CREATING A MASSIVE OPEN ONLINE COURSE: OPPORTUNITIES FOR DISPLAYING TEACHERS' PROFESSIONAL COMPETENCE

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Abstract: The paper describes the experience of creating a massive open online course from the viewpoint of the opportunity to employ one as a criterion for demonstrating teachers' professional competence. The paper details approaches to the concepts of professional competence and enriching information educational environment existing in the Russian tradition. It also illustrates opportunities for actualizing the cultural and humanistic function of education as a social institution. The authors of the paper share the results of conducting questionnaire surveys and interviewing the academic teaching staff who have a hands-on experience of massive open online courses and are engaged in designing them. The survey results offer an insight into the teachers' attitude to pedagogical potential of the MOOC being implemented and to developing MOOC as a technological process demanding high professional competence from teachers.

Keywords: massive open online course, professional competence, functions of education, the educational environment, communicative competency.

1 Introduction

Russia's educational policy relies on the basic principles detailed in the Federal law "On education" (2012). The following problems should be considered the priority ones at the regional level within the system of education for the nearest two or three years. First, new federal state educational standards have to be implemented for both higher and school education, and consistency and integration of the "school – higher educational institution" system has to be ensured. The upbringing potential and social humanitarian trend of the educational process have to be enhanced. Another priority is the higher role of syncretic integrated knowledge. Finally, polycultural individuals having a clear national identity must be cultivated (Akvazba et al., 2018).

The cultural and humanistic function of education consists in its performing the function of a tool for broadcasting culture, value-based behavior and communication. By acquiring these in the process of pedagogical interaction, students adapt to the changeable environment in which the society exists and gain the opportunity to learn developing their own subjectivity, i.e., they gain the skill of self-awareness and self-development (Akvazba, 2003).

As it is the area of the Russian Federation which is in question, according to the law "On the state language" (2005), Russian is the state language for all citizens (regardless of their national affiliation). This conditions the necessity and obligation to adhere to the standards of using linguistic means stipulated by the law.

At present, when speaking about language as a nation's cultural code and perceiving it as a means of capturing the mentality, people's culture, and way of thinking, one faces the problem of globalization and integration of the world space, the repercussions of the world telecommunication revolution. What comes as a consequence of this is the oral and written speech mixed up.

It should be noted that the Russian language can be an independent subject to be learned at an educational organization, on the one hand, while on the other hand, it is the principal tool for mastering the educational programs, too. As a rule, educational organizations carry out the main professional educational programs in their state language, in Russian for this case. However, higher educational institutions teach citizens of other states as well, in the Russian language at that, which renders the problem of studying Russian as a foreign language relevant.

In the process of performing their cultural and humanistic function, educational organizations have the following pedagogical tasks to complete. First of all, individuals' inherent value must be realized, and they must be recognized as subjects of the academic and upbringing process. Next, the creative nature of activity, the necessity of students' self-revelation and self-development must be understood. Finally, the social humanitarian culture must be developed in individuals as a set of qualities, namely, the unity of their internal moral essence and external behavioral expression, communicative subjectness.

The subjects aimed at developing the universal competency (which in the latest federal state educational standards approved is worded as "UC-4 – students can perform business communication in the verbal and written form in the state language(s) of the Russian Federation and in a foreign language") are usually termed "Russian and speech culture" and the "Foreign language", with some variations to the course names.

In the world of rapidly developing technologies, the conventional approach in the domain of didactics gradually fades into the background, while the trend of transforming the approach to teaching techniques manifests itself in all subjects at all levels of education. This is exactly how the principal urge of the age of information is met – the continuity of education, making the "lifelong education" principle relevant (Akvazba et al., 2020).

2 Literature Review

The concept of competency incorporates the total of interrelated personal qualities (knowledge, abilities, skills, modes of activity) that are set in relation to a certain circle of objects and processes and required for high-quality productive actions toward them. When one possesses the necessary competencies, this state of one's development is characterized by the term "competence" (Kuzibetskiy & Rozka, 2010, p. 12). In pedagogical practice, professional competence implies having the competencies the content of which depends on the functional needs of pedagogical practice, i.e., "this is the total of knowledge and abilities determining the effectiveness of work, … a combination of personal qualities" (Vvedenskiy, 2003, p. 32) that are important for teachers in terms of their occupation. So, professional competence is an integrative characteristic uniting such concepts as "professionalism", "qualification", and "professional particularities". Making the content of the concept more specific, one can say with confidence that teachers have to possess a number of key competencies and subject-specific pedagogical ones which will enable them to successfully perform the process of teaching and refining students (Batyreva & Chebotar, 2004, p. 4).

The following competencies can be referred to the key ones for teachers: the general cultural one, the social worldview one, the information and communication competency, and the personal self-improvement one. Among the principal subject-specific pedagogical competencies, there are the following most significant ones. First, these are the communication and speech competency (it ensures the teachers' speech literacy and optimum teacher-to-student, subject-subject interaction) and the subject and information one (having the current basic and state-of-the-art knowledge and abilities in the subject taught). Next, this is the operational and methodological competency – the ability to select, design, and effectively apply practices and technologies. Another important subject-specific pedagogical competency is the social regulation one (it involves efficient teaching, control and assessment activity, successful planning and managing of the educational process).

It is the level of having the total of the above competencies that is the teachers' professional competence level.

An open online course in the format of MOOC (massive open online courses) (Solodov et al., 2018, p. 433) is a course intended for digital learning and including video lectures, additional study materials, presentations, and test assignments which are related in topics. Such courses ensure continuous communication of all participants of the academic process at forums via the specialized online education platform. It is also one of the results of teachers' academic and methodological work at higher school.

A. V. Khutorskoy (2008, p. 154) believed the educational environment to be a condition for the development of personality. V. A. Yasvin suggested that the learning environment was a system of influence and a condition of developing individuals according to the principal pattern set (Pashchenko, 2013, p. 11).

The very term "massive open online courses" (coming from English and abbreviated as MOOC) implies the open-access Internet-based courses with interactive participation, one of the most efficient embodiment forms of distance educational technologies (Gushchina & Mikheeva, 2017, p. 120). Over a very short period of time, online courses have won incredible development (Solodov et al., 2018, p. 434).

Much attention is paid to the problems of determining teachers' range of functions in carrying out MOOC, or, more exactly, in preparing and developing them. So, J. Ross, C. Sinclair, J. Knox, S. Bayne, and H. Macleod (2014) analyze the roles of teachers within MOOC which they believe to be essentially different from teachers' functions in conventional training. Depending on the MOOC type, teachers can be instructors, content supervisors, moderators of studies, or facilitators (Guardia et al., 2013, p. 58).

A number of works discuss practical aspects of MOOC development (Solodov, 2016, p. 218), among them: opting for the most expedient and relevant course type; considering the key factors – didactical, technical, and administrative ones. They deal with pedagogical and methodological constituents of the online courses, too, taking into account the requirements set for them in the 21st century: relying on the critical thinking and cooperation principles, continuous self-education, and team work ability (Guardia et al., 2013; Soltovets et al., 2019; Chigisheva et al., 2016).

The term "pedagogical design" was suggested by developers of the project "Informatization of the system of education" as an umbrella concept for denoting the field of pedagogical science and practice which addresses the questions of developing study materials, forming the learning environment, and building an efficient academic process. In social and pedagogical thought of the West, this domain is detailed in the following concepts, for example, instructional design (the development of study materials), learning design (the academic process development), learning environment design (the way learning environment is elaborated), and so on (Aleksandrova, 2020). However, for this paper, it is more expedient to speak exactly about the pedagogical design – as the process of creating MOOC is characterized and considered as a tool for actualizing pedagogical competence of higher education teachers.

3 Research Methodological Framework

The principal objective of this research was to identify the attitude of the pedagogical staff to the process of developing MOOC as one of the tools for actualizing teachers' professional competence. The research was conducted in summer 2020.

The tasks of this research included, first of all, finding out if the teachers had an experience of using MOOC in educational activity and an experience of creating their own MOOC (as members of the working group). Second, they involved determining if the teachers rated designing MOOC as an opportunity for professional growth or practice of their professional competence. Third, the authors identified the range of issues which the teachers face when creating MOOC.

Based on Industrial University of Tyumen (IUT), the process of creating the massive online open course "Russian as a foreign language" is underway. It is supervised by the head of the department of intercultural communication, candidate of sciences in philology, associate professor Svetlana Davidovna Pogorelova. They commenced developing the course early in 2020, but due to the COVID 2019 pandemic, the process of shooting was postponed and resumed only after the restrictions were lifted. The contributors' working group consists of 9 teachers, associate professors of IUT holding academic degrees, ranks, and diplomas of professional training in the course being designed. They feature a vast experience in teaching profession, too.

The object of the research was the working group of the MOOC designers and the academic teaching staff of IUT. The subject of the research was the attitude of the academic teaching staff to the MOOC and the process of its development as an opportunity for employing teachers' professional competence.

The authors conducted interviews of the academic teaching staff of the university numbering 50% of the personnel (the sample included the total of 1100 people from the Institute of Service and Branch Management, the Institute of Transport, the Construction Institute, the Institute of Geology, Oil and Gas Mining, in equal shares). They also interviewed designers of the MOOC (9 developers – teachers of the intercultural communication department).

The principal research method – the quantitative one – was questionnaire survey. The questionnaire contained a number of items. 1) What is MOOC? 2) Have you got any experience of working with MOOC as a student or teacher? Please specify what exactly or explain why if none. 3) What virtual educational environments and virtual services do you use in the process of working with students? 4) What virtual educational environments and virtual services seem the most convenient to you? 5) Please evaluate the pedagogical content of the MOOC you have used in your work. 6) In your opinion, are MOOC a form of actualization of pedagogical competence?

The second, qualitative method of the research was interviewing the developers. The interview contained the following lines to be discussed. What for are MOOC designed? What problems have to be solved by the MOOC? What must the pedagogical content and pedagogical design of MOOC be like? What difficulties have you faced when developing the MOOC and what prospects can you see?

4 Results and Discussion

The questionnaire survey has shown that: for holding classes with students in the distance mode during the COVID 2019 pandemic, the teachers extensively use digital messengers (Viber, WhatsApp), vk.com, e-mail, youtube.com, skype, and open educational Internet resources (MOOC, Open education platform of IUT). However, it is the educon system that remains the basic one for them.

Resources used for providing digital learning are the University's educational environment (educon) and open education platform. The use of Coursera (4%) and the "Open education" National platform (7%) amount to a small percentage only, i.e., they are applied as additional resources.

All higher education teachers are aware about the existence of such educational resources as MOOC; they understand what these are and have an experience of using the courses in their educational practice. Some teachers tried studying at MOOC themselves (38%), while others used the recommended MOOC during the pandemic extensively, as additional tools for boosting students' activity, too.

The higher school teachers consider MOOC designing and the opportunity of working with various MOOC as a form of materializing their professional competence (according to 96% of the respondents), with 4% giving no straightforward answer,

although noting MOOC as a positive phenomenon in the educational environment.

As a result of interviewing the MOOC working group, the authors have summarized the principal interview lines as follows.

The objectives of creating open online courses in the format of MOOC are: to improve the University brand awareness; to promote the University's educational programs both at the Russian and the international levels; to enhance accessibility of education regardless of the students' location; and to increase the quantity of Russian and foreign course participants at the University.

When designing an open online course in the MOOC format, a number of stages can be singled out, according to the developers. So, the procedure is as follows. First of all, the MOOC program is developed. The script is written for the advertising video clip (the promo video). Next, the pedagogical blueprint of the course is elaborated. Text, graphic, and other study and methodological materials for creation of the MOOC are prepared and handed over for appraisal by experts. After that, the advertising video clip is recorded, and so are video lectures. The recorded lectures are viewed and checked for errors with the video editor. Once these steps are completed, all materials of the MOOC are handed over to the Platform operation specialist. Finally, the exclusive rights transfer contract is signed.

The developers note that the course has to rely on week-to-week planning, and its sections have to be formed according to the principle of configuring materials studied within one week (or several weeks) together.

Materials of each week have to be decomposed into sections and subsections, with each subsection including one or more pages, and each page containing at least one component.

Each subsection has to be aimed at achieving certain constituents of the training goals. Within each week, there has to be at least one subsection component ensuring the assessment of training results achieved so far.

Each subsection has to contain at least one component ensuring interaction between the students.

All developers share the opinion that the overall credit value of the course has to be 2 (72 hours) to 6 (216 hours) credit points. The duration of the course can range from 10 to 16 weeks inclusive, and for the course participants, weekly academic load cannot exceed 22 hours. The teaching methods and the course structure have to be optimized for reducing the students' workload, provided that the results of training are achieved.

The methods and means of training used within the course have to allow for the unlimited increase of the quantity of students without an essentially higher labor intensity of supporting the course and without the course authors' direct participation in working with students.

No compulsory participation of students in synchronous events has to be provided for by the educational technology applied.

The course may include mutual checking of works or students' team work.

The course can use the following page components: lectures, practical training, and assignments. With regard to this, lectures are video lectures accompanied by multimedia materials. When compiling a lecture, logical units (video clips) of 5-15-minute duration have to be singled out that are going to be watched by the course participants daily within a week. Practical training can be presented as solving problems, debates, creative projects, working in virtual laboratories, etc.

All video lectures have to be accompanied by subtitles. Whenever interactive components are used, an alternative option has to be provided for people having health limitations to achieve the results of training and to have them assessed.

The algorithm for calculating the final mark on the course has to be determined, too.

Difficulties which course designers face can be of both organizational and methodological nature.

First of all, they refer to availability of the work time resources, inventory, equipment, and specialists. Next, shooting schedules have to be set up. In particular, the very shooting and editing of the working materials have to be matched with availability of teachers engaged in the academic process being carried out (meanwhile, each has his or her own timetable to keep to). Finally, there are difficulties associated with the specific nature of the course (Russian as a foreign language implies capturing national and cultural specific features of the subject).

Among the methodological difficulties, they note scripting the actions, elaborating the pedagogical and informative (subject-related) content, and selecting easily visualizable examples and illustrations. Alongside this, requirements for the recommended language of lecture material presentation have to be met: scientific lecture texts (the academic discourse habitual to the modern higher education teachers) have to be transformed into the popular science ones, texts in the "accessible" language.

5 Conclusion

Given the total informatization of the society and implementation of professional standards into practice, what is required from teachers is not only proficiency in information and communication technologies, but also the ability to organize the academic and upbringing process at the innovation level. When grasping the current situation at the modern market of educational services, teachers become active participants of the intellectual online courses.

The new innovation development vector for the specialist training system is set by the informal learning in the format of MOOC. It is oriented to maximum use of technical and software capacities of the contemporary information technologies, network and mobile interaction services.

Massive open online courses can be extensively used in the process of training students coming from other states and for providing adapted educational programs to students having health limitations.

MOOC ensure the formation of the required cognitive environment and they are aimed at solving the following problems. First, all students have to be given equal opportunities for self-education and choosing learning algorithms, i.e., for identifying their individual paths of acquiring the new knowledge, necessary skills and abilities, further training. Meanwhile, teaching the course content has to be provided with the required information resources in an accessible and convenient digital form. Opportunities must be available for bringing into life the innovation pedagogical ideas to organize students' project and research activity within the selected study course. In particular, conditions have to be formed for replacing the authoritarian scientific supervision style (the conventional pedagogical system of training) with the democratic style adopted in the new educational environment where modern digital communication means are used. There must be incentives, too, for students to cultivate their personal intellectual qualities and abilities aimed at searching for the required information and transforming it into knowledge.

In designing MOOC, special attention is paid to such practical questions as opting for the most expedient and relevant course type, taking into account the key factors – didactical, technical, and administrative ones, the structure of principal elements, pedagogical and methodological constituents. Guided by the requirements set for online courses in the 21st century, course

designers rely on the critical thinking and cooperation principles, continuous self-education, and team work ability, too.

When developing a MOOC, teachers have the opportunity of materializing and enhancing their key professional competencies: the general cultural one, the social worldview one, the information and communication one, and the personal self-improvement competency. According to the authors of this paper, most importantly, they actualize and enhance the subject-dependent pedagogical competencies, too (the communication and speech one, the subject and information one, the operational and methodological one, the social regulation one, and the control and assessment one).

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