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INCREASING THE POTENTIAL OF TEACHERS IN DISTANCE LEARNING THROUGH THE DEVELOPMENT OF THE IT – COMMUNITY IN EDUCATION

The authors consider the need to increase the potential of teachers in distance learning through the development of networking and the creation of an educational IT community. The article provides definitions of the concepts «teacher's potential for distance learning», «IT-community in education». A study was carried out, during which 343 teachers of schools, colleges and universities were trained on the use of digital educational technologies for distance learning in advanced training course. The content of training is described, including the knowledge necessary for the teacher to organize training during the quarantine period of the COVID19 pandemic: distance learning, learning models, digital educational resources, Web 3.0 services in training, gamification of the educational process, creating, recording video lectures and publishing them, using MOOCs for formal and informal training, webinar services. Review, room creation. Other streaming platforms.). The study focused on the development of the IT community: teachers performed project activities in groups, participated in discussions and meetups, thanks to which they received feedback from colleagues. An input and output questionnaire was conducted, the results of which showed a positive dynamics in the development of the potential of teachers through active participation in the professional IT community.

Keywords: potential of teachers, distance learning, IT-community, professional development, digital educational technologies.

Introduction

The quarantine time during the COVID-19 pandemic showed the need for the development of distance learning. Online learning technologies have significantly expanded the open, flexible and distance learning environment. Along with this growth, efforts need to be made to meet the needs of learners.

Despite the significant available resources of educational institutions for online learning, most teachers and students experienced significant stress when choosing a method of communication to obtain distance learning results [1].

The teachers felt confusion, unreadiness, inability to organize distance learning. A number of authors have considered [2, 3] the concept of a teacher's potential in distance learning. Pedagogical potential is understood to be the totality of the teacher's capabilities, including not only what they are now, but also from the point of view of their formation and development prospects [2]. Based on this definition, the teacher's potential is subject to development in the process of organizing distance learning.

Based on the research, the structure of the teacher's potential was highlighted, including motivational readiness for the implementation of distance learning, technological readiness and a reflexive-effective assessment of activities for the implementation of distance learning.

Motivational readiness includes a system of positive motivation and attitudes towards distance learning. Technological readiness includes skills in using methods of organizing distance learning, skills in using digital technologies, and the ability to choose an educational Web 3.0 resource to solve a pedagogical problem. Reflexive-effective assessment of the implementation of distance learning includes reflection and assessment of the process of distance learning [3, 4].

As you can see, the teacher's readiness for distance learning depends on the level of use of information, communication and digital means for solving pedagogical problems, his positive motivation.

One of the effective tools for the development of positive motivation and stress relief in distance learning is the organization of networking, which leads to the creation of an IT-community of teachers.

Based on the study [6], we define the IT-community in education as a mixed group of teachers who are engaged in a topic of mutual interest in the field of organizing distance learning. These are not just individual professional development opportunities in the form of a series of seminars, but creating a sense of community among members of the IT community by encouraging opportunities for interaction. This allows you to enrich and realize the potential of teachers in the field of distance education.

In the study of I.E. Devyatova [2] the following methods of potential rise are identified: a) coaching, mentoring, b) observation over more experienced colleagues, c) electronic courses and webinars, d) direct communication with the tutor of the advanced training course, e) simulation games, f) facilitation, g) internships, h) implementation of training projects, i) video courses, podcasts, mobile learning.

The active position of the teachers in the study and use of distance learning tools allows them to quickly adapt and get used to new learning.

In this case, it becomes necessary to create support from the IT community, which prompts and helps to find solutions in organizing successful distance learning [6].

Thus, the goal of this study is to substantiate the role of the IT community in increasing the potential of teachers for distance learning.

Research methodology

For research practice, we conducted a survey of teachers (university teachers and teachers of schools, colleges) twice. 343 teachers living in Pavlodar region participated in it. The initial survey was carried out before the organization of the IT-community and until the full inclusion of the teacher in it. We conducted the next survey after the advanced training courses and the full functioning of the teacher communities.

The survey included 14 questions, most of which related to the role of the IT community for the level of teacher use of digital technologies for distance learning.

The following substantive questions were asked:

- Assess your level of ICT literacy (knowledge of information and communication technologies in professional activity).
- Are you a member of the IT community?
- Do you actively participate in discussions with members of the IT community?
- Do you have any difficulties during preparing for an online lesson?
- What resources do you use for distance learning? (University distance learning platform, Web 3.0 online resources: virtual whiteboards, presentations, interactive exercises, etc., Teaching materials from the itclass.tou.edu.kz Internet resource, others).
- What difficulties do you experience the most with distance learning?
- Where do you take advanced training courses in ICT and distance learning?
- How do you prefer to acquire knowledge on the organization of distance learning? (Contact colleagues from the IT community, On your own, Improve your qualifications in courses and webinars, Other).

During the research, professional development courses for teachers were organized with an emphasis on creating an IT-community and communication in it. The teaching methodology was built on a project basis - projects were given to teachers that they performed in teams with subsequent defense (pitch).

After the training, the teachers were re-surveyed. The research results are discussed in the next section.

Research results

The initial survey showed that the majority of teachers assess their potential for distance learning as low (73 %). 68.2 % were not ready to switch to distance learning, 11 % indicated that they are members of IT community in education, the rest did not refer themselves to any community. Only 21 % of respondents are actively involved in discussions of the professional community. At the same time, it is indicated that difficulties arise when developing digital educational resources (85 %), when conducting classes in streaming systems (78 %), when creating online test materials (83 %), when organizing constant feedback (98 %). The main sources of knowledge were the advanced training courses (88 %) and self-study (12 %).

The high level of difficulties experienced by teachers in distance learning has determined the need to train them in advanced training courses. We conducted several courses in classes, where we organized all interaction around communication platforms: the participants received tasks that they performed in a group and individually, but later demonstrated and discussed the work in an organized community. Meetups were held, projects were defended, thanks to which communication in the IT community continued after the end of the courses.

The main content of training on the advanced training course included:

- Distance learning, forms of interaction with the learner, learning models;
- Digital educational resources, types, creation tools;
- Web 3.0 services in training. Creating a class in Google Classroom. Virtual whiteboard. Service of interactive maps. Use of Google services;
- Gamification of the educational process: Voki, Google-forms, Kahoot, Quiz, LearningApps;
- Creation of infographics for educational content (Infogr.am, Google Charts, Easel.ly, Draw.io, Canva);
- Record video lectures and publish them. Youtube channel maintenance and content management. Broadcast;
- Using MOOCs (Massive Open Online Courses) for formal and informal learning;
- Webinar services. Review, room creation. Other streaming platforms.

When studying on the advanced training course, we focused on networking, the need to communicate and exchange information with colleagues.

The secondary questionnaire was conducted after the successful defense of the final projects. The results showed that 81 % of students rate their potential for distance learning as high enough. 98 % of the trainees said they are ready to switch to distance learning. 100 % of the listeners indicated that they enter and actively participate in the IT community in education created during the courses, which helps the teacher. Almost all respondents became confident after joining the community, due to the fact that they can turn to colleagues with any difficulty.

Only 81 % of respondents began to actively participate in discussions of the professional community. Difficulty indicators decreased when developing digital educational resources (25 %), when conducting classes in streaming systems (12 %), when creating online test materials (5 %), when organizing constant feedback (13 %). Advanced training courses (61 %), self-study (15 %) and the IT community they entered (67 %). were cited by the respondents as the main sources of knowledge. Also, students indicated the resource of the IT community (itclass.tou.edu.kz) as a resource that can be used for distance learning.

The growth in indicators shows that the created IT-community has significantly influenced the growth of the confidence and potential of teachers for distance learning.

Discussion

Training on advanced training courses for teachers allowed them to master digital technologies for streaming classes, creating tests and exercises on Internet resources, and organizing classes. At the same time, motivation and psychological readiness for organizing distance learning and facing difficulties were formed in the process of active participation in the IT community of fellow teachers. Community members had a sense of community.

One of the difficulties of teachers, which the majority pointed out, is the lack of methodological support (ready-made teaching materials, consultations). Thanks to the joint efforts of the members of the IT community, materials have been developed that can be used by subject teachers (in particular, computer science teachers) in distance education.

The process of training teachers on the advanced training course showed that teachers can get the missing knowledge or materials by asking colleagues from the IT-community, which increased the effectiveness of training, along with project activities.

Conclusion

As the survey of teachers before and after the creation of the IT community shows, their potential for organizing distance learning has grown significantly. Participation

in meetups, discussions, in project activities contributed to the growth of confidence, their readiness to face the difficulties of distance learning, since the teacher received quick feedback from colleagues when difficulties arose.

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Білім берудегі IT-community дамыту арқылы қашықтықтан оқытудағы педагогтердің әлеуетін арттыру

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Повышение потенциала педагогов в дистанционном обучении через развитие IT-community в образовании

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Авторлар нетворкингті дамыту және IT-community білім беру жүйесін құру арқылы қашықтықтан оқытуда педагогтердің әлеуетін арттыру қажеттілігін қарастырады. мақалада «педагогтың қашықтықтан оқытуға әлеуеті», «білім берудегі it-community» ұғымдарының анықтамалары келтірілген. Зерттеу жүргізілді, оның барысында мектептердің, колледждер мен университеттердің 343 педагогы біліктілікті арттыру курстарында қашықтықтан оқыту үшін цифрлық білім беру технологияларын пайдалану бойынша оқытылды.

COVID19 пандемиясының карантиндік кезеңінде оқытуды ұйымдастыру үшін оқытушыға қажетті білімді қамтитын оқыту мазмұны сипатталған: қашықтықтан оқыту, оқыту модельдері, сандық білім беру ресурстары, оқытудағы Web 3.0 қызметтері, оқу процесін геймификациялау, бейне дәрістерді жасау, жазу және оларды жариялау, ресми және бейресми оқыту үшін ЖАОК пайдалану, вебинар қызметтері, бөлмені шолу, құру, басқа ағынды платформалар.

Зерттеуде IT-community дамуына ерекше көңіл бөлінді: педагогтар топтарда жобалық қызметті орындады, талқылаулар

мен митаптарға қатысты, соның арқасында әріптестерінен кері байланыс алды. Кіру және шығу сауалнамасы өткізілді, оның нәтижелері кәсіби IT-қоғамдастыққа белсенді қатысу арқылы педагогтердің әлеуетін дамытудың оң динамикасын көрсетті.

Кілтті сөздер: педагогтардың әлеуеті, қашықтықтан оқыту, IT-community, біліктілікті арттыру, цифрлық білім беру технологиялары.

Авторами рассматривается необходимость повышения потенциала педагогов в дистанционном обучении через развитие нетворкинга и создания образовательного IT-community. В статье приводятся определения понятий «потенциал педагога к дистанционному обучению», «IT-community в образовании». Проведено исследование, в процессе которого было обучено 343 педагога школ, колледжей и университетов по использованию цифровых образовательных технологий для дистанционного обучения на курсах повышения квалификации. Описано содержание обучения, включающее необходимые для преподавателя знания для организации обучения в период карантинного периода пандемии COVID19: дистанционное обучение, модели обучения, цифровые образовательные ресурсы, сервисы Web 3.0 в обучении, геймификация учебного процесса, создание, запись видеолекций и публикация их, использование MOOK для формального и неформального обучения, сервисы вебинаров. Обзор, создание комнаты. Другие стриминговые платформы). В исследовании особый акцент делался на развитие IT-community: педагоги выполняли проектную деятельность в группах, участвовали в обсуждениях и митапах, благодаря чему получали обратную связь от коллег. Было проведено входное и выходное анкетирование, результаты которого показали положительную динамику развития потенциала педагогов через активное участие в профессиональном IT-сообществе.

Ключевые слова: потенциал педагогов, дистанционное обучение, IT-community, повышение квалификации, цифровые образовательные технологии.

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