinion Research 2016:138] or analysis of data sampled this way. Non-probability sampling is highly contingent on decisions made by those who are selected than those who select. Traditional statistical methods based on probability estimates allow testing hypotheses about non-randomness of relationships revealed. In non-probability sampling, however, the concept of "randomness" becomes rather problematic. Sergey Chesnokov proposed an alternative method of social data analysis, which he named "determination analysis" [Chesnokov 2009]. This method is based on the idea that no answer is random and relationships and patterns should be discovered

[2] For more on survey methodology and sampling procedure, see: Rogozin D. (2020) *Metodicheskoe opisanie issledovaniya: Massovy opros professorsko-prepodavatel'skogo sostava vysshikh uchebnykh zavedeniy Rossiyskoy Federatsii o razvitii onlayn-sredy v usloviyakh koronavirusnoy infektsii (COVID-19), 10–15 aprelya 2020 g.* [Methodological Profile of Research: A Mass Survey of Faculty Members in Russia on the Development of Online Learning Environments amidst the COVID-19 Pandemic, April 10–15, 2020], Moscow: Institute for Social Analysis and Forecasting, Russian Presidential Academy of National Economy and Public Administration. April 23 (manuscript).

by forward calculation of various sets of characteristics. Chesnokov's theoretical approach is thus focused on searching for statistical determinism and revealing the rules behind the choice of answers.

Large non-probability samples are the best for determination analysis, as they allow to avoid calculating the mean and the standard deviation as well as analyzing correlations between different parameters, and to calculate precise dispersions of meaningful sets of characteristics instead. Otherwise speaking, large samples afford ground for analysis of subsamples emerging as a function of respondents' answers.

Data analysis is built around calculating all possible combinations of significant parameters of perceptions of the future and comparing them to the target characteristic of faculty members' beliefs about effectiveness of in-person and online education. Faculty's perceptions were assessed by their answers to the question, "Do you think the quality of online learning is higher, lower, or the same as in offline instruction?" The difference between online and distance learning is not problematized in the present article, the two terms being used as synonyms.

Parameters of perceptions of the future were identified based on transcripts of expert discussions with faculty members from RANEPA and Moscow School of Social and Economic Sciences (Shaninka) and researchers from RANEPA's Institute for Social Analysis and Forecasting. A total of six significant characteristics of such perceptions were isolated: individualization of educational trajectories, development of online learning environments, increase in competition, development of new student assessment methods, increase in government control, and increase in professors' freedom to choose teaching methods.

This operationalization of significant characteristics has a number of essential limitations, first of all associated with the risk that the image of the future is incomplete and unthinkable in expert evaluations. Respondents were simply asked to agree or disagree with the forecasts offered, which had been formulated in advance and represented contextually determined expert evaluations. At the same time, this mechanism of building a dataset using closed-ended questions allows lowering the cognitive load on respondents and reducing the time spent on the survey.

A Negative Future

At first, faculty members were asked to compare the quality of learning in online and offline formats without the temporal perspective. Seventy per cent said that the quality of online learning was inferior, only 2% considered it superior, 15% found no difference in learning quality between the formats, and 13% were undecided. The majority of professors thus gave priority to in-person instruction.

Next, faculty members were asked about the future of the education system, in which the share of distance learning will obviously be substantially higher: "A year from now, do you think the quality of higher education in Russia will be better than now, worse, or remain

Table 1. **Six assumptions about the future of higher education** *(row percentage)*
Question: Imagine what higher education in Russia will be like a year from now. To what extent do you agree or disagree with the following?

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Undecided
Learning will become more individualized, tailored to students' personal educational trajectories	6	30	34	12	17
The vast majority of lectures and seminars will be delivered remotely in online learning environments	3	19	43	24	11
Regional enrollments will decline due to an outflow of students to global online education markets	8	29	32	9	21
New student assessment methods will be introduced that are focused more on self-assessment	9	54	17	5	15
Government control over curriculum and teaching methods will increase	11	40	20	6	23
Faculty's freedom to choose teaching methods and techniques will increase	6	35	31	12	16

unchanged as a result of the COVID-19 pandemic?" Only 15% of professors believe that educational quality will improve, while 43% say it will degrade, 20% think it will remain unchanged, and 23% refused to answer this question. In the current situation of disrupted work routines, work-life convergence, restrictions imposed on travel and, most importantly, freedom during the self-isolation period, one can hardly notice any improvements or confidently expect them in the future. Pessimism about the future affects experiences at present [Seginer 2000:308], shaping negative attitudes toward not only current events but also people and measures taken to overcome the devastative effects of the pandemic.

Apart from general evaluation of the national education system of the future, faculty members were also asked to agree or disagree with six possible scenarios of higher education development in the next 12 months on a five-point scale (Table 1).

In such an uncertain situation as today, the future appears vague, so categorical judgments are rare among professors. The only scenario encountering strong disagreement on the part of a large percentage of faculty members (24%) is that the majority of lectures will be moved online (24%); for the rest of the assumptions, categorical an-

swers are at least twice less frequent. Few respondents believe in fully online learning, 67% disagreeing with this point somewhat or strongly. Such judgments are quite reasonable, as distance learning does not imply mandatory dismantlement of the in-person instruction model.

Thirty-six per cent agree and 46% disagree (the options "Strongly agree" and "Somewhat agree" are merged, and so are "Strongly disagree" and "Somewhat disagree") that education will become more individualized and personalized. Twenty-two per cent agree and 67% disagree that most lectures and seminars will be moved online. Thirty-eight per cent agree and 43% disagree that there will be an outflow of students to global universities. Sixty-three per cent agree and 22% disagree that new assessment methods will be introduced. Fifty-one per cent agree and 26% disagree that government control over education will increase. Finally, 41% agree and 43% disagree that professors will have more freedom in choosing the methods and techniques of teaching.

Three assumptions split the sample almost in halves: 30% somewhat agree and 34% somewhat disagree that learning will become more individualized; 29% somewhat agree and 32% somewhat disagree with an increase in global competition and a reduction in regional enrollments in the future; 35% somewhat agree and 31% somewhat disagree that academic freedom will increase.

Finally, two scenarios find more support than resistance: 40% of faculty members believe that government control over curriculum and teaching methods will increase, and 54% agree that new methods of student assessment will be introduced. Most of the respondents who are apprehensive about the future expect first of all an increase in government control and changes to their own control practices, i. e. assessment methods. A negative future is rather associated with control than freedom.

Variability of the Future in Faculty's Answers

Let us consider all possible combinations of answers—"Agree", "Disagree", and "Undecided"—to the six scenarios of the future of higher education offered to faculty members, provided that the options "Somewhat agree" and "Somewhat disagree" are included in the options "Agree" and "Disagree", respectively. There are 650 possible combinations that can be made out of six items and three response options—that is the number of unique groups that can be isolated from the sample. Out of 30,779 faculty members in the dataset, 79 had unique combinations of response options that were not reproduced by any other respondent; 233 combinations reoccurred from 2 to 9 times; and 284 were reproduced from 9 through 99 times. These are rare combinations of answers that may arise from fault or negligence, and they are irrelevant to the present study. Meanwhile, 54 out of 650 combinations were reproduced by over 100 faculty members each. These are of much more interest, as they reflect some common trends and patterns.

Table 2. **Combinations of faculty's answers about the future of higher education** *(row percentage)*
Question: A year from now, do you think the quality of higher education in Russia will be better than now, worse, or remain unchanged as a result of the COVID-19 pandemic?

Combination code*	Better	Worse	Unchanged	Undecided	Number of respondents
111111**	43	25	20	12	1613
222222	3	67	23	7	1258
111221* **	**35**	**23**	**30**	**12**	**1073**
211122	*5*	*70*	*16*	*9*	*899*
211222	8	52	27	13	891
212222	4	60	28	8	839
000000	1	18	8	73	804
111121	29	37	21	13	793
111222	16	44	27	14	630
111211	**43**	**15**	**30**	**12**	**616**
221122	*4*	*73*	*16*	*7*	*530*
211121	20	44	21	15	509
211111	28	39	20	13	501
211221	25	33	28	14	497
111122	9	60	19	12	472
222122	2	83	11	4	464
221222	5	56	31	7	459
121222	12	48	31	10	448
121221	**39**	**21**	**29**	**10**	**431**
122222	8	54	29	9	364
211112	6	66	16	11	343
121111	38	32	20	10	334
112222	8	49	29	14	329
212122	*2*	*77*	*14*	*7*	*314*
000020	3	27	17	53	289
121122	*6*	*72*	*16*	*6*	*286*
121121	32	39	22	8	274
111112	10	57	19	14	211
000022	4	61	13	22	186
112221	22	31	37	10	181
221112	*5*	*71*	*14*	*10*	*174*
111011	31	13	21	35	170

Combination code*	Better	Worse	Unchanged	Undecided	Number of respondents
111021	25	23	17	36	163
211211	30	29	23	19	162
202222	2	52	29	17	161
221221	20	38	29	12	156
200022	2	64	11	24	152
212221	18	32	40	10	147
221121	23	55	16	5	146
221111	15	60	18	7	141
002222	2	53	21	24	129
101222	18	37	20	25	127
001000	4	23	10	63	123
101221	**33**	**14**	**20**	**33**	**123**
222221	18	47	29	7	120
121112	14	61	16	9	119
121211	**52**	**16**	**20**	**12**	**119**
122221	27	35	32	6	118
211022	5	46	22	28	116
222022	2	76	13	9	113
211212	9	55	24	12	105
000220	3	22	21	53	103
101111	28	18	21	34	101
210022	4	68	9	19	101

* Codes are made up of the item's position and response options: position 1—assumption about individualized learning, 10—about moving the majority of lectures online, 100—about reduction in regional enrollments, 1000—about new methods of student assessment, 10000—about an increase in government control, and 100000—about an increase in academic freedom. Response options are coded as 1 for "Agree", 2 for "Disagree", and 0 for "Undecided". Summing up all the answers in the matrix table, we obtain combination codes that allow unambiguous identification of response options chosen by each respondent. For example, code 0 means that the respondent was undecided about every scenario; code 111111 means that the respondent agreed with each assumption; and code 222222 means that the respondent disagreed with all the items. Code 111221 reflects the following belief about the future of higher education: professors' freedom in choosing the methods and techniques of teaching will increase (code 1000000), government control over curriculum and teaching methods will increase as well (code 100000), and new student assessment methods will be introduced (code 1000), but regional enrollments will not reduce (code 200), and the vast majority of lectures and seminars will not be moved online (code 20), even though instruction will become more individualized (code 1).
** Combinations with six repeating digits (111111, 222222, 000000) may indicate gross measurement errors caused by respondent's negligence or intentional dishonesty. Such answers require revalidation, but due to the lack of variables allowing to assess their integrity, these combinations are excluded from the present analysis.
*** Combinations of answers that are predominantly optimistic about the future of higher education are given in boldface, and those that are predominantly pessimistic are given in italics.

Table 3. **Five most pessimistic groups of faculty members**
Question: Imagine what higher education in Russia will be like a year from now.
To what extent do you agree or disagree with the following

	The quality of higher education will be worse a year from now* (percentage of respondents with a negative view of the future in the group,%)				
	70 (211122)**	71 (221112)	72 (121122)	73 (221122)	77 (212122)
Learning will become more individualized, tailored to students' personal educational trajectories	No	No	No	No	No
The vast majority of lectures and seminars will be delivered remotely in online learning environments	No	Yes	No	No	No
Regional enrollments will decline due to an outflow of students to global online education markets	Yes	Yes	Yes	Yes	Yes
New student assessment methods will be introduced that are focused more on self-assessment	Yes	Yes	Yes	Yes	No
Government control over curriculum and teaching methods will increase	Yes	No	No	No	Yes
Faculty's freedom to choose teaching methods and techniques will increase	No	No	No	No	No

* Response option "Worse" to the question, "A year from now, do you think the quality of higher education in Russia will be better than now, worse, or remain unchanged as a result of the COVID-19 pandemic?"
** Combination code (see footnote to Table 2).

That is to say, 54 combinations of answers, or 8% of all possible combinations, represent opinions of 20,027 professors, or 65% of all questionnaire respondents (Table 2).

On average, degradation of the quality of higher education is predicted by 43% of faculty members, the proportion of pessimists reaching two thirds in some groups with specific combinations of scenario choices.

The Most Negative

In five groups, the share of pessimists is in excess of 70% (Table 3). Beliefs shared by these groups are agreement with the assumption that regional enrollments will reduce due to an outflow of students to global online education markets and disagreement with the scenarios of individualized learning and increased academic freedom.

Pessimism about distance learning is associated with detachment and alienation from the current events as well as changes and transformations initiated from above. Imposed changes trigger irritation and apathy.

Antagonists of distance learning are categorical and presumptuous in their answers to the open-ended question about the future of education. Their comments are basically addressed either to the distance

learning of 30 years ago—when technology was so primitive that interactivity, personalization, and communication were out of the question [Curran 1987; Rampal 1989]—or to extramural learning.

> Education and formation of personality are impossible without face-to-face interaction with students. Distance learning as a strategic policy of higher education will be misleading for the country. We don't need creators, only operators of foreign equipment (Doctor of Sciences, Peter the Great St. Petersburg Polytechnic University).

> Simplification of education and elimination of academia as such. Perhaps, higher education will cease to exist or be replaced by some kind of ersatz (Doctor of Sciences, institution unspecified).

> Depersonalization of the learning process and extreme digitization of all interactions leading to ultimate social disintegration (Candidate of Sciences, Moscow International Higher Business School MIRBIS).

> The human aspect will go, and educational formalism will thrive; creativity will be inhibited by distance learning (Doctor of Sciences, Mordovia State Pedagogical Institute).

> A crackdown on professors' initiative by tight and incompetent control from the government and administrators (Doctor of Sciences, Irkutsk State University).

Lack of freedom and autonomy, depersonalization, and passive response to external factors shape anti-innovation behaviors among faculty members, spurring them into concealed protest and sabotage of any technological change.

It would hardly be reasonable to infer that critics of distance learning lack the key four motives of educational innovators: self-sufficiency, novelty search, universalism, and kindness [Khavenson, Koroleva, Lukina 2018:8–9]. Rather, they lack self-confidence and opportunity to exhibit the qualities mentioned above, rejecting the very possibility of choice and change and seeing distance learning as an adverse administrative decision imposed from above.

Rudy Hirschheim and Michael Newman identify nine reasons for resistance to digital technology: (i) innate conservatism, inertia, and reluctance to change the familiar practices and habits; (ii) lack of felt need, i. e. lack of obvious benefits from the change or impossibility to recognize them; (iii) uncertainty, inability to predict the future, and lack of income security; (iv) lack of involvement in the change, i. e. the feeling of being excluded from the decision-making process and resistance to being changed by others; (v) risk of uncontrolled redistribution of resources and the threat arising from the disruption of the *status quo*; (vi) organizational invalidity, i. e. a mismatch between spe-

Table 4. **Five least pessimistic groups of faculty members**
Question: Imagine what higher education in Russia will be like a year from now.
To what extent do you agree or disagree with the following

	The quality of higher education will be worse a year from now* (percentage of respondents with a negative view of the future in the group,%)				
	14 (101221)**	15 (111211)	16 (121211)	21 (121221)	23 (111221)
Learning will become more individualized, tailored to students' personal educational trajectories	Yes***	Yes	Yes	Yes	Yes
The vast majority of lectures and seminars will be delivered remotely in online learning environments	No	Yes	Yes	No	No
Regional enrollments will decline due to an outflow of students to global online education markets	No	No	No	No	No
New student assessment methods will be introduced that are focused more on self-assessment	Yes	Yes	Yes	Yes	Yes
Government control over curriculum and teaching methods will increase	D/K	Yes	No	No	Yes
Faculty's freedom to choose teaching methods and techniques will increase	Yes	Yes	Yes	Yes	Yes

* Response option "Worse" to the question, "A year from now, do you think the quality of higher education in Russia will be better than now, worse, or remain unchanged as a result of the COVID-19 pandemic?"
** Combination code (see footnote to Table 2).
*** Answer to the item in the current row. Each column thus reflects the combination of answers that corresponds to the column's code.

cific features of change and characteristics of the existing organization, including elements of organizational structure and work patterns; (vii) lack of management support and substitution of control and accounting for cooperation; (viii) poor technical quality or low computer literacy; and (ix) personal characteristics of the developers and users [Hirschheim, Newman 1988:399–400].

The present study did not perform such a differential diagnosis of resistance to change, but the answers obtained from respondents already allow identifying the distinguishing characteristics of the current rejection of distance learning and, hence, of latent resistance to digital innovation. First of all, these include uncertainty, lack of engagement, fear of losing the *status quo* and money, and a strong belief that control and supervision over teaching will increase.

The Least Negative

In five groups of respondents, the proportion of negative evaluations is minimal, ranging from 14 to 23% (Table 4). These groups share disagreement with the scenario of reduction in regional enrollments and a strong agreement that learning will be individualized and academic

freedom will increase. In addition, they believe that new methods of student assessment will be introduced that will be focused more on self-assessment.

Optimistic assessment of the situation should probably not be expected amidst a pandemic, with the exception of some answers given from the perspective of administrative approval: "We're fine! No problems, I agree with everything." However, such answers are far more evasive than optimistic. Even positive evaluations are born through struggle and strain, in spite of the fear of external threats. With this in mind, the groups of respondents with relatively low levels of pessimism will be hereinafter referred to as pessimists with a new perspective, or neo-pessimists. This perspective has a lot in common with the phenomenon of defensive pessimism [Saana et al. 2006; Seginer 2000; Spencer, Norem 1996] as a method of resisting current or upcoming threats.

Neo-pessimist professors as a subsample of respondents in the present study differ little from other groups in gender, age, and academic degrees and titles, but they differ significantly in preferred methods of teaching and attitude towards the education process. Online learning materials are used by 76% of neo-pessimist faculty members, as compared to 62% in the total sample. Fifty-four per cent of neo-pessimist professors believe that access to learning materials should be open for everyone, as compared to 39% in the total sample. Finally, 49% of neo-pessimists are willing or somewhat willing to include supplementary reading in a foreign language in their courses, as compared to 40% in the total sample. Therefore, it is not young age or computer skills but a shared belief in the possibility of free teaching independent from administrative pressure that fosters positive perceptions of the future and readiness to support the integration of online technology.

Neo-pessimists are ready to embrace digital technology and expand the field of communication in educational and research activities.

> Distance learning expands faculty collaboration all over the country, promoting exchange of achievements to find and select methods and techniques of teaching within specific fields of study and majors in the evolving online environment (Doctor of Sciences, Yuri Gagarin State Technical University of Saratov).

> More opportunities for academically engaged students and higher dropout rates among low performers, that's what I see as the main idea (no academic degree, Kuzbass State Technical University).

> We might face formalization, schematization, simplification of knowledge, for example in philology, shortage of communication with the professor, and lack of live feedback from students, which lecturers need so much. And at the same time we can expect high levels of self-organization and learning autonomy from students, although no one knows what will come of it. Students need permanent men-

> torship up to a certain moment (Candidate of Sciences, Saint Petersburg State University of Economics).
>
> Distance learning makes communication with students more personalized, as they find it easier to do it online. But rigid control from the Ministry will deny professors the opportunity to restructure the content of lectures. I wish there were less ministerial intervention in education (Candidate of Sciences, D. Mendeleev University of Chemical Technology of Russia).
>
> Distance learning allows the professor to find new ways of content delivery and student assessment to be used later in person. Still, the professor and the student are separated by the monitor, which is a huge mental stress (no academic degree, Moscow State University of Geodesy and Cartography).

Neo-pessimists do not tout impersonal forms of learning. For them, distance learning is a new educational technology yet to be assimilated, which supplements and enhances in-person instruction, and thus can always take free and mixed formats depending on the context and student characteristics. It is in adaptive web design [Prasad et al. 2014; Montanana et al. 2015], gamification of learning [Joseph et al. 2013], extended discussions with ubiquitous device support [Zhao, Okamoto 2009], digital logic design for knowledge representation [George 2019; Weng, Zhu, Cheng 2009], possibility of remote experiments [Oguz 2016; Polat, Ekren 2020], and step-by-step complex systems of skill acquisition and assessment [Kaya, Tan 2014; Nickels 2000] that researchers see advantages of distance learning.

Allegedly, researchers actually prevail among neo-pessimists. Distance higher education ultimately dissolves the boundaries between teaching and research. Teaching is not perceived as transmission of a body of knowledge anymore, but as experimenting, testing hypotheses, solving complex problems, and searching for optimal solutions together with students. The traditional division into basic and applied research is subject to a fundamental revision, as a holistic knowledge of the world is always theoretical and applied at the same time.

It is not in-person instruction but analog, limited knowledge that is confronted by distance, or digital, learning. At the same time, face-to-face formats of education have been traditionally opposed to extramural learning. It is this blend of distance and extramural learning formats that feeds the resistance, nudging faculty members to see a degradation of higher education in distance learning. In practice, distance learning can be implemented in in-person formats that are rich in communication[3]. Marcus L. George enumerates the basic dis-

[3] "The Way in Which Students Are Taught in Russia is Better than in the United States": Yaroslav Kuzminov, Rector of HSE, on the Revolution in Higher Educa-

tance technologies that facilitated his teaching throughout the coronavirus pandemic: (i) e-learning platform, (ii) digital workbook with interactive links between theoretical modules and practical questions, (iii) digital electronics visual tutor, (iv) online navigation through all course resources, (v) online YouTube videos, (vi) email-based consultations, (vii) supplementary e-worksheets, (viii) online mock quizzes, (ix) mock quiz feedback document, and (x) mixing of learning resources, such as Zoom and Blackboard Collaborate [George 2020:8–13]. This is a huge extension of educational tools within a single course, without the slightest hint of extramural format, degradation, or simplification of learning that pessimist professors anticipate.

Such a large-scale expansion of education practices also has two essential limitations, or reservations: individual educational trajectories and academic freedom, which are mentioned by neo-pessimists. On the one hand, digital formats are personalized and barely applicable to large audiences, so it would be an illusion to expect reduction in the price of online education. On the other hand, distance learning is impossible without faculty's academic freedom. The latter is indispensable in any type of education, but the traditional format concealed actual practices behind analog interactions that were hidden from outside parties over many years. Academic freedom and openness are the central idea of distance learning.

Three types of academic freedom can be identified based on this survey: (i) collaborative freedom, where educational trajectories are individualized and students are granted agency and choice; (ii) methodological freedom, i. e. the freedom of professors to choose teaching approaches and methods and make autonomous decisions about the organization of learning process; and (iii) organizational freedom, which includes the lack of fear of global competition, response to emerging challenges and the development of open online courses [Kuzminov et al. 2019:78] as an institutional resource, not a barrier to university's activities or a threat of reduction in enrollment. Freedom of opinion and free learning environment are key characteristics of the education system of the future as perceived by faculty members with the least negative perceptions of the present and the lowest level of pessimism about the future.

Avenues for Further Research

The present survey of faculty members took place in the middle of April, a few weeks into self-isolation and emergency remote teaching. In no small part, negative forecasts are due to the compulsory nature of distance teaching and the lack of alternatives. New measurements will be made after the lockdown restrictions are eased, when there will

tion, Universities for the Elite, and the Outcomes of the Pandemic. ***Forbes***, July 18, 2020: https://www.forbes.ru/biznes/403155-my-uchim-luchshe-chem-v-ssha-rektor-vshe-o-revolyucii-v-vysshem-obrazovanii-vuzah-dlya

be some distance from the shock experience and faculty members will be able to express a well-reasoned and unemotional opinion about the current and future state of education.

Perceptions of the future may change, and the levels of pessimism and detachment may decline. Post-pandemic surveys will help understand the reasons behind faculty members' fears and negative emotions as well as which measures, or the absence of such, make them resist modern technology. Future studies will clarify faculty's perceptions of distance learning practices in their universities, international open online courses, and transparent learning environments. Such surveys will allow to find out whether the current expectations of changes in tuition and human resource policies will persist. It is not so much facts as it is sentiment and expectations that make sense right now, as that is what shapes the public attitude—critical or supportive of change. Whether distance learning will or will not develop as a regular format depends in the first place on professors, and measures should be taken not only to make their voices heard but also to provide a communicative space for discussing and constructing a common future.

More than half a century ago, Jerome S. Bruner formulated four significant changes in educational practices of those times, or "innovations", as they would be called today. First, the concept of *homo educandus* changed, and a complex science of pedagogy emerged. Second, researchers learned to interpret and understand mental processes. Third, understanding of the learning process evolved as a result of numerous experiments in education. Fourth, new perspectives developed on how youth should be taught and how education could look ahead of the present and into the future [Bruner 1966:22–23]. All the four aspects can be safely recalled today at the new stage. Progress in the global education market has become obvious over these years: we have come to know more about human beings, mental processes, learning procedures, and youth's needs. However, a fifth change should be added to Bruner's list: freedom is now valued more as a necessary and sufficient condition of any type of education. It is only in a free, decentralized, globally integrated environment that a modern educational community may evolve. Furthermore, distance learning is the only learning format that meets all the freedom criteria and adds value, meaning, and immense utility not only to the learning environment but also to the instruction itself. There is little left to do: overcome the negative emotions and fears, steer clear of abuse of administrative power, and devote oneself to liberal education.

The article was written on the basis of the RANEPA state assignment research programme. The bullet points of this article were first presented at the round table Lessons from the Pandemic: New Risks and Opportunities for Education, organized by the Institute of Education (National Research University Higher School of Economics) on June 16, 2020.
Translated from Russian by I. Zhuchkova.

References

American Association for Public Opinion Research (2016) *Otchet rabochey gruppy AAPOR o nesluchjnykh vyborkakh: iyun 2013* [Report of the AAPOR Task Force on Non-Probability Sampling: June 2013]. Available at: https://fomlabs.ru/files/BOOK-otchet-aapor-o-nesluchaynykh-vyborkakh.pdf (accessed 12 January 2021).

Basak S.K, Wotto M, Bélanger P. (2018) E-learning, M-learning and D-learning: Conceptual Definition and Comparative Analysis. *E-Learn Digit Media*, vol. 15, no 4, pp. 191–216.

Bauer M. (1991) Resistance to Change: A Monitor of New Technology. *System Practice*, vol. 4, no 3, pp. 181–196.

Bruner J. (1966) *Towards a Theory of Instruction*. Cambridge: Harvard University.

Center for Strategic Research, Higher School of Economics (2018) *Dvenadtsat resheniy dlya novogo obrazovaniya. Doklad* [Twelve Solutions for a New Education. Report]. Available at: https://www.hse.ru/data/2018/04/06/1164671180/Doklad_obrazovanie_Web.pdf (accessed 12 January 2021).

Chesnokov S. (2009) *Determinatsionny analiz sotsialno-ekonomicheskikh dannykh* [Determination Analysis of Socioeconomic Data], Moscow: Librokom.

Curran Ch.C. (1987) Dealing with the Distant Learner as Part-Time Learner. *Journal of Education for Library and Information Science*, vol. 27, no 4, pp. 240–246.

Faisal P., Kisman Z. (2020) Information and Communication Technology Utilization Effectiveness in Distance Education Systems. *International Journal of Engineering Business Management*, vol. 12, no 2, pp. 1–9.

George M. (2020) Effective Teaching and Examination Strategies for Undergraduate Learning during COVID-19 School Restrictions. *Journal of Educational Technology Systems*, vol. 49, no 8, pp. 1–26.

George M. (2019) Port Mapping Tool for Digital Logic Development. *i-Manager's Journal on Software Engineering*, vol. 14, no 1, pp. 20–39.

Hirschheim R. A., Newman M. (1988) Information Systems and User Resistance: Theory and Practice. *Computer Journal*, vol. 31, no 5, pp. 398–408.

Joseph S., Schumm M., Rummel O. et al. (2013) Teaching Finite State Machines with Case Method and Role Play. Proceedings of the *2013 IEEE Global Engineering Education Conference (EDUCON) (Berlin, 2013, March, 13–15),* pp. 1305–1312.

Kaya Z., Tan S. (2014) New Trends of Measurement and Assessment in Distance Education. *Turkish Online of Distance Education*, vol. 15, no 1, pp. 206–217.

Khavenson T. E., Koroleva O. D., Lukina A. A. (2018) *Aktory obrazovatelnykh innovatsiy: tsennosti i motivatsiya* [Actors of Educational Innovation: Values and Motivations], Moscow: HSE.

Klyagin A. V., Makaryeva A. Yu. (2020) Federalnye institutsionalnye resheniya [Federal Institutional Decisions]. *Shtorm pervykh nedel: kak vysshee obrazovanie shagnulo v realnost pandemii* [First Weeks Storm: How Higher Education Entered into Reality of Pandemic]. Moscow: HSE, pp. 29–46.

Kuzminov Ya.I., Froumin I. D., Abankina I. V. et al. (2019) *Kak sdelat obrazovanie dvigatelem sotsialno-ekonomicheskogo razvitiya?* [How to Make Education a Driver of Socioeconomic Development?]. Moscow: HSE.

Martynov K. K. (2013) Distantsionnaya Coursera [University Coursera]. *Otechestvennye zapiski*, no 4, pp. 307–316.

McCabe D., Ciuk S., Gilbert M. (2019) 'There Is a Crack in Everything': An Ethnographic Study of Pragmatic Resistance in a Manufacturing Organization. *Human Realations*, vol. 73, no 7, pp. 953–980.

Montanana J. M., Lemus-Zunigab L.G., Garzac A. A., Benlloch-Dualdeb J.V. (2015) Teaching Strategy on VHDL Course Based on Participative Learning. Proceedings of the *2015 International Conference on Information Technology Based Higher Education and Training (ITHET) (Lisbon, 2015, June, 11–13)*, pp. 1–6.

Nickels K. (2000) *Pros and Cons of Replacing Discrete Logic with Programmable Logic in Introductory Digital Logic Courses*. Paper presented at American Society for Engineering Education Annual Conference (Springfield, MS, 2000).

Oguz Y. (2016) Designing a Real-Time Remote-Control System for Undergraduate En-

gineering and Engineering Technology Students. *Journal of Engineering Technology*, vol. 33, no 1, pp. 34–43.

Polat Z., Ekren N. (2020) Remote Laboratory Trends for Distance Vocational Education and Training (D-VET): A Real-Time Lighting Application. *International Journal of Electrical Engineering and Education*. Available at: https://doi.org/10.1177/0020720920926679 (accessed 12 January 2021).

Prasad P. W.C., Alsadoon A., Beg A., Chan A. (2014) Incorporating Simulation Tools in the Teaching of Digital Logic Design. Proceedings of the *2014 IEEE International Conference on Control System, Computing and Engineering (ICCSCE) (Penang, Malaysia, 2014, November, 28–30)*, pp. 18–22.

Rampal A. (1989) Distant Learning and Distancing the Learner. *Social Scientist*, vol. 17, no 9/10, pp. 96–99.

Reinertsen A. B. (2020) Fuzzytechie Languaging and Consilience: Dataphilosophy and Transdisciplinary Digital Force for Justice. *Policy Future in Education*, vol. 18, no 4, pp. 453–466.

Rye S. A. (2013) Learning about Distant Places through the Internet: Young Students as Global Citizens? *Norwegian Journal of Geography*, vol. 67, no 3, pp. 148–156.

Sanna L. J., Chang E. C., Carter S. F., Small E. M. (2006) The Future Is Now: Prospective Temporal Self-Appraisals among Defensive Pessimists and Optimists. *Personality and Social Psychology Bulletin*, vol. 32, no 6, pp. 727–739.

Seginer R. (2000) Defensive Pessimism and Optimism Correlates of Adolescent Future Orientation: A Domain-Specific Analysis. *Journal of Adolescent Research*, vol. 15, no 3, pp. 307–326.

Spencer S. M., Norem J. K. (1996) Reflection and Distraction Defensive Pessimism, Strategic Optimism, and Performance. *Personality and Social Psychology Bulletin*, vol. 22, no 4, pp. 354–365.

Terentev E. A., Zakharova U. S. (2020) "Eto rabotaet!": perekhod na udalenny rezhim raboty i distantsionnoe obuchenie v otsenkakh prepodavateley rossiyskikh universitetov [Transition to Remote Working and Distance Learning as Perceived by Russian Faculty Members]. *Shtorm pervykh nedel: kak vysshee obrazovanie shagnulo v realnost pandemii* [First Weeks Storm: How Higher Education Entered into Reality of Pandemic]. Moscow: HSE, pp. 67–79.

Tesar M. (2020) Towards a Post-COVID-19 'New Normality'? Physical and Social Distancing, the Move to Online and Higher Education. *Policy Future in Education*, vol. 18, no 5, pp. 556–559.

Vasilyeva M. R., Fefelova Yu.A. (2019) Primenenie distantsionnogo kursa po distsipline "Patofiziologiya, klinicheskaya patofiziologiya" v professionalnom obuchenii studentov meditsinskogo vusa [Application of a Distance Course "Pathophysiology, Clinical Pathophysiology" for Professional Training of Medical University Students]. *Open and Distance Education*, no 3, pp. 14–20.

Voytsekhovskaya M. F. (2019) Kriterii otsenki elektronnykh kursov kak sredstvo upravleniya kachestvom elektronnoy informatsionno-obrazovatelnoy sredy vuza [The Criteria for Electronic Courses Assessing as a Means of Managing the Electronic Information Quality and Educational Environment at the University]. *Open and Distance Education*, no 4, pp. 34–39.

Weng T., Zhu Y., Cheng C. K. (2009) Enhancing Learning Effectiveness in Digital Design Course through the Use of Programmable Logic Boards. *IEEEE Transactions in Education*, vol. 52, no 1, pp. 151–156.

Zakharova U. S. (2016) Aktualnye tendentsii primeneniya MOOK v vysshem obrazovanii evropejskikh stran: obzor publikatsiy Evropejskogo sammita uchastnikov MOOK-proektov 2015 g. [Current Trends of Using MOOCs in European Higher Education: The European MOOC Stakeholder Summit 2015 Review]. *Open and Distance Education*, no 1, pp. 20–23.

Zhao X., Okamoto T. (2009) An Email-Based Discussion Learning System with Ubiquitous Device Support. Proceedings of the *4th International Conference on Computer Science and Education (Nanning, China, 2009, July, 25–28)*, pp. 1420–1424.