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► The impact of the COVID-19 pandemic on the practice-oriented education sector and assessment methods

Although the process of digitalization of the intermediate Vocational Education and Training (VET) in Russia began before the COVID-19 pandemic, the usage of distance and blended learning technologies was rare during the crisis. The study identified the main weaknesses of intermediate VET which came to light during the pandemic as well as the barriers to distance learning both for teachers and learners. Therefore, the study emphasises that the problems identified need to be addressed in order to ensure a successful digital transformation process of the intermediate VET.

1. Being a practice-oriented education system, intermediate Vocational Education and Training (intermediate VET) experienced particularly severe limitations between March and June 2020. According to the usual schedules, this is a period of educational and work placement internships as well as of practical examinations in all courses. The unexpected transition to distance learning and the inability to change schedules for graduation courses posed particular difficulties.
2. Surveys conducted in the individual regions of the Russian Federation by the Federal Institute for Education Development of the Russian Academy of National Economy and Public Administration under the President of the Russian Federation revealed the peculiarities and difficulties of the operation of the intermediate VET system during this period. They established that the digitalization of the intermediate VET process began before the pandemic. Many regions (in particular the more industrially developed and financially prosperous ones) created digital platforms for intermediate VET; large colleges (those with more than one thousand students) developed their own digital resources. Electronic educational resources for colleges have begun to appear on the educational software and publications market over the past 4–5 years. However, distance and blended learning technologies were used rarely and in isolation, and there was no corresponding training of intermediate VET teachers.

3. The emergency transition to distance learning has caused an increase in the labour intensity of teaching of approximately 50 percent. Teachers had to master new tasks associated with the processing of digital content, distinctive class planning, online interactions with students, etc. When working during periods of self-isolation, teachers also incurred new expenses, e.g. for remote workplace equipment, high speed Internet access, or software.
4. Many publishers of electronic educational resources and textbooks for intermediate VET provided all colleges with unlimited free access to their digital libraries during the period of restrictive measures. At the same time, analysis of the surveys' results showed that only about 10 percent of Vocational Education programmes have electronic educational resources available to them (in particular, for their theoretical parts). The teachers and masters of Vocational Education/intermediate VET do not independently develop textbooks and manuals for their courses, since, unlike the teaching staff at universities, they do not have the appropriate qualifications.
5. The survey found that the main means of learning were non-platform solutions (Skype, Zoom, social networks, messengers, Google tools, email, etc., as well as individual MOOCs – massive open online courses).
6. The practice-oriented nature of intermediate VET programmes requires students to be ready to apply knowledge and skills in practical professional activities as a result of learning; as a rule, this is not required for more academic disciplines. The surveys showed that, in particular, the “university resources” (MOOCs) were least frequently used for distance learning in the intermediate VET programmes.
7. If the practice-oriented education institution did not have either a single educational platform or available online courses, each teacher developed their own distance learning course using any ICT tools known to them, available methodological recommendations, and their own teaching experience. As the surveys showed, this was the approach used on a mass scale in the intermediate VET system after the introduction of universal distance learning in a self-isolation environment.
8. Currently, distance learning in the intermediate VET system is carried out mainly using disparate, non-platform means, which raises the question of the didactic quality of such an educational process.
9. There are several main barriers to distance learning.
The group of obstacles identified in the survey as “insurmountable by one’s own efforts” includes:
 - ▶ technical problems (poor Internet connection, overloaded servers and/or online learning platforms, etc.)
 - ▶ general lack of time
 - ▶ lack of material and technical resources

- ▶ unpreparedness of students
 - ▶ unpreparedness of teachers to work effectively with distance learning.
10. The intermediate VET students had to face serious challenges as well. An analysis of their study and leisure time in self-isolation revealed two problems: massive disruptions in the daily routines and insufficient technical equipment for learning at home. Break-downs of the students' daily routines occurred due to the lack of self-organization skills outside of face-to-face contact with teachers as well as a comparatively low learning motivation.
 11. An important problem, predicted from the very beginning of the epidemiological restriction measures, was graduates' unemployment risk. As early as in March and April 2020, the vast majority of colleges surveyed potential employers about their intentions to hire graduates. Concerns were raised about vocational areas such as services, catering, hospitality, and culture.
 With the support of government agencies of the subjects of the Russian Federation, branches of the Russian Union of Industrialists and Entrepreneurs, and the Chamber of Commerce and Industry of the Russian Federation, Vocational Education organizations began (and continue) to seek vacancies for their graduates during the period of the pandemic. As a possible solution, some graduates are offered free additional in-demand qualifications as part of the federal "Re-training Programme for Persons Affected by the Effects of the New Coronavirus Epidemic."
 12. The main problems of distance learning in intermediate VET and approaches to solving them are:
 - A. *The problem of the quality of education.* Distance learning in the intermediate VET programmes does not allow for the effective teaching of all students at the level corresponding to the conditions of traditional (face-to-face) and blended learning. With distance learning, the educational process turns into *de facto* self-education. Students who do not possess a sufficient level of learning independence cannot engage in such a learning process without the involvement of parents, who act as "external motivators."
 - B. *The problem of time.* In any of its forms (distance or blended), online learning significantly increases the teacher's working time as their day becomes even more irregular. The accustomed format of traditional teaching helps to save a lot of time due to frontal forms of work. By contrast, distance learning is organized based on an asynchronous model and requires individual work with each learner, even if the individualization is purely technical rather than substantive in nature.
 - C. *The problem of practice orientation.* Given distance learning conditions, it is impossible to arrange either full-fledged work placements under intermediate VET programmes or demonstration exams. Work placement plays a special role in the sys-

tem of intermediate VET; it is a final, holistic stage of training which involves not only practicing professional skills but also participating in a real professional environment and being part of a work team.

The problems we have focused on will not solve themselves. On the contrary: if organizers and managers do not pay them close and scientifically supported attention, the problems will be felt more and more strongly, hindering the process of digital transformation of intermediate VET (even if this process is evolutionary in nature).

13. Work under conditions of limited face-to-face education allowed us to see where support for the development of intermediate VET is most needed.
 - A. Intermediate VET teaching staff needs systematic scientific and methodological support of their teaching activities, especially in the area of blended learning technologies.
 - B. Measures are needed to develop modern digital educational resources in order to provide online courses for Vocational Education programmes, possibly as part of the “Education” and “Digital Economy” federal projects.
 - C. At the level of educational standards, the minimum amount of practical work (in particular, work placements) should be regulated in order to prevent the substitution of practical training with other forms. Of course, this measure will not solve the problems arising under strict quarantine measures, but it will force practice-oriented education institutions to comply more strictly with the requirements for the practical training of students.
 - D. New standards for the remuneration of teaching staff in intermediate VET institutions should be developed, taking into account the new realities of teaching in a digital educational environment.