Distance learning expert and leader

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Abstract. The paper deals with the theoretical foundations of training experts and leaders of distance learning in order to improve their training program. An expert is a specialist who has an experience in developing distance courses, conducting distance learning classes and has and uses the skills of a content curator. Leaders create the conditions for innovative changes that allow people and organizations to share their vision and move in its direction, contribute to the management and implementation of ideas. The paper describes the basic skills to be developed by an expert and a leader, provides typical mistakes of distance course developers. Training of experts and leaders was based on the distance course "Distance Course Examination" for experienced developers of distance learning courses and administrators of distance learning systems from different organizations. During the training, students analyzed the purpose of learning according to the Bloom's taxonomy and its accessibility, the complexity of the text and its design, tasks and learning activities, test quality and evaluation system as well as other elements responsible for the quality of learning. During the pilot training, the results were obtained in the form of reports of students about the examination of the distance course as well as analysis of this work was done. 47 teachers of educational institutions of Ukraine were trained and only 12 teachers successfully completed their training. Based on the results of training and taking into account the experience of emergency training during the pandemic and military actions in Ukraine, the course program has been refined. It is planned to use a team of experts, "playing" coaches and new methods for conducting distance learning. Particular attention is paid to training experts, leaders and measuring their competencies.

Keywords: distance course · quality · examination · evaluation · expert · leader

1 Introduction

Quality of distance learning is determined by higher education institutions (HEI) in Ukraine. That is the examination of distance courses (DC) developed at a HEI or beyond it in accordance with the predefined rules (Regulations for conducting examination of the DC at the university) is needed [21]. For example, in some universities, two subject matter experts and a methodologist are involved in examination of distance courses. Such examination helps to maintain a certain level of DC and to carry out examination of mixed courses, when different types of activities are added to the distance course during face-to-face studies.

The expert-methodologist checks the quality assurance of distance learning through promotion of contacts between students and teachers, development of student cooperation, usage of active learning tools, quick feedback, effective use of time, high motivation and taking into account the abilities of students and ways of learning.

Each university creates its own standard of distance course. As a rule, distance learning is usually planned weekly. The structure of a lesson includes [8] the section title, the purpose of the lesson, keywords referring to the glossary, work schedule for a week, theoretical material, methodological instructions for task performance and the tasks themselves, a forum for discussing the educational material, additional material.

By structure, distance courses can be divided into resource-course, distance course with measured result and distance course with measured competence. In the first case, this is a theoretical material, tasks and tests placed in the environment. In the second case, all objectives of the distance course tasks are classified by Bloom taxonomy, in the third case, competencies are secured by tasks with objectives which are classified by Bloom taxonomy and their performance is fixed by competencies defined in the Moodle environment.

By assignment, distance courses are divided into three levels [34]:

1. Student activities are aimed for mastering frequently repeated tasks with predetermined answers (computer-based learning), used in almost all educational establishments and corporations.
2. A teacher interacts with students, directing their learning (artificial intelligence systems), used in corporations (in part) and universities.
3. The educational process is conducted by leading scientists in specific fields using modern communication tools, author's courses and connectivist open distance courses.

Blended learning has proven to be one of the most popular modern technologies because of its flexibility and convenience of the distance course and the advantages of the face-to-face learning [5, 24, 27, 29].

The Sloan Consortium [39] defined blended (mixed, hybrid) courses as those that "integrate online (30–70 percent of the educational process) with traditional face-to-face class activities in a planned, pedagogically valuable manner".

The National Council for Online Education of Canada [26], which includes the Online Learning Consortium (OLC), Quality Matters (QM), the University Association for Vocational and Continuing Education and WCET (WICHE Cooperative for Educational Technologies), states that emergency training does not take into account the accumulated experience of distance learning and does not meet the needs of society. Taking into account a large number of teachers involved in emergency education, there is a need to train specialists, experts and leaders in online learning.

Thus, it is necessary to generalize the methods of designing and conducting the distance learning process for training of experts, taking into account the experience of emergency training.

2 Research purpose

The aim of the study is to analyze the activities and role of the expert and leader in examination of a distance course and according to the results of the analysis to modernize the program of their training and possibilities to measure their competencies.

3 Distance course expert

Each university should have a team of experts to evaluate the quality of the developed or involved third-party distance courses (DC). The expert should have the necessary theoretical background in distance learning theory, experience in developing a distance course and conducting a distance learning process. It should be noted that theoretical learning may be different due to the fact that most universities focus on LMS technologies rather than pedagogical aspects.

The expert should have a mastery of personal knowledge [17] and he/she should monitor the activities of content curators on e-learning [22].

During the examination of the distance course, the most promising pedagogical innovations are studied, understood and developed. Examination becomes the organizer of innovative searches. If innovative learning is the object of expertise, then potential for development is the subject matter.

In the course of examination not only the study of a particular object is carried out, but also the reflection and support of the prospects of its further development is carried out. It should be noted that development is not only an innovative project in itself – participation in expert procedures serves as a powerful impetus for the professional development of all its participants.

The subject matter of the examination is the evaluation of the quality of the learning program. Criteria – the quality standard, on the basis of which an assessment is carried out, determination or classification of something, measure of assessment. The criteria are determined in accordance with the principles and objectives of the particular examination. There are different approaches to determining the examination criteria.

There are general practice requirements for academic programs (including online courses). Such requirements generally determine the levels of minimum eligibility for certain DC elements.

Expert conclusion is a document in which the nature of the objects, the criterion base and the technology must be fully disclosed.

3.1 Distance course quality

The main activity of the expert is to determine the quality of a distance course. There is no definitive idea about the quality of learning.

General practical requirements are usually formulated for academic programs in the sphere of higher education (including online courses). Such requirements generally determine the levels of minimum eligibility for certain dimensions (for example, educational instruction, institutional context, evaluation and analysis, etc.) of institutional proposals.

The formulation of similar quality standards at the course level is difficult for at least three reasons [1]. First, there is not any authoritative body that can (or wants) to determine minimum levels of eligibility for learning in all its manifestations within a variety of approaches. Thus, there are no universal standards for course quality. Second, if such standards exist, it is difficult to create an assessment tool that can be used successively for all courses, programs. Third, if such a tool was available, it would take a long time to evaluate an individual course.

The origin of standards affects their credibility. For example, the most course standards are written by small groups of individuals with personal teaching/learning experience. Such standards are often accepted by the community without analysis and criticism and become axioms.

Almost all sets of course standards carry the imprint of instructional design (for example, learning goals, constructivist influence, dominant technologies, etc.) and frequently exclude the experience of teachers and students.

In addition to institutional efforts for promoting quality in the courses, perhaps the best use of quality standards is the self-assessment of individual teachers and the informal peer review of teaching effectiveness.

3.2 Learning effectiveness

Development of successful learning requires institutional obligations with the involvement of senior executives, deans, department heads, faculty and support staff.

Learning effectiveness is the faculty's ability to influence students' success and is determined by several factors, such as how well the teachers organize the courses, know the course material, communicate clearly with the students, how often they provide timely feedback, and other criteria. In the classroom, learning effectiveness sometimes depends on the enthusiasm of the teacher. During online and blended learning courses, students need more support to succeed, as their activities require them to take responsibility for their own learning success.

Providing students with guidance and advice before beginning their studies, feedback during the course, and final feedback at the end of the course can significantly improve the learning effectiveness.

For the first experience of teaching an online course, it is advisable to choose one or two strategies based on learning goals.

Writing personal goals for learning a teacher is an other practice. Creating an online teaching journal allows you to keep track of thoughts and actions over a long period of time, including personal learning goals among the first entries will help much for a good start.

3.3 Pedagogical designing

The expert's first evaluation is the level of pedagogical design, the process of creating a new object to meet the needs of a personality. The purpose of design is to initiate changes in the human artificial environment.

Traditionally pedagogical design is based on ADDIE [8]: analyzing the needs of the organization; designing the system for the needs of the organization; developing the system using the analysis of initial data; implementing the system processes; evaluating the project creation and execution.

Rapid eLearning [38] is the best way to achieve scalability and speed of high quality design and development of e-learning. Many development tools offer templates and resources that simplify e-learning development.

Fast e-learning follows the basics of educational design, while avoiding unnecessary redundancies. It's a quick solution for training programs that need to be deployed quickly, such as informing employees about policy changes or product updates.

Factors that make rapid e-learning successful [9]:

- Availability of content;
- Flexible project management processes;
- Rapid development tools are easy to use and customize templates as well as do not require programming skills.
- Standardization of fast e-learning saves time by reusing items such as screen layouts and global instructions.

The experience of learning the course developers points to the psychological barriers of teachers. It is difficult for them to understand that the teacher is not the main person in the educational process, learning is not the process of knowledge transfer, the distance course is not a synopsis of lectures and practical tasks posted on the network. It is especially difficult to develop a distance course in the absence of a standard.

The expert should pay attention to the fact that the distance course is a comfortable environment for the student and the teacher to organize the educational process, the teacher's face, his/her attitude to the student, and the student is the main person of learning. A successful distance course has a week-long format and the result is important in learning, not discipline logic and process.

3.4 Learning theories

The emergence of new social services affects the development of education and, in particular, distance learning. Psychological and pedagogical approaches to learning are revised, especially if they relate to corporate learning. Designing educational materials for distance learning includes approaches of the theories of behaviorism, cognitivism, constructivism [8]. Behaviorism strategies can be used to study facts ("what"), cognitive theory – to study processes and rules ("how"), and constructivism strategies – to answer the question "why" (a high level of thinking that provides personal understanding and learning, depending on the situation and context). Formal, non-formal, informal and social learning were also not ignored.

Consideration of types of specialist's work allows to determine the correlation of formal and non-formal learning [12]. When performing routine work, the proportion of non-formal learning is minimal and increases to types of activities that require variational (creative) tasks.

Currently, there is a rise in non-formal learning [41], which is associated with the rapid development of e-learning, the forerunner of non-formal learning, increased innovation in business, and increased productivity. Non-formal learning, which can be monitored and measured, ensures the profitability of knowledge transfer, competence, promotes rising the organizational efficiency.

The emergence of social services and the development of learning theories presents that the combination of formal and non-formal learning makes the learning process more successful [35]. Herewith it is necessary to prognosticate a non-formal workplace learning.

Social learning is based on A. Bandura's social learning theory [33] and includes observation, behavior modeling, attitude and emotional response. Elements of learning include attention, consolidation, active self-reproduction, motivation and characteristics of the observer, which includes autonomy, independence, self-organization, self-government and self-control [13].

Numerous studies show that social learning [18] is carried out at workplace – 70 percent, in communication with colleagues and leaders – 20 percent and in the process of studying courses and books – 10 percent. For realization of this principle a support of the workplace learning process, the improvement of employee learning skills and the creation of a supportive organizational culture are needed.

Workplace learning is facilitated by the application of new knowledge and skills in real-life situations, the allocation of new jobs within the existing role, increasing the range of responsibilities and areas of control, tasks aimed at new initiatives, small group work, the ability to carry out research and expertise.

Learning in communication with colleagues is facilitated by feedback on new approaches to the old problem, participation in formal and non-formal mentoring, encouragement to participate in discussions, expressing opinions, teamwork, and building a learning culture.

Besides the above mentioned pedagogical theories and approaches, the expert should be able to use other pedagogical theories and techniques, for example, collectivism which is connected with network education.

3.5 Course goal setting

The most difficult thing for teachers, especially beginners, is to determine the purpose of tasks and the course.

The purpose of learning is the behavior, knowledge, skills, and the skills that a student must demonstrate in order to be called "competent", a description of expected learning outcomes, not the learning process itself.

The purpose of learning has three components: fulfillment (What can a student do?), condition (Under what conditions will he/she be able to do it?), criteria (How well can he/she do it?).

A fundamental, classic concept of taxonomy for educational purposes was developed by a group of American psychologists and educators led by Bloom [6] in the early 1950's.

Bloom's taxonomy is based on the following four principles:

1. Principle of practical orientation: taxonomy should reflect goal setting theory and be an effective tool for a practitioner.
2. Psychological principle: taxonomy should be based on the modern achievements of psychological science.
3. Logical principle: the taxonomy must be logically completed and have an inner harmony.
4. The principle of objectivity: a hierarchy of goals does not mean a hierarchy of their values.

Although Bloom's taxonomy was developed a long time ago, it still remains one of the most popular systematization of educational goals among scholars and practitioners. It is the most comprehensive and covers different areas of students' educational activities: cognitive domain (requirements for mastering the content of the subject), affective domain (emotion and value area, attitude to the investigated subject), psycho-motor domain (development of motions and neuro-muscular activities).

Systematization of educational goals in the cognitive sphere has the following levels: knowledge; comprehension; application; analysis; synthesis; evaluation.

Anderson et al. [3] proposed a modified Bloom's taxonomy, adding another dimension to knowledge types: factual, conceptual, procedural, and meta-cognitive. Earlier, they renamed the hierarchy of levels from nouns to verbs. They also reversed the positions of the two highest levels.

Bloom's modified taxonomy takes into account the role of the teacher and student, assesses the level of questions and test tasks and has the following levels:

1. Remembering.
2. Understanding.
3. Application.

4. Analysis.
5. Evaluation.
6. Creation.

Factual, conceptual, procedural and meta-cognitive knowledge in the taxonomy can be represented by means of the measurement matrix of activity quality [16], where horizontally are demonstrated: remembering – understanding – application – analysis – evaluation – creation, and vertically – knowledge: fact-based – conceptual – procedural – meta-cognition (ability to cognitive activity).

And the last thing that is very important for learning is the ability to evaluate reflection by Bloom's taxonomy [30], that is, by describing a student's reflection we can indicate what level of Bloom's taxonomy our student has achieved and what leadership qualities he or she has formed.

Table 1. Bloom taxonomy levels based on reflection results.

Bloom's taxonomy levels	General reflection	Student reflection
Remembering	What did I do?	What was the task? How was it done? Did I perform on time?
Understanding	What was important about what I did? Did I achieve my goals?	Do I correctly understand the parts of the task and how they are related? And does my answer completely cover all parts of the task? Where does this fit into what we are studying?
Application	When did I do this before? Where can I use this again?	How was this task similar to other tasks? Are there any ways to adapt it to other tasks? Where can I use it (content, product or process) in my life?
Analyzing	How do I see the forms and relationships in what I have done?	Were there any strategies, skills and procedures that I used effectively in this task? What patterns do I see in my approach to work? What approaches were used – were they effective?
Evaluation	How well did I do? What happened? What do you need to improve?	Is what we are studying important? Have I done effective work and told others? What have I learned about my strengths and weaknesses? How do I develop as a student?
Creation	What should I do next? What is my plan?	How can I better use my strengths to improve the outcome? What steps do I need to take or use the resources to meet my problems? What suggestions do I have to improve my learning environment?

Many teachers, when creating their first distance course, in most cases declare their purpose, but not the student's goal. They do not always declare tasks for the goal of the distance course or there is no correlation of the level of purpose and the task according to Bloom. It is even more difficult to implement the chain: "competency–purpose–task", that is, to define activities that characterize

competence, to determine the level of assimilation by Bloom's taxonomy and to go to the educational task. Frequently, the usual task is defined as problematic or situational. In most cases, this is due to a low level of pedagogical learning.

The expert should pay particular attention to the analysis of the purpose for each task, its understandability and approachability for a student. Questions for theoretical material should be consistent with all levels of Bloom's taxonomy and should be placed in the educational text as an element of reflection. The quality of the distance course and the maximum student grade for the course are determined by the level of tasks by Bloom's taxonomy.

3.6 Course information block

In the organization of learning materials, attention should be paid to examples, concepts of relationships, rules and procedures regarding [8]:

1. *Content correctness.* Not only students, but also experts (content experts) may sometimes not notice errors or inconsistencies.
2. *Completeness of content.* It means not only the presence of all the necessary elements in the course, but also a sufficient level of methodological explanations that take into account the student's knowledge and skills.
3. *Functionality.* It is considered according to the interrelationships between the individual topics within the course and the subjects within the syllabus.
4. *Content consistency and coherence.* The sequence of definitions, concepts, procedures and content coherence must be taken into account.
5. *Volume of content.* Volume is one of the significant factors of learning load. In the case of distance courses where external control is limited, the amount of material has an impact on the time required to complete the tasks and ensure student motivation.

3.7 Adapting learning information

The content structure includes the following elements: basic positions and concepts; known methods of action; new concepts, patterns and modes of action; psychological analysis of the content in order to identify possible and appropriate problem situations. Requirements for text design [8]:

1. Compliance with learning goals and objectives.
2. Compliance with the learning styles of the used text tools: alternative, flexibility, mobility, proof, clearness.
3. The semantic completeness of a certain block of text.
4. Structure of blocks of text.
5. Activity and interactivity.
6. Style of language organization (internal dialogue, author's discussion and reasoning, open questions, attempts to create an algorithm of information processing using a number of keywords, etc.).
7. Means to ensure the interest and content of the content (historical information, interesting messages, experience, etc.).

8. Schemes of individual blocks of text and defining relationships.

The logical structure of an educational material is a model that reveals a system of relationships between the logical elements of this material [36].

When the elements of the whole are not simply united mechanically and not simply connected, but interconnected in such a way that they mutually affect each other, and this influence is quite significant, it makes sense to say that the elements of the system form a structure. Thus, structure is a way of stable communication, elements mutual influence of such holistic systems.

Structures are global (training programs) and local. Local structures, unfortunately, remain out of the attention of teachers, and it depends on them the availability and degree of perception of educational material.

Any part of the educational material, any explanation, reasoning, solution of the cognitive task (in the broad sense) is characterized by a certain logical structure. This logical structure depends primarily on the following factors [8]:

- which concepts and judgments are used to conclude one or another regularity for justification (which has not necessarily to be strictly logical) of a given or another position, and
- which connections and relationships between these concepts and judgments are established or revealed in the process of consideration (reasoning, justification, decision).

The number of different ways of structuring (constructing) educational material is unlimited. But there can be no questions about experimental verification of teaching methods.

Variants of educational materials presentation by means of different structures should be interpreted as a transition from one "language" to another. During the transition, we initially seem to expose the idea in order to "dress" it in completely new means of external expression. Separating a thought in its purest form is nothing more than a logical analysis of a new version of content. In addition, "non-linguistic" information is always involved in the learning process, which is not directly present in the text, but depends on the student's experience, and thus the logical structure of the educational material becomes an important communicative characteristic of the latter.

The excessive information in education, that is, all information given more than the minimum necessary for understanding (repetition, communication of the same information in a new form – meaningful synonymy), is determined not only by fluctuations in attention and imperfect memory of students, but also by the urgent need to find with the help of information recoding such a form of communication that would respond to the peculiarities of students' thinking.

The problem of educational material accessibility is, in fact, a problem of communicativeness of educational material, its possible transcoding.

A variable approach to learning situations is needed to make the most effective use of each listener's basic vocabulary (semantic space). Educational information as a semantic invariant of the learning process is the internal meaning

of the learning situation. In this regard, a content structure is defined that influences the structure of the learning method. At the same time, the procedural aspect of educational activity is of great importance.

The structure of each stage of the learning process should be considered at three levels: didactic, logical and psychological as well as methodical.

The didactic structure is based on the need to update the acquired knowledge (creation of information space for perception of the educational topic related to the dissemination of existing basic vocabulary or explanatory thesaurus); tools for generating new knowledge (direction of search, technology tools), new skills (forms of multilevel activity).

The methodical structure is a form of support and maintenance of the learning system functioning, so it consists of exercises, explanations, cognitive tasks, as well as students' self-completion of tasks of different levels of difficulty with comments.

These two structures are linked to each other, as well as to the goals of the learning process, by an internal logical and psychological structure that is intended to provide information perception and its awareness in the first stage. Then, by means of comparison, analogies, explanations, problematic dialogue, understanding and comprehension, as well as generalization and creation of the system are formed.

When designing an organizational structure to study a particular topic, the teacher should predict:

- regularities of the learning activity process and its logic;
- regularities of the process of assimilation of new knowledge as subjective value and pledge of personal activity;
- regularities of independent cognitive activity;
- types of possible joint activities of the teacher and the student as subjects of the learning process.

A distance course includes such standard elements:

- Biography of teachers.
- Preface to the course.
- Detailed course description.
- Terms and definitions.
- Course policy page.
- Copyright page.
- Weekly activity goal.
- Contact page.

One of the most active means of influencing the perception of information are illustrations that connect figurative thinking. These illustrations have different functions:

1. Decorative for preventing monotony of information.
2. Entertaining (cartoon).

3. Expressive for conveying emotions and feelings.
4. Decisive. Not only for expressing emotions but also for persuading, changing point of view.
5. Descriptive for conveying the necessary concepts that cannot always be expressed in words.
6. Explanatory. Illustrations can show how objects work or how they are used.
7. Simplistic. A simplified version of reality that makes it more accessible to perception:
8. Calculated (graphs, histograms, etc.) for comparison of sizes, data.
9. Setting. Tasks setting.

3.8 Student's activity in the course

One of the main tasks of the teacher is the organization of the educational process through communication and cooperation. Communication by Parygin [31] is a purposeful rationally designed, information exchange between individuals that performs social, social and psychological as well as individual and psychological functions [8].

Social communication functions are information sharing for collaboration; transfer of knowledge, experience, ways of action; assessment of human activity; formation of behavior norms.

Social and psychological functions of communication are communicative self-expression, self-realization; knowing each other's people; formation and development of interpersonal relationships.

The individual and psychological functions of communication are the formation of consciousness; support of normal activity of consciousness; maintaining emotional equilibrium and working capacity.

Any communication in distance learning is known to cover five steps: access and motivation, socialization (messaging, cultural and social environment learning), information sharing, constructing knowledge and development. At each step the teacher performs an appropriate role and the success of communication in the group depends on his/her activity.

There are different methods of communication: reading and answering, debates ("for", "against"), conference, discussion of ideas, open forum, master class and others. For example, an open forum starts with a moderator's letter with an overview and statement of the problem, discussion, interim conclusions, discussion and final conclusions.

Discussion moderator (teacher or student) performs pedagogical, social and technical roles.

Recently forgotten chat plays the main role in distance learning as a control of the quality of mastering knowledge, development of creative component of thinking; general (final) control of knowledge; brain storm.

Chat requires serious preparation for developing a chat scenario, which includes brief information about the topic, a list of questions to listeners on the topic, activities for the formation of cognitive operations and the ability to ask questions, etc.

Distance learning necessarily involves collaborative learning, which is a model of using small groups of students in real or virtual class, where the learning tasks are structured in such a way that all team members are interconnected and interdependent, while being quite independent in mastering the material and solving problems.

There are mini-small groups – 3 people, small groups – 3–5 people, maximum small group 12–16 people.

The basic elements of group activity are: positive interdependence, personal responsibility, personal interaction (face to face), social skills, group processing of results.

Emotional types of cooperation are distinguished in relation to process and results, expression of evaluations and personal thought, and cognitive – creation of an atmosphere of creative search and evaluation of information, display of intelligence and horizon.

The principles of cooperation are trust, belief in his/her capabilities and partner's ones, the right to have his/her own opinion and doubts about the correctness of his/her actions and partner's ones, voluntary exchange of thoughts, efforts, information, common sole purpose, sources of information, single result and form of encouragement.

Teacher should monitor in teams: communication and participation, decision making, conflicts, leadership, goals and roles, norms of collective life, moral climate, individual behavior.

3.9 Evaluation, rating

Evaluation is a classification, attribution of an object to one of the classes, based on the values of the set of indicators and the established criterion.

In a distance course there are evaluated: academic achievements, student and tutor performance, learning performance, program quality, and course quality.

Algorithms for calculating a student's assessment should be open, configured for communication, and accessible to a student.

A teacher should determine how he will evaluate the quality of the completed operations, the timing of the completion, the student's self-assessment, the final test, assign weight to the evaluation of operations.

Rating is an evaluation system where the total number of points on a topic is determined depending on the importance of the topic in comparison with others and consists of mandatory (independent and course works, problem solving, etc.) and additional points (promotion of students in performing creative tasks, timely completion of teaching and control tasks, active participation in practical and seminar classes, etc.).

It is impossible to make an assessment that meets all needs at the same time. An approximate estimate is often quite effective, but accurate one is almost unattainable.

3.10 Motivation

Motivation is a set of persistent motives, promptings that determine the content, orientation and nature of an individual's activity, his/her behavior. Motivation depends on the needs of the person, which can be defined by Maslow [25] from simple to higher: physiological ones, security, love, belonging to something, respect, cognition, aesthetic ones and self-actualization.

There are distinguished external and internal motivations, but the latter is stronger. Intrinsic motivation is comfort, purpose, presence of an example, principle, condition, motivation for the future, social relations, level of education.

Heckhausen and Heckhausen [15] are stated that the prompting to action is motivation, the motive remains effective only for achieving the goal as "individual – environment", motivation consists of different processes, activity is motivated, but it is not necessarily motivation. The number of motives depends on the relationship "individual – environment". Motives are stable relationships of individual development. People differ in the strength and nature of motives. Behavior is motivated by a high motive that provides achieving the goal. To arm someone with motives that he did not have before. To "catch" someone by his/her motives and to provide an opportunity for their realization. To instill ways of behaving that are of subjective importance, to inspire, to stimulate.

Motivation is usually an external one based on strategies of coercion, luring, "seduction", "vision" (vision for division).

The tools of motivation may be (by Sprenger [37]) a gingerbread (something nice, attractive), a whip (something that should be avoided), law (some established norms, rules, standards in the activity), expert opinion (an expression of an authoritative personality), emotions (influence on emotions, both positive and negative).

Motivation in distance learning is the creation of a comfortable learning environment (areas of immediate development) that has all the conditions for the learning activities of the target audience.

3.11 Social services

Cloud computing (Software as a Service or SaaS) is the execution of programs hosted on external servers [23]. Now their use is becoming a very popular in educational practice [28, 40].

Among the best software products [14] that can be used in the learning process were video chat platforms, because many organizations tried to support distance work and learning during quarantine: Zoom (the 2nd place in Top 150 Tools for Education (ED150)) and Teams (the 4th place in ED150); Kahoot live interaction tools (the 18th place in ED150) and Mentimeter (the 29th place in ED150) for providing interactive functionality to meeting tools; Google Docs and others.

The blogosphere promotes openness, it is a space for discussion, information exchange and communication with each other. A teacher blog [42] is a critical analysis of recent publications, views on some issues, reflections. In the future,

information can be transformed into reports at conferences, articles, classes for students. They can be seen by students, work colleagues. Writing such blogs makes you to read other researchers' blogs.

A qualitative distance learning process necessarily involves asynchronous (mail, forum) communication and synchronous one (chat, Skype). Since 2009, a new webinar communication tool has been actively distributed. Webinar (web + seminar = webinar) is a group work on the Internet using modern video, flash and chat communication tools.

Webinars can be used for delivering feedback lectures; thematic seminars; defending the work performed; group work, conducting surveys; demonstration of computer work; trainings.

Cloud computing tools allow a student to form a personal learning environment (PLE), a term that appeared several years ago in Western literature related to the practical application of e-learning 2.0 [32].

The minimum composition of the personal learning environment, according to the points of view of Western colleagues, should include Twitter, blog, netvibes, RSS reader, DIIGO, Wiki. PLE is not only a comfortable environment for different types of activity, but also a means of creating a personal learning network, a network where we can interact not only with our colleagues, such as members of a community or mailing list, but also with their partners in a collaborative activity. This significantly broadens our circle of communication, allows us to receive much more professional information.

The choice of tools for PLE is purely personal, depending on the author's goals. But if the PLE is more varied then students have more learning opportunities. Therefore, it is recommended to develop PLE constantly taking into account new social services capabilities that are becoming easier to use. This contributes to the development of PLE participants in the educational process and the achievement of their own goals.

4 Results

On the basis of the considered material, a distance learning program "Distance Learning Examination" was created for the system of professional development of teachers, which proceeds six weeks (108 hours):

1. Distance course expert.
2. Distance course quality.
3. Project analysis. Goal setting in the course.
4. Course information block.
5. Student activity in the course, evaluation, rating.
6. Motivation. Social Services. Conclusions.

47 teachers enrolled in the open distance course, 37 teachers worked in the course, and 12 teachers fully completed the course program.

At the beginning of the course, learners were offered a questionnaire that demonstrated their experience in developing a distance course and conducting a

distance learning process. The questionnaire was answered by 26 learners who studied in distance courses of the Research Laboratory of Distance Learning.

But, unfortunately, the answers to the questions were not of the highest standard. Not all learners were familiar with Bloom's taxonomy and did not use pedagogical theories in their teaching practice. Not all of them use a system approach in designing courses and educational materials.

In the first stage, the learners identified the requirements for the distance course expert, drew up an examination plan and a list of quality criteria for the distance course, developed a system for evaluating a distance course.

Each learner had to choose a distance course for their tutor examination or to offer their own ones. All practical activity of the learners in the course was related to the evaluation of the various components of the course. Namely, to evaluate the main components of the distance course as the requirements of the technical task were taken into account.

During the learning, the learners compared the methods of pedagogical design (ADDIE, Agile, SAM), conducted an analysis of the target audience of the selected distance course, the purpose of Bloom's taxonomy for every week and its approachability, conducted a general analysis of the information (suitability to the purpose and tasks, redundancy, ease of use). They analyzed the complexity of the text, its design, connection with the graphic material, the quality of the graphics. The tasks, discussions and other activities on diversity, usefulness, etc., tests, evaluation system, availability of rating were analyzed. At the end of the course, learners prepared an expert opinion of the course and made a self-assessment of their activity in the course.

4.1 Development of an expert training program

After the completion of the distance course "Distance Learning Examination" [20], great changes took place. During the two-year quarantine, all universities began to use distance and blended learning. Almost without interruption, they continued to use distance learning during the war, when teachers and students are in different parts of the country and abroad. About 90 percent of teachers who did not have distance learning courses and experience in conducting distance learning joined the distance learning specialists of different universities. As a result, the level of distance learning, known as "emergency distance learning", has fallen and it is in line with the achievements of 2000.

All this requires a review of the developed program, methods of conducting classes, the inclusion of new areas of training related to the development of e-learning, the formation of leadership skills by teachers, the development of dual learning.

A McKinsey survey [43] conducted in July 2020 found that the pandemic accelerated the overall adoption of digital technologies by three to seven years in just a few months.

Accents began to change. At the pre-COVID stage, professionalism in the educational system was replaced by an endless search for "efficiency", the concept of efficiency acquired an economic connotation. Economic efficiency is usually

measured as the optimal combination of costs, which leads to the maximum output at the lowest possible cost [7].

Using the innovative online tools and platforms, educational institutions can reduce the cost of rethinking the education system by expanding accessibility and reducing costs in all areas. Society is moving to scale learning.

The integration of distance learning into the existing learning system, which can be called an electronic or digital learning system before the appearance of the established term, is becoming important. To form such a system, each university must create an e-learning planning and development team, which should include qualified teachers and distance learning professionals. The purpose of the team is to form an e-learning system and identify priority areas for training personnel and gaining a competitive advantage. This approach will help in avoiding the chaotic use of technologies that is taking place today.

The current e-learning system allows to develop an e-learning strategy, which should include methods for designing and deploying solutions, change management, communication planning, job support solutions, knowledge and technology management. One of the directions of the strategy should be dual education on the basis of an educational program, which is a joint activity of the university and the enterprise.

The main task of the educational program is to obtain the learning outcomes defined by the standard and to form the preset competencies for the students.

Instead of testing how knowledgeable a person is in a particular field, competence-based learning focuses on how each person performs the necessary actions in the workplace, which allows them to be recognized as competent.

LMS Moodle has a built-in tool for creation a repository of competencies for various educational programs. Definition of competency indicators allows the group and individual students to develop a curriculum. All indicators are confirmed by a certain list of practical tasks of distance learning courses performed by students. Each task has one or another complexity, which is determined by Bloom's taxonomy. This allows not only to determine the formation of competencies, but also their level.

All over the world much attention has been paid to leadership in distance learning [4], which is considered as a set of approaches and behavior models that create conditions for innovative changes that allow people and organizations to share their vision and move in this direction, helps to manage and implement ideas.

Digital leadership [11] is to enable others to lead and create teams, to optimize their daily activities. The role of digital leaders will play a significant role as they will need to manage, design and develop systems that create an inclusive future for all. Leadership focuses on the present, as well as visualizes the future and creates a roadmap for its achieving.

Organizations need to train leaders at all levels by developing participation and accountability. They need to learn from people who work in the field, participate and trust them. Each team member should be encouraged to contribute

ideas and knowledge to achieve common goals. Leaders will need to create and show the way forward in conditions of transition, failure, chaos and uncertainty.

The leader of the university determines [4] the goal of e-learning development, that is strategic planning, teaching and learning. The leader works with university teachers and ensures cooperation and collegiality, defines values, behavior and culture, influences the formation of interpersonal communication, organizes teacher training and their professional development.

The development of e-learning and teacher training requires new types of leaders who will track changes, analyze them, select the most promising, prepare training courses and new leaders for changes in e-learning systems of the organization. They must have the skills of personal knowledge (to be curators of content).

How to train such leaders? "Leadership cannot be taught. This can only be learned" [10]. There should be a selection of specialist educators who are educators, curators of content, have information technology training (possibly educational engineers – a new specialty in education [19]. In addition, there should be a system of training for top leaders. Leaders should have high competencies that are not fully defined.

Training of distance learning leaders and experts should be systematic, starting with the training of the content curator (ability to navigate and process professional information flows), followed by the development of a distance course using pedagogical design, acquiring tutor skills and completing distance learning examination, taking into account development of the world distance learning system.

Leaders and experts of distance learning at higher educational institutions are responsible for the creation and maintenance of the e-learning system in the institutions. Only their preparation can provide full and meaningful competitions for distance learning courses and gaining experience in organizing quality education.

All these aspects should be taken into account in the course "Distance Course Examination" [20]. Given the large list of tasks, it is necessary to form a team of experts who will be responsible for certain areas.

There should be a group of experts who will be responsible for measuring the formed competencies of the course participants. The ISTE standard [2] is chosen as the basis and the team needs to determine for each competence the activity that confirms the acquisition of competence at the appropriate level according to Bloom's taxonomy. The results of the work are placed in the Moodle competency framework and relevant curricula. During the educational process, this team monitors the acquisition of a particular competence in the curriculum, the appointment of badges for significant achievements of students.

Another team of experienced experts will act as "playing" trainers to support the learning process. The distance course will be open, so course participants will have different levels of training. The team of trainers will help beginners to master the training material and perform tasks, form groups and identify leaders in them.

1. To demonstrate their experience, course participants must present their distance learning courses using the Learning Tools Interoperability (LTI) protocol.
2. At the beginning of the course it is planned to conduct testing for determining the level of participants' knowledge. All participants will be divided into two groups: beginners and experienced distance learning professionals. In addition, newcomers are planned to form cohorts and help to define their goals.
3. During the training, participants will determine the criteria for assessing the quality of the distance course and conduct an examination of the course of their colleagues on these criteria.
4. Much attention will be paid to forming a team of leaders who will perform their functions at various levels from department to university. This will provide an opportunity to form communities of practice in different areas.
5. Webinars for Moodle listeners, experts and leaders, administrators are provided each week.
6. To increase the effectiveness of communication in the course there is a forum "question-answer" and a reflection questionnaire.

5 Conclusions

The paper presents the theoretical foundations and methods of forming the necessary skills of experts-leaders of distance learning courses. The results of open distance course learning showed that not all teachers who enrolled in the course have the necessary basic theoretical and practical training for the examination of the course.

The training of expert-leaders has been modernized taking into account the development of emergency training as a result of the epidemic and martial law. The training process in the open distance course will be conducted by a team of experts who will monitor the formation of competencies and perform the role of "playing" coaches. In the future, when recruiting participants, it is necessary to use the entrance questionnaire and motivation letter of the participant. This approach will promote the development of distance and blended learning methods, improving their quality.

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