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***The Erasmus+KA2 project DEFEP
Distance Education for Future:
best EU practices in response to the requests of modern higher
education seekers and labor market***

REPORT

**on the results of sociological survey of
stakeholders' requests for distance education
(students, academics and teaching staff, HEI
management, employers)**

Moldova

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Section I. Students about distance education

1.1. General information about the sample of students

The questionnaire was applied in order to determine the needs of students interested in distance learning and 440 responses were received. Most of the responses were given by females 79%, males 21% (Fig. 1.1).

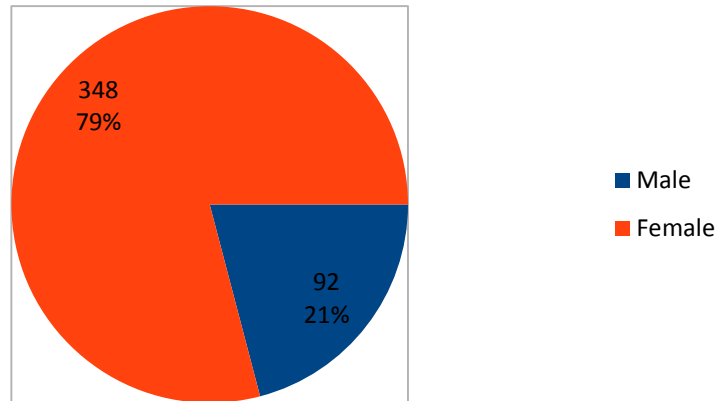


Fig. 1.1 *Distribution of respondents by gender*

The analysis of the distribution of respondents according to the cycle of studies shows a higher participation of the first cycle quota (87% of respondents), of which 33% are studying in the second year and 25% in the first year. Cycle II students participate with a share of 9%, with a higher participation of year I students of 7%. Cycle III students participate with a share of 4% (Fig. 1.2).

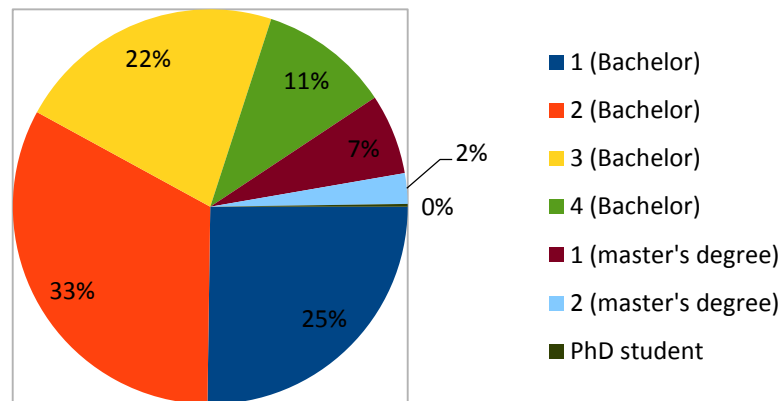


Fig. 1.2 *Distribution of respondents by cycles and years of study*

The breakdown of respondents by field of study reflects a more representative participation of students from Law (34%), followed by Economics and Management with 25% and Social Sciences and Humanities with 17%. The share of participants from the other fields of study varies between 5% Technical and Mathematical Sciences and 0.2% Physical Sciences (Fig. 1.3).

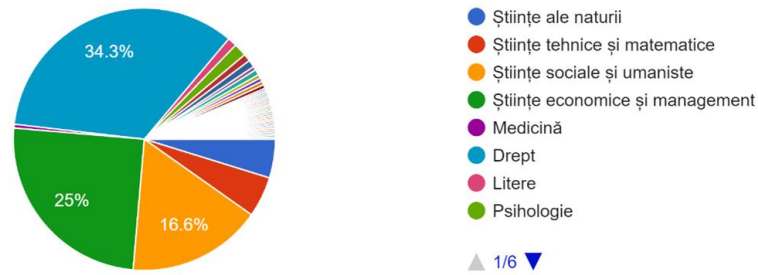


Fig. 1.3 *Distribution of respondents by field of study*

The analysis of the employment and social status of the respondents shows that 49% of them combine studies with a permanent job and 25% have a situation other than those mentioned in the questionnaire. The smallest share belongs to respondents with special needs (0.5%) (Fig. 1.4).

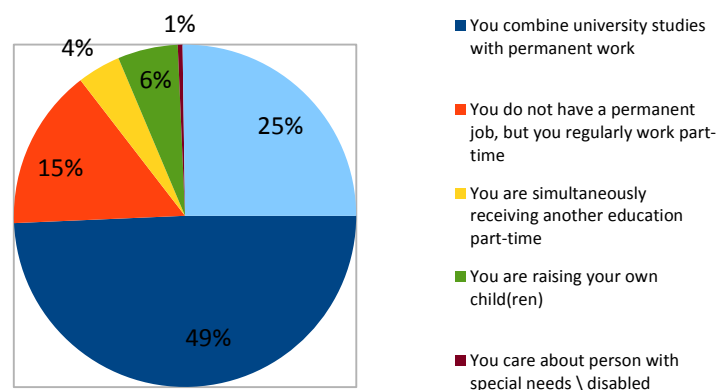


Fig. 1.4 *Employment status and social status*

The breakdown of respondents by faculty reflects the same field-specific trends. Thus, 34% of respondents belong to the field of Law, 26% - to the field of Economics, 16% - to Psychology, Education Sciences, Sociology and Social Work. The smallest representation is in History and Philosophy with 0.5% (Fig. 1.5).

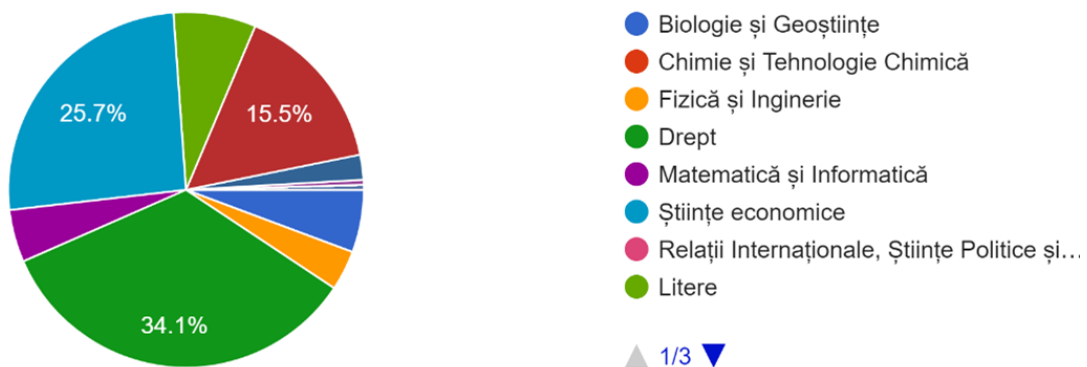


Fig. 1.5 *Distribution of respondents by faculties*

Of the statements mentioned by students as the first thing that comes to mind when hearing the term "distance education", most students mention the convenience, flexibility and comfort offered by this form of learning. At the same time, in some cases respondents mention fears about the likelihood of a drop in the quality of teaching/learning.

1.2. Students about access to distance education

Assessing access to internet sources, 66% of respondents mentioned access to fixed internet with relatively high speed (WiFi, cable), 26% mentioned the possibility to connect to mobile internet despite the lack of fixed internet network and only 8% said they lacked the opportunity to connect to the internet (Fig. 1.6).

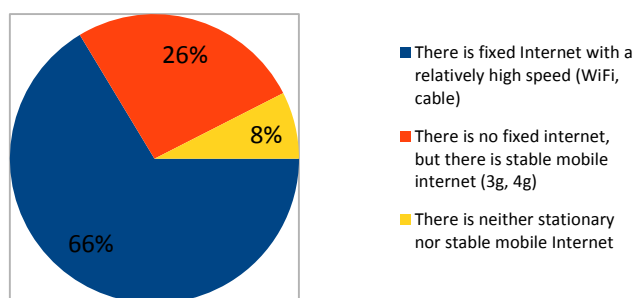


Fig. 1.6 Assessment of the quality of the internet in the place of study

Regarding the devices that can ensure participation in online courses, it is worth mentioning the provision of several devices that allow connection to the classes, thus 427 respondents have a smart phone, 405 a laptop, 151 have a stationary computer and 91 a tablet. (Fig. 1.7)

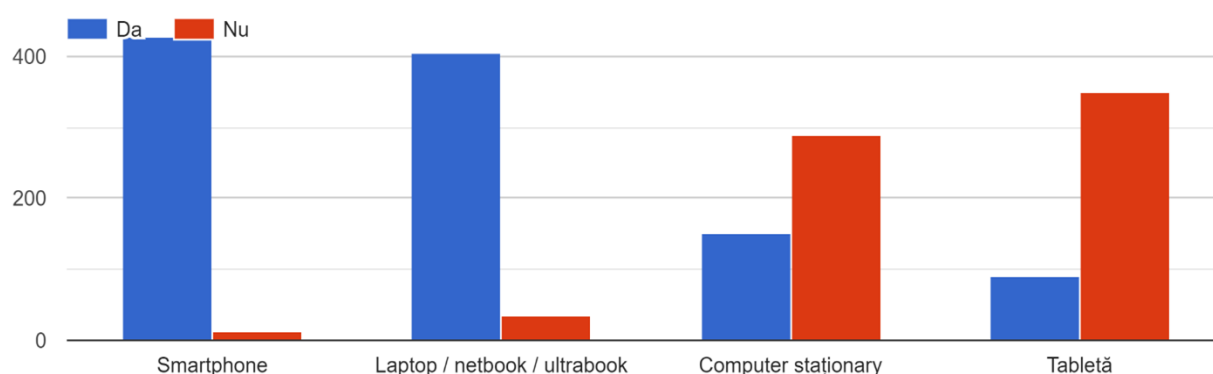


Fig. 1.7 Devices ensuring participation in online courses

1.3. Students' assessment of platforms and communications

The most convenient means of communication for students is email (selected by 341 students), followed by distance learning platforms selected by 295 students. Similarly, a good proportion of students (270) opted for the Telegram channel and 248 students for Viber. WhatsApp is likewise a means of communication selected by 188 students. From the survey responses it appears that 100% of students know how to use email. 5 students out of the total number of 440 do not know how to use distance learning platforms. The most complicated means of communication that students do not know is the WhatsApp channel, followed by Telegram and then Viber. (Fig. 1.8).

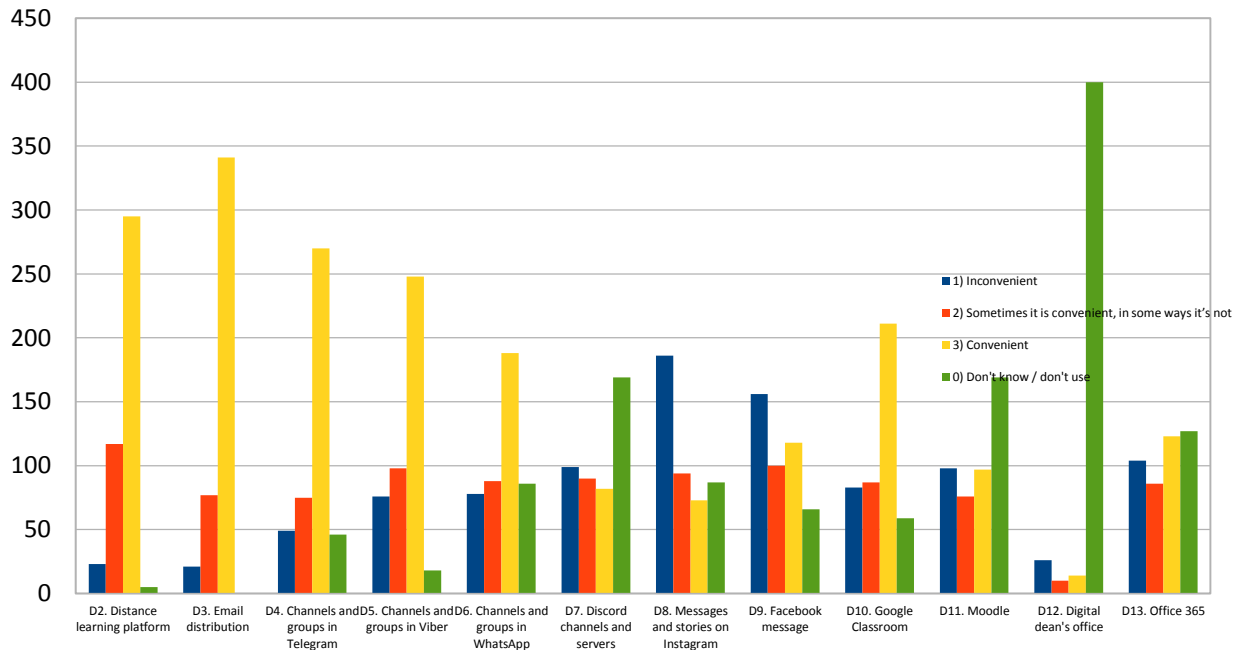


Fig. 1.8 Convenient means of communication for organising distance learning

1.4. Students about the formats of work

Regarding the forms of delivery considered most effective for distance learning, respondents' opinions are divided, while the majority of respondents accept all forms of delivery. The possibility to expose themselves to a larger number of teaching forms led to the following arrangement: 90% of the respondents advocate online lectures with PPT presentation, 59% opt for Moodle distance learning course, and 55% for working with textbooks, guides reflecting the topic taught. Not accepted is the classic lecture, thus only 8% opt for the lecture without PPT. Therefore, lectures with the use of PPT offer a greater opportunity to understand the topic taught and are more attractive to students. (Fig. 1.9).

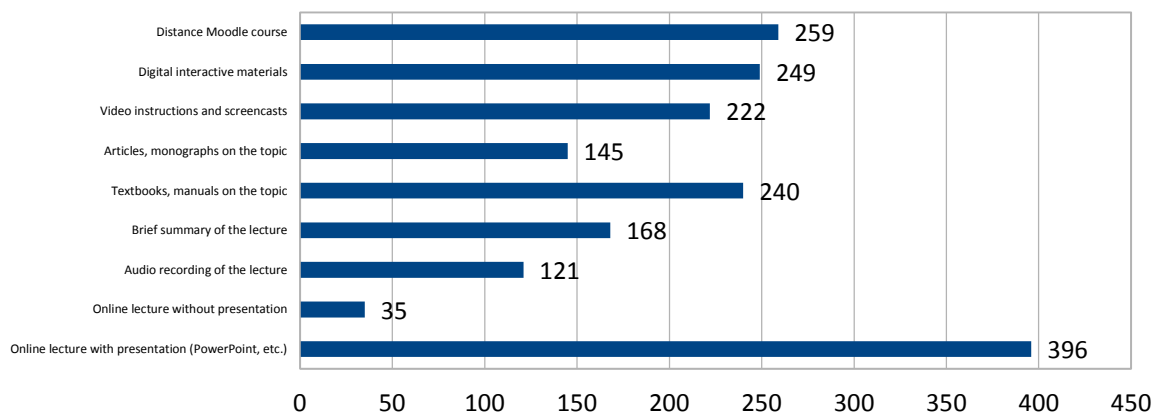


Fig. 1.9 Forms of teaching considered effective for distance learning

1.5. Students about the workload during distance education

Taking into account course attendance, completion of assignments, etc. 29.8% (131) of students consider that they spend 10 to 20 hours per week on distance learning. 21.6% (95) of students say that distance learning occupies 20 to 30 hours per week. 8.6% (38) of students selected the least number of hours per week allocated to distance learning. 7% (31) of students consider distance learning to take up a lot of their time, 40 hours per week or more. (Fig. 1.10).

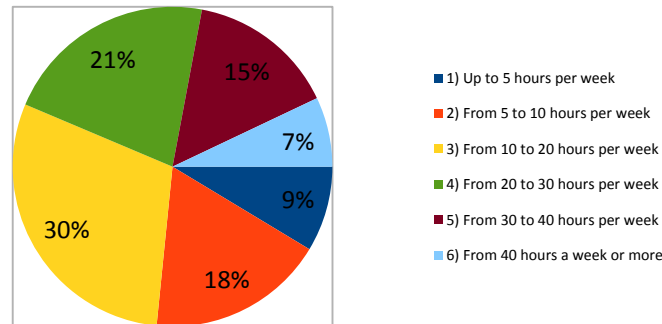


Fig. 1.10 Average time spent on organised distance learning

1.6. Socio-psychological and motivational components of distance education

When asked about the provision of the socio-psychological and motivational components of distance learning, the majority of respondents state that the institution and they themselves are prepared for such a form of education, mentioning that: *all the necessary elements are present, personally I do not think I am missing anything, I can also work in the distance format*, etc. At the same time, certain difficulties are also indicated, most often of a technical nature, which could diminish the quality of the studies.

1.7. Students about the quality, cost and choice of distance education

With regard to the quality of distance learning, respondents' opinions are divided according to the specificity required. Thus, only 85 respondents consider that distance learning makes it more difficult to organise the working environment, compared to 224 who consider that full time learning makes it more difficult to organise the working environment. Some 280 respondents find distance learning more psychologically comfortable, compared to 88 who find full-time learning more comfortable. With regard to the number of assignments and independent work most respondents (258) consider that there are no differences depending on the form of study organisation. About 190 students consider that there are no differences in the quality of education obtained, as well as difficulties in motivation. On the other hand, the majority of respondents (376) consider that it is easier to combine studies with work in the case of distance learning. With regard to class attendance, only 106 respondents consider that distance learning students are more likely to be absent from classes. With regard to the quality of lectures, most respondents consider that there is no difference. Another advantage mentioned by students is less fatigue, only 62 respondents consider that distance learning causes more fatigue. At the same time, respondents (108) consider that students participate less actively in classes when studying at a distance. A disadvantage of distance learning in the opinion of respondents is the lesser ability of teachers to conduct seminars and laboratory classes (76) and the lesser possibility to establish friendships and working relationships (83). With regard to the time required by teachers, 219 respondents consider that there is no difference and the majority of students (225) consider that it is more pleasant to study at distance learning. (Fig. 1.11).

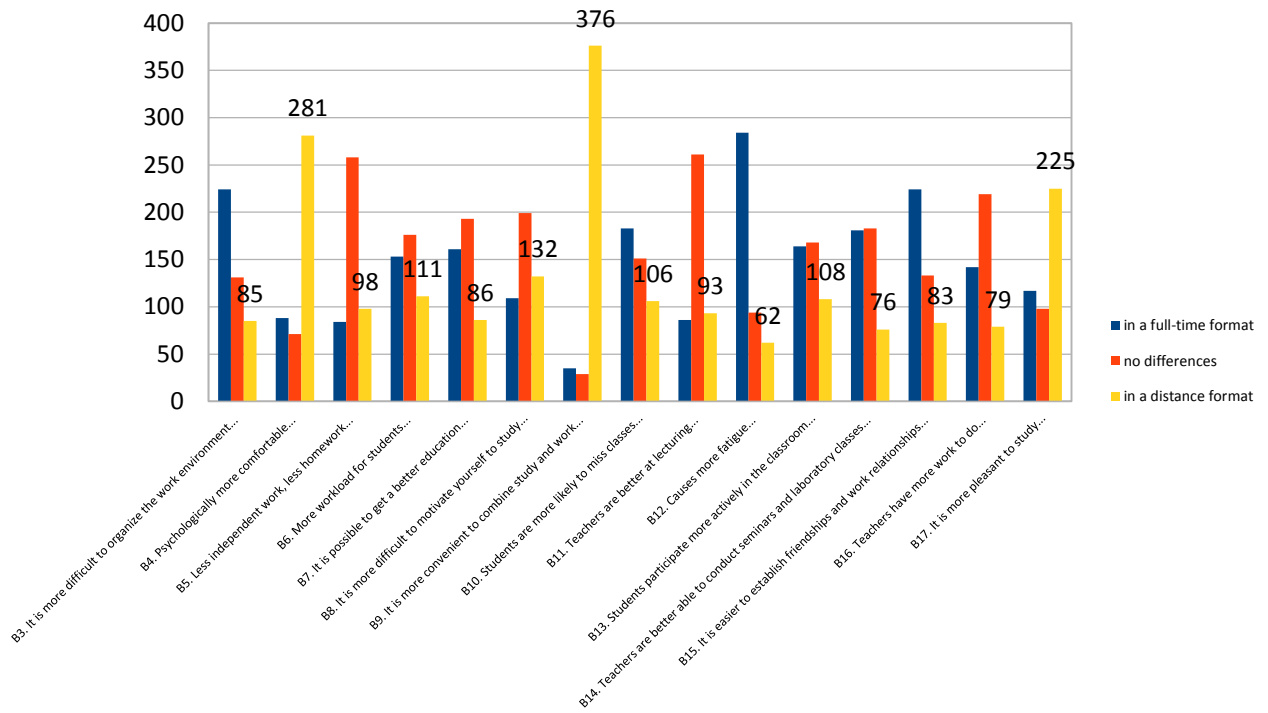


Fig. 1.11 Comparing distance learning with face-to-face learning

Regarding the fees that need to be paid for distance learning, the majority of respondents (55%) believe that they should be the same as for full-time education, and 32% believe that educational services for distance learning should cost less than for full-time education (Fig. 1.12).

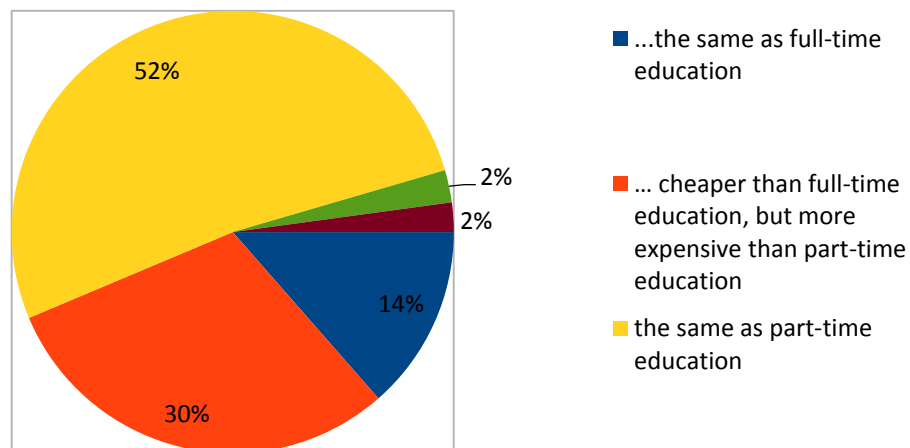


Fig. 1.12 Price for distance learning

Regarding the choice of a distance learning programme, 46% of respondents opt for the option to pursue a distance learning programme, 41% say they would be more for than against and only 4% are categorically against this form of study organisation (Fig. 1.13).

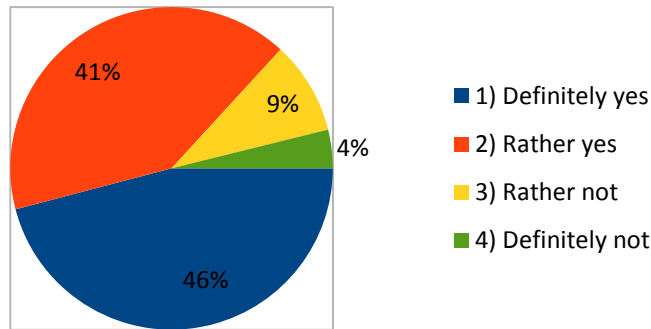


Fig.1.13 *Choosing a distance learning programme*

Out of the total number of respondents, 136 totally agree with the statement that distance education meets the requirements of modern society better than traditional education. 42 respondents totally disagree with this statement. To the statement that Distance Learning does not provide an opportunity to build trusting communication with students, the largest number of students (138) responded somewhat agree, somewhat disagree. With the statement that Distance Learning is only a simulation of the learning process, the largest number of students (144) strongly disagreed. Only 25 students agree with this statement. 101 students agree with the statement Distance learning is universal for almost all specialities in higher education. 55 students strongly disagree. Most students (125) selected the answer somewhat agree, somewhat disagree. The largest number of students (110) expressed total disagreement with the statement Distance learning does not provide the same quality of knowledge, skills and abilities as traditional. Only 55 students totally agree with this idea. The majority of students (185) believe that distance learning is the university education of the future. Only 30 students expressed total disagreement (Fig. 1.14).

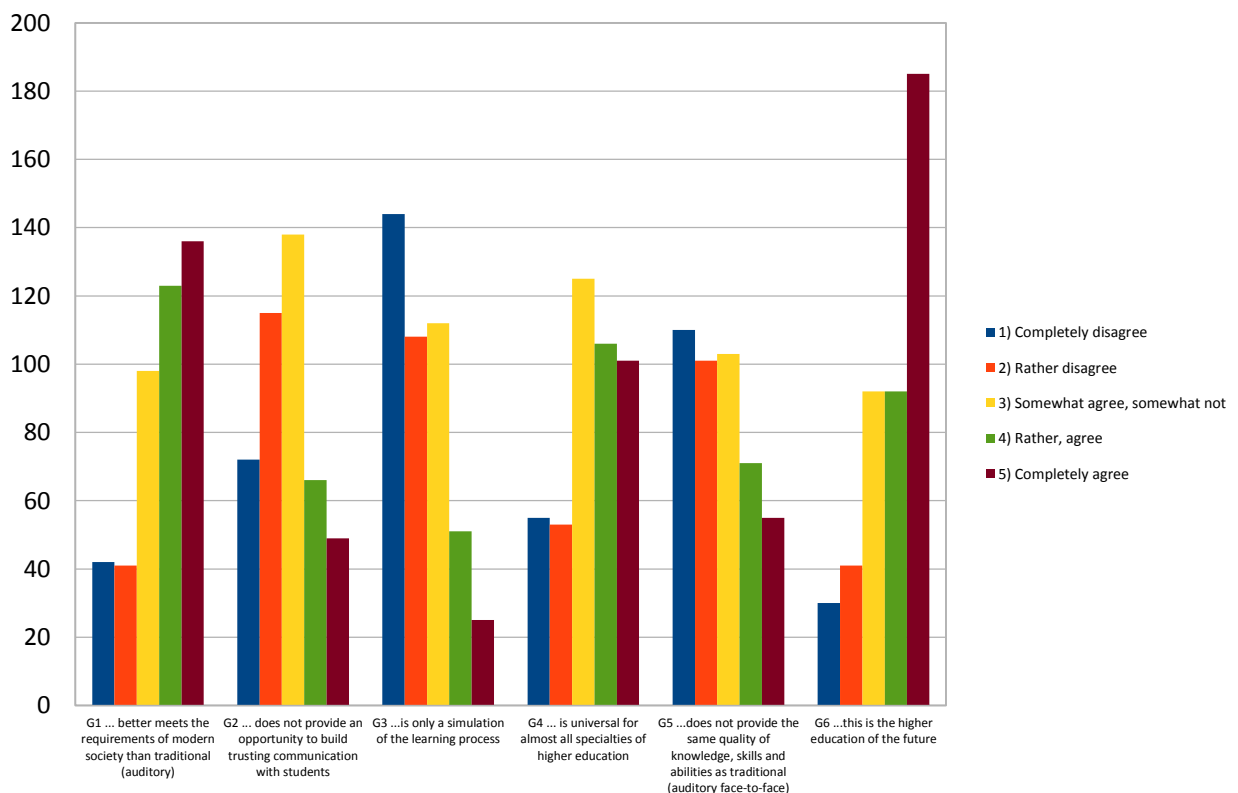


Fig. 1.14. *Agreement or disagreement with distance learning*

Section II. Academic staff about distance education

In order to determine the opportunities and prospects of distance education in the Republic of Moldova, to identify the needs of academic staff in higher education institutions regarding distance education, the questionnaire was completed based on the application of the sociological survey method for academic staff. The questionnaire, structured in 7 Blocks, was completed by 158 respondents from 12-22 May, 2023.

2.1. General information about the sample of teaching staff

The analysis of the results shows that out of 158 respondents - 101 are women, which is 63.9% of the total number and 57 - men, which is 36.1%. Generalized data for item 1. Your gender are presented in Fig.2.1.

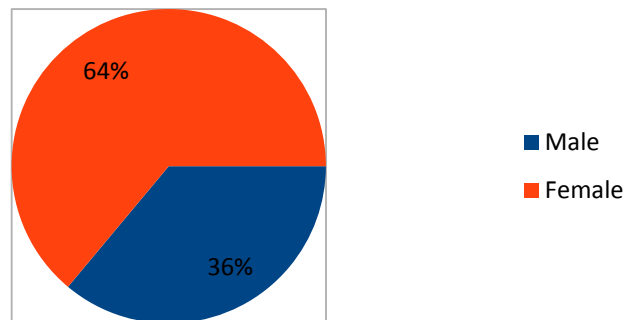


Fig.2.1. Gender of respondents, academic staff in higher education institutions

Referring to the position held in the university, we highlight that out of the total number -60 respondents (38%) hold the position of associate professor; 49 respondents (31%) - lecturer; 39 respondents (24.7%) - university assistant; 10 respondents (6.3%) - university professor. We find that the highest share is held by lecturers (see Fig.2.2).

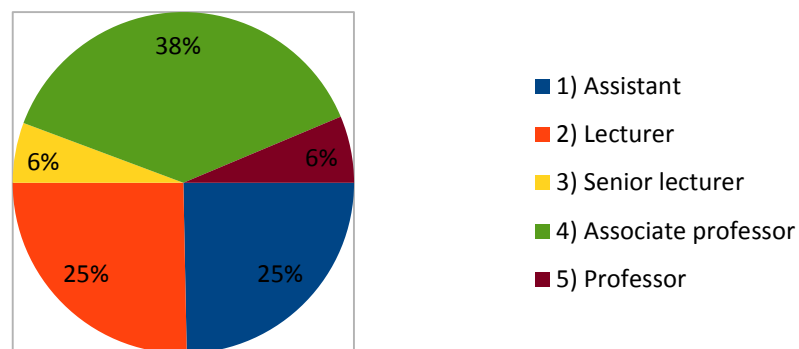


Fig.2.2. Function of academic staff in the university

Fig.2.3. shows the amount of academic staff salary received as a member of the university research and teaching staff. From the answers given we see that the highest amount of salary - 150% - is received by 18 respondents (11.4%); 12 respondents (7.6%) - 125%; 48 respondents (30.4%) - 100%; 39 respondents (24.7%) - 25%; 27 respondents (17.1%) - 50%; 14 respondents (8.9%) - 75%. Out of the total number, most respondents receive as a member of the university research and

teaching staff an amount from their salary of 100%.

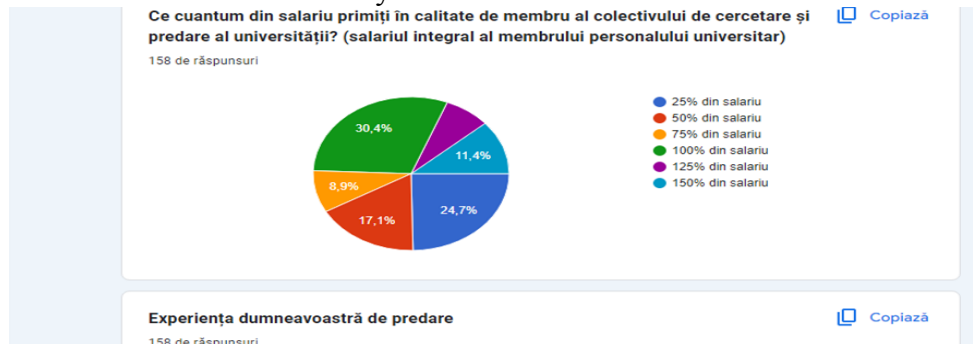


Fig.2.3. Amount of salary received as a member of the university research and teaching staff

The results obtained for the Teaching Experience item, reflected in Fig.2.4., show that more than half of the respondents - 55.7% (88 respondents) have more than 20 years of teaching experience; 27.2% (43 respondents) - between 10 and 20 years; 13.95 (22 respondents) - between 3 and 10 years and 3.2% (5 respondents) - up to 3 years. We highlight the significantly lower number of teachers with teaching experience between 3 and 10 years and up to 3 years respectively.

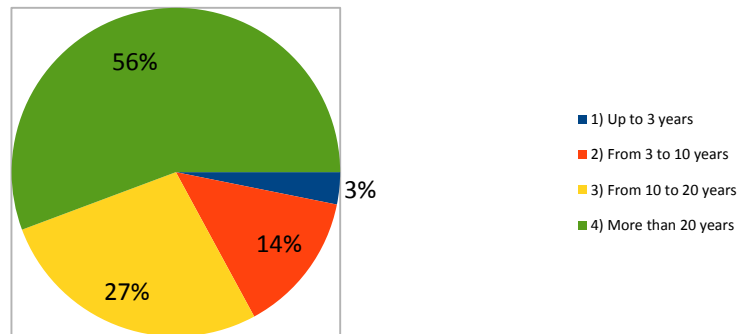


Fig. 2.4. Teaching experience of academic staff in the university

Another item included in the questionnaire, to which a response was requested, is the specification of the higher education institution where the teachers and academics work. We note that the majority of respondents - 69.6% (110 respondents) - work at the Moldova State University, followed by 26.5% (42 respondents), who work at the Technical University of Moldova. The generalized data are presented in Fig.2.5.

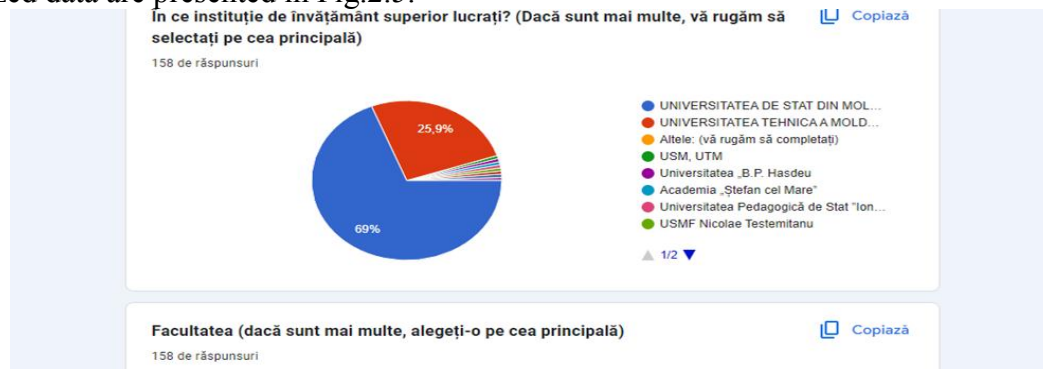


Fig. 2.5. Higher education institutions where academic staff work

Participants in the questionnaires were asked to specify the faculty at which they work. Thus we find that 21.5% (34 respondents) - work in the Faculty of Economics; 11.4% - (18 respondents) -

Psychology and Educational Sciences Sociology and Social Work; 9.5% (15 respondents) - Letters; 7% (11 respondents) - Mathematics and Computer Science; 7% (11 respondents) - Law; 7% (11 respondents) - Biology and Geosciences; 3.8% (6 respondents) - Physics and Engineering; 0.6% (1 respondent) - Veterinary Medicine; 3.2% (5 respondents) - Agricultural, Forestry and Environmental Sciences; 2.5% (4 respondents) - Design; 4.4% (7 respondents) - Economic Engineering and Business; 4.45% (7 respondents) - Construction, Geodesy and Cadastre; 0.6% (1 respondent) - Urban Planning and Architecture; 0.6% (1 respondent) - Food Technology; 3.2% (5 respondents) - Mechanical, Industrial and Transport Engineering; 3.8% (6 respondents) - Computers, Informatics and Microelectronics; 0.6% (1 respondent) - Energy and Electrical Engineering; 2.5% (4 respondents) - Electronics and Telecommunications; 2.5% (4 respondents) - History and Philosophy; 3.8% (6 respondents) - Journalism and Communication Sciences (see Fig. 2.6.).

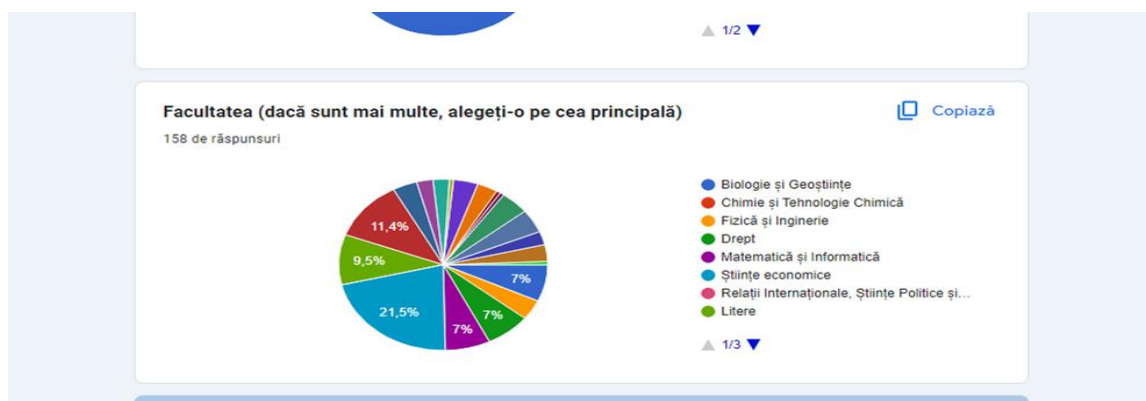


Fig.2.6. Faculty where academic staff work

2.2 Technical support of the teaching staff for distance education

Another issue, highlighted by the academic staff survey, was with reference to online course delivery spaces. Thus, to your question. do you usually teach online courses being..., the following answers were highlighted: 45.6% (72 respondents) - at home / in the bedroom; 36.7% (58 respondents) - on the university premises; 3.8% (6 respondents) - on the premises of another workplace; 1.8% (3 respondents) - at home/office; 1.3% (2 respondents) - at home, in a specially designed space or on the university premises; 10.2% (16 respondents) - at home, in the office; 0.6% (1 respondent) - in the work space at home or in the library (see Fig. 2.7).

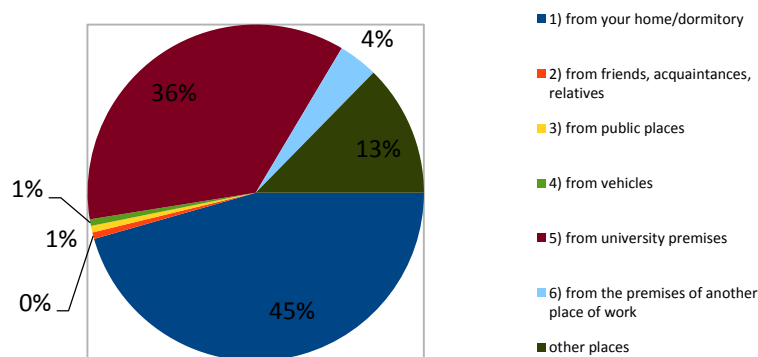


Fig. 2.7. Spaces where online courses are taught

Fig. 2.8 shows graphically how teachers rate the quality of the internet in their teaching place. We

note from the answers given that the majority of respondents have fixed internet access. Thus, 84.2% (133 respondents) mentioned that - there is fixed internet with relatively high speed (WiFi, cable); 14.6% (23 respondents) - there is no fixed internet, but the connection is via stable mobile internet (3g, 4g). Only 1.3% (2 respondents) mentioned that there is neither fixed nor mobile internet

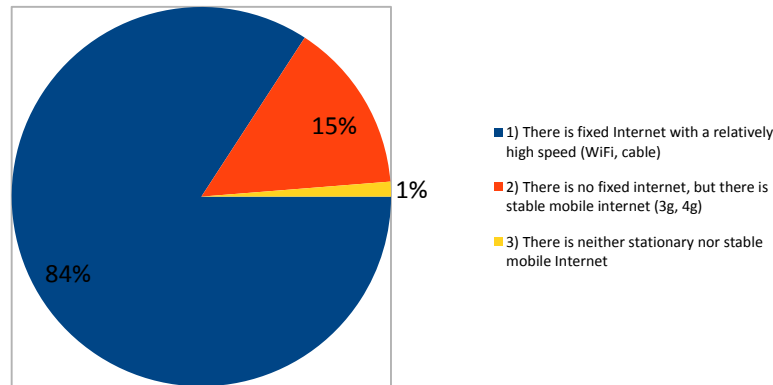


Fig.2.8. Internet quality at the place of delivery

As part of the survey, teachers were asked to specify which devices they use to regularly attend online courses? This resulted in the following answers, which are shown graphically in Fig. 2.9:

- Smartphone: Yes - 41 respondents (26%), No - 117 respondents (74%);
- Laptop / netbook / ultrabook: Yes - 151 respondents (96%); No - 7 respondents (4%);
- Stationary computer: Yes - 96 respondents (60.8%); No - 62 respondents (39.2%);
- Tablet: Yes - 24 respondents (15.2%); No - 134 respondents (84.8%).

We find that the majority of respondents, in order to regularly participate in online courses use laptop and stationary computer.

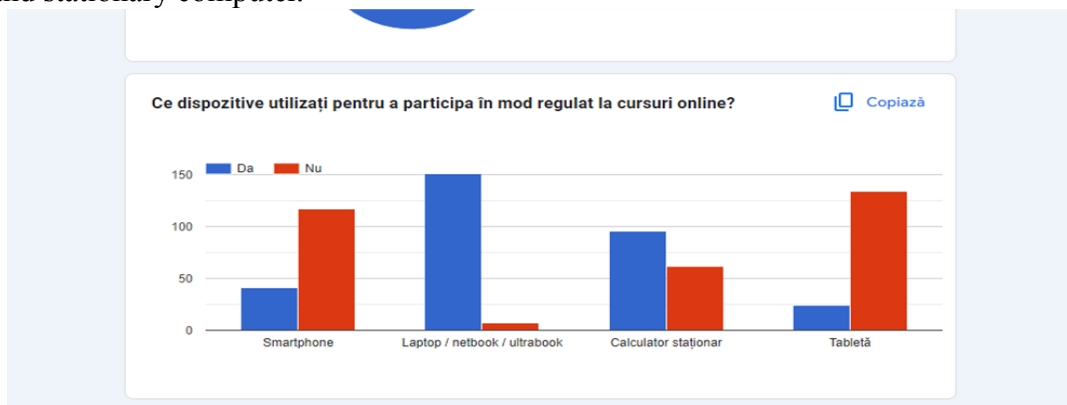


Fig. 2.9. Devices used to regularly participate in online courses

The data presented are confirmed by the teachers' answers to the question: What devices do you usually use to participate in online classes? Thus, 84.2% (133 respondents) mentioned - I almost always log in from a computer/laptop; 13.9% (22 respondents) - more often I log in from a computer or tablet, but sometimes from a smartphone; 1.3% (2 respondents) - I often log in using a smartphone, sometimes I log in from a computer or tablet; only 0.6% (1 respondent) mentioned - I almost always log in using a smartphone

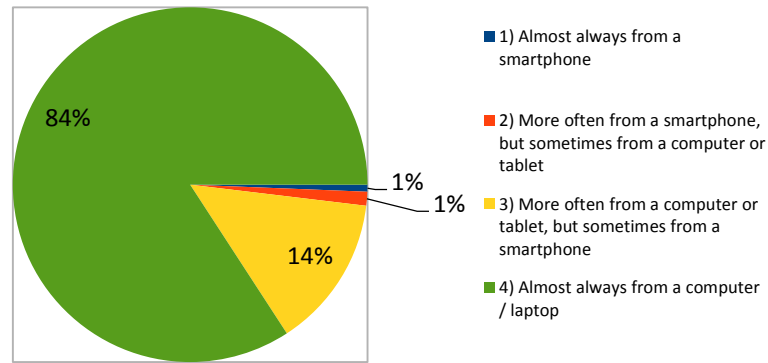


Fig. 2.10. Devices usually used for participation in online classes

One issue highlighted by the academic staff survey was How important is it that students connect the room during online courses? From the answers provided, also shown in Fig. 2. 11, we find that 42.4% (67 respondents) mention that it is very important, so they ask to turn them on; 4.2% (54 respondents) - it is important in some situations, so they ask to connect the cameras; 16.5% (26 respondents) specified that it is important, but do not ask for it; 6.3% (10 respondents) - it is not very important, so they do not ask for it, 0.6% (1 respondent) highlighted that it is really annoying, so they ask not to turn them on.

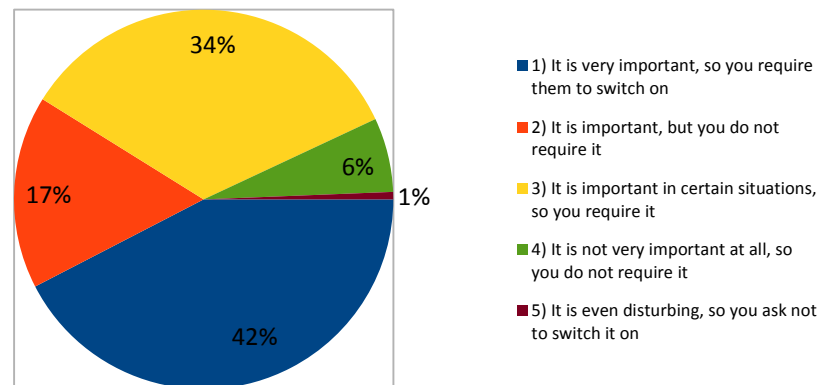


Fig. 2.11. How important is it for students to turn on the camera during online courses?

Fig. 2.12 shows graphically the results of the evaluation of how convenient online courses are using various applications.

- **Zoom**: Not convenient - 10 respondents (6.3%); Not very convenient - 20 respondents (12.6%); It is convenient - 108 respondents (68%); Do not use it - 21 respondents (13.1%)

- **GoogleMeet**: Not convenient - 7 respondents (4.5%); Not very convenient - 12 respondents (7.5%); Convenient - 118 respondents (74.2%); Don't use it - 22 respondents (13.8%)

- **Discord**: Not convenient - 10 respondents (6.3%); Not very convenient - 12 respondents (7.5%); Is convenient - 8 respondents (5%); Don't use it - 129 respondents (81.2%).

- **Skype**: Not convenient - 12 respondents (7.5%); Not very convenient - 18 respondents (11.25%); Convenient - 20 respondents (12.5%); Don't use it - 110 respondents (68.75%).

- **Microsoft Teams**: Not convenient - 12 respondents (7.5%); Not very convenient - 15 respondents (9.4%); Is convenient - 82 respondents (51.5%); Don't use it - 50 respondents (31.6%).

We note, that teachers find online courses using Zoom, GoogleMeet and MicrosoftTeams most

convenient.

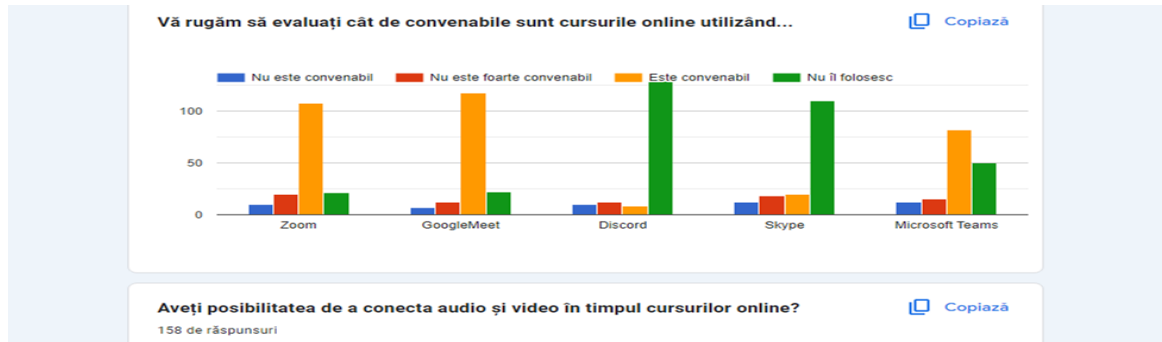


Fig. 2.12. Results of the assessment of how convenient online courses using various applications are

When asked if they have the possibility to connect audio and video during online courses? Teachers mentioned: 87.3% (138 respondents) - I have the possibility and connect audio/video permanently; 7% (11 respondents) - I usually have the possibility, but I do not connect audio/video; 5.7% (9 respondents) - I do not have this possibility permanently, but I can connect audio/video if necessary (see Fig. 2.13)

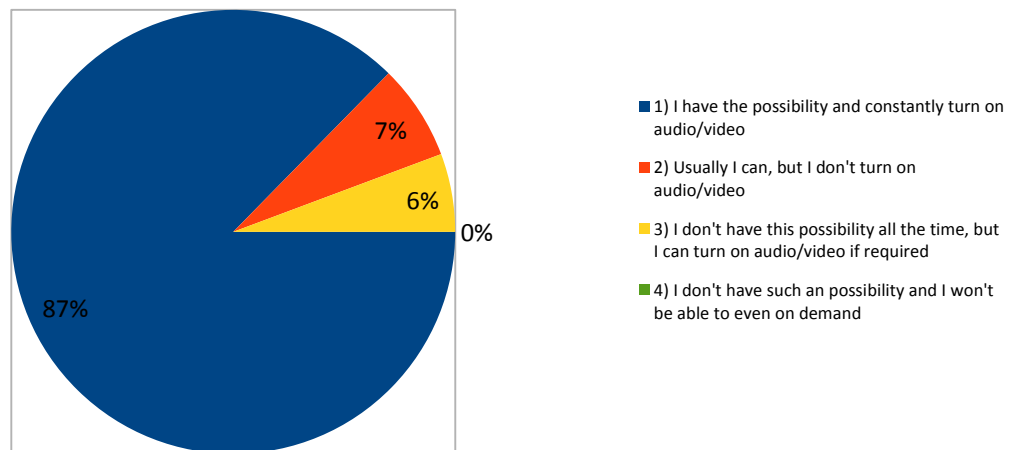


Fig. 2.13. Possibility to connect audio and video during online courses

2.3 Evaluation of platforms and communication channels provided by the Teaching staff

Next, the questionnaire provides general information on how to set up platforms for organising distance learning, convenient means of communication for receiving and sending current information and working files, organising department meetings in online format. Fig. 2.14. shows graphically the point of view, for the organisation of distance learning platforms should be chosen (Moodle, Office 365 etc. The answers to the question highlighted: 49.4% (78 respondents) - centrally for the whole university; 36% (57 respondents) - individually by each individual professor; 7% (11 respondents) - separately by each faculty and research institute; 5.1% (8 respondents) - separately by each individual department; 0.6% (1 respondent) - Office 365; 0.6% (1 respondent) - separately by faculty, but with the condition that software access is provided for all the teachers involved; 0.6% (1 respondent) - it depends on size, available infrastructure, number of students, courses, etc. Ideally centralised: less maintenance costs; 0.6% (1 respondent) – Zoom).

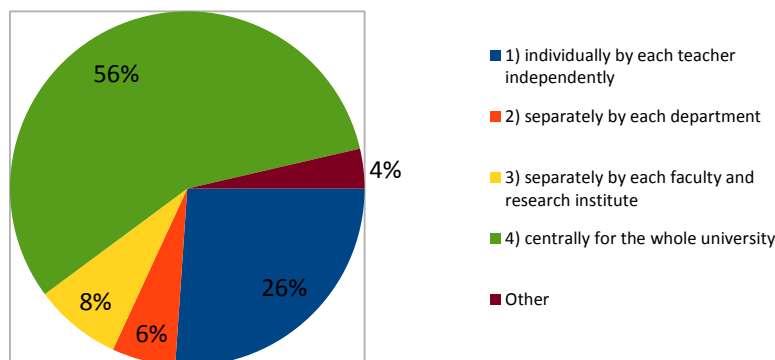


Fig. 2.14. Platforms (Moodle, Office 365, etc.) should be chosen to organise distance learning. To the question What means of communication are convenient for you to receive and send current information and work files? Respondents mentioned:

- **Online learning platform:** Inconvenient - 4 respondents (2.5%), Sometimes convenient, sometimes not - 32 respondents (20.3%), Convenient - 108 respondents (68.4%), Don't know/don't use - 14 respondents (8.8%).

- Sending by **e-mail:** Inconvenient - 11 respondents (7%), Sometimes convenient, sometimes not - 33 respondents (20.9%), Convenient - 112 respondents (70.9%), Don't know/don't use - 2 respondents (1.26%).

- Channels and groups in **Telegram:** Inconvenient - 15 respondents (9.5%), Sometimes convenient, sometimes not - 30 respondents (19%), Convenient - 34 respondents (21.5%), Don't know/don't use - 79 respondents (50%).

- Channels and groups in **Viber:** Inconvenient - 17 respondents (10.75%), Sometimes convenient, sometimes not - 45 respondents (28.5%), Convenient - 73 respondents (46.25%), Don't know/don't use - 23 respondents (14.5%).

- Channels and groups in **WhatsApp:** Inconvenient - 19 respondents (12%), Sometimes convenient, sometimes not - 37 respondents (23.4%), Convenient - 45 respondents (28.5%), Don't know/don't use - 57 respondents (36.1%).

- **Discord** channels and servers: Inconvenient - 15 respondents (9.5%), Sometimes convenient, sometimes not - 18 respondents (11.4%), Convenient - 10 respondents (6.6%), Don't know/don't use - 115 respondents (72.5%).

- Posts on **Instagram:** Inconvenient - 37 respondents (23.4%), Sometimes convenient, sometimes not - 13 respondents (8.2%), Convenient - 11 respondents (7%), Don't know/don't use - 97 respondents (61.4%).

- **Facebook** posts: Inconvenient - 31 respondents (19.5%), Sometimes convenient, sometimes not - 34 respondents (21.5%), Convenient - 24 respondents (15.2%), Don't know/don't use - 69 respondents (43.8%).

- **Google Classroom:** Inconvenient - 15 respondents (9.5%), Sometimes convenient, sometimes not - 37 respondents (23.4%), Convenient - 42 respondents (26.6%), Don't know/don't use - 64 respondents (40.5%).

- **Moodle:** Inconvenient - 8 respondents (5%), Sometimes convenient, sometimes not - 29 respondents (18.4%), Convenient - 116 respondents (73.4%), Don't know/don't use - 5 respondents (3.2%).

- **Digital deanery:** Inconvenient - 5 respondents (3.2%), Sometimes convenient, sometimes not - 24 respondents (15.2%), Convenient - 32 respondents (20.3%), Don't know/don't use - 97 respondents (61.3%).

- **Office 365:** Inconvenient - 7 respondents (4.4%), Sometimes convenient, sometimes not - 37 respondents (23.4%), Convenient - 70 respondents (44.4%), Don't know/don't use - 44 respondents

(27.8%).

The generalised data are presented in Fig. 2.15.



Fig. 2.15. Convenient means of communication for receiving and sending current information and work files

And finally, to the question asked to academic staff on the need to create a specialised software system (learning content management systems, LMS) for distance learning? The analysis of the answers provided shows that 43% (68 respondents) consider - rather yes; 26.6% (42 respondents) - partly yes, partly no; 19.6% (31 respondents) - definitely yes; 7% (11 respondents) - rather no; 3.8% (6 respondents) - definitely no. It should be noted, however, that the vast majority of respondents opt for the creation of a specialised software system (learning content management systems, LMS) for distance learning (see Fig. 2.16).

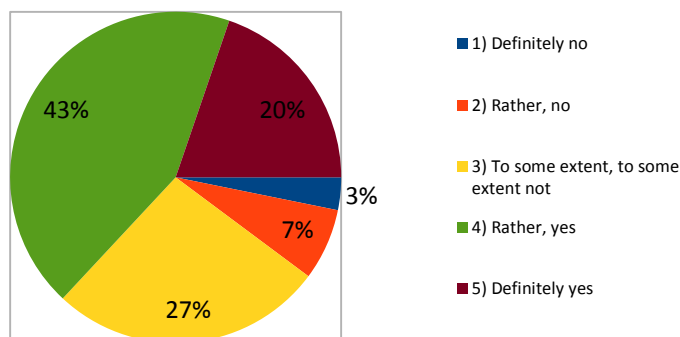


Fig. 2.16. The need for a specialised software system (learning content management systems, LMS) for distance learning

2.4. Information about the formats of work

The next question to academic staff is What forms of teaching do you consider to be the most effective in distance learning? From the answers given we find:

- 60.1% - 95 respondents - online lectures with a presentation (PowerPoint etc.)
- 15.2% - 24 respondents - distance learning course on Moodle
- 12% - 19 respondents - interactive electronic materials
- 6.3% - 10 respondents - video recording of lecture
- 3.2% - 5 respondents - online lectures without presentation
- 1.3% - 2 respondents - short lecture notes
- 1.3% - 2 respondents - textbook files, manuals on the topic
- 0.6% - 1 respondent - video instructions and screenshots.

The generalised data are shown in Fig. 2.17.

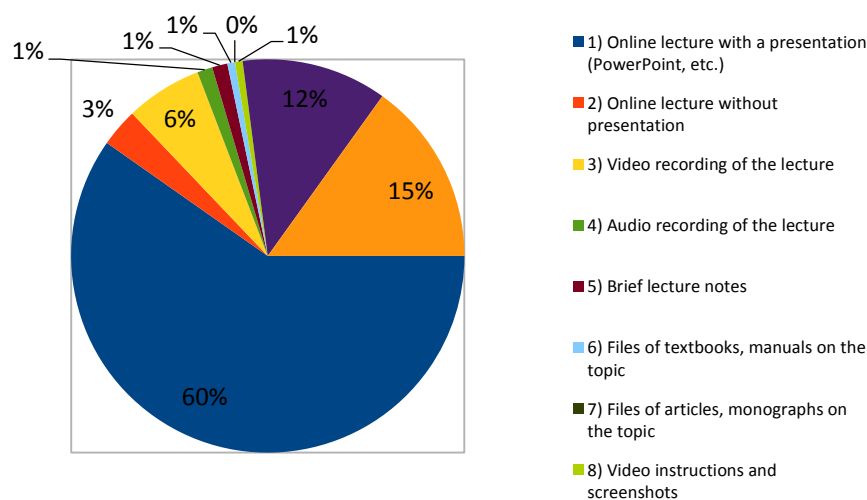


Fig. 2.17. Most effective forms of delivery in distance learning

The next question asked of academic staff is What ways of formulating tasks do you prefer? The data presented in Fig. 2.18. highlights that:

- 21.5% - 34 respondents - oral answers, reports during class time.
- 17.1% - 27 respondents - control tasks in test format
- 15.8% - 25 respondents - group assignments in seminars (practical) and laboratory
- 13.3% - 21 respondents - presentations and reports during lectures
- 10.8% - 17 respondents - group homework, projects
- 10.1% - 16 respondents - written homework (summaries, notes, analytical, essays, etc.)
- 1.3% - 2 respondents - all listed, on a case by case basis
- 1.9% - 3 respondents - options 1,2,3,4,5
- 0.6% - 1 respondent - are for mixed tasks, would not disadvantage students
- 0.6% - 1 respondent - final multimedia product developed
- 0.6% - 1 respondent - individual tasks
- 0.6% - 1 respondent - interactive tasks, tests, group work, final projects
- 0.6% - 1 respondent - tasks in taxonomic context related to learning objectives
- 0.6% - 1 respondent - individual work
- 0.6% - 1 respondent - tasks/checking items, practical tasks/exercises with objective, calculable answers, with automatic checking and only sometimes with unfolded answer
- 1.9% - 3 respondents - miscellaneous, combined tasks
- 0.6% - 1 respondent - in general, tasks for higher education should be at the appropriate level, not

like for primary classes - student to learn
 0.6% - 1 respondent - case studies
 0.6% - 1 respondent - combined, seminar and project assignments

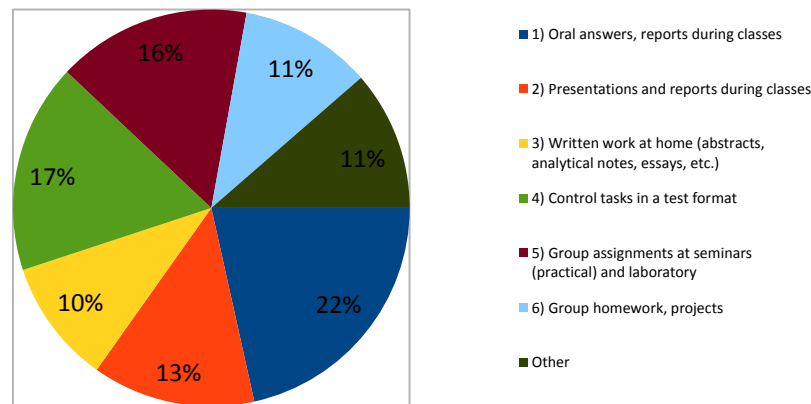


Fig. 2.18. Academic staff preferred ways of formulating tasks

2.5. Teaching staff on workload during distance education

The questionnaire provides general information about the amount of time spent, in the medium, on work organised in distance format (including lectures, preparation, checking assignments, etc.), the extent to which the actual time spent on certain types of blended/distance learning activities would change, the extent of preparation for additional elements of administrative documentation for lessons conducted in online format. To the question *How much time would you spend, on average, on work organised in distance format (including lectures, preparation, checking homework, etc.)?* Respondents mentioned: 10.1% (16 respondents) - up to 5 hours per week; 17.7% (28 respondents) - between 5 and 10 hours per week; 28.5% (45 respondents) - between 10 and 20 hours per week; 19.6% (31 respondents) - between 20 and 30 hours per week; 12.7% (20 respondents) - between 30 and 40 hours per week; 11.4% (18 respondents) - 40 hours per week or more.

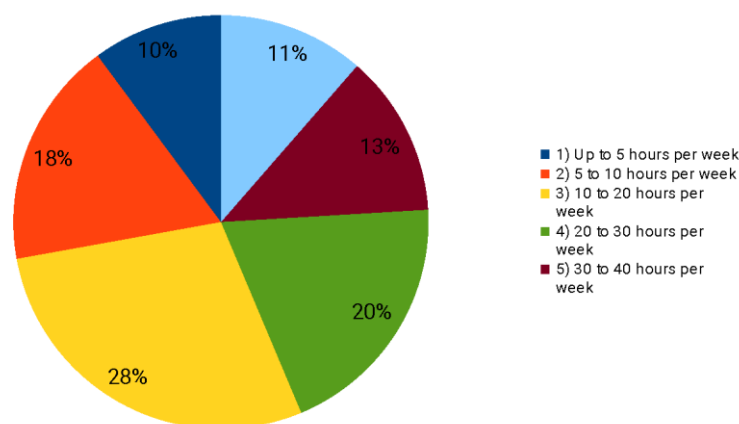


Fig. 2.19. Time spent, on average, on work organised in distance format (including lectures, training, checking homework, etc.).

Another issue highlighted by the survey of academic staff was whether the actual time spent on the following types of blended/distance learning activities would change? The answers provided by respondents are structured according to the following indicators:

- Course preparation and delivery: 44 respondents (27.8%) - Yes, it would increase significantly; 67

respondents (42.4%) - Yes, it would increase, 42 respondents (26.6%) - No, it would not change, 4 respondents (2.5%) - Yes, it would decrease; 1 respondent (0.6%) - Yes, it would decrease significantly.

- Preparation and conduct of training sessions (seminars, practice, laboratory): 46 respondents (29.1%) - Yes, would increase significantly, 62 respondents (39.2%) - Yes, would increase, 43 respondents (27.2%) - No, would not change, 4 respondents (92.5%) - Yes, would decrease, 3 respondents (2%) - Yes, would decrease significantly

- Conduct of individual courses/consultations: 31 respondents (20.2%) - Yes, it would increase significantly, 55 respondents (34.8%) - Yes, it would increase, 66 respondents (41.8%) - No, it would not change, 5 respondents (3.16%) - Yes, it would decrease, 1 respondent (0.6%) - Yes, it would decrease significantly.

- Checking students' individual work: 36 respondents (22.8%) - Yes, it would increase significantly, 45 respondents (28.5%) - Yes, it would increase, 63 respondents (39.9%) - No, it would not change, 10 respondents (6.3%) - Yes, it would decrease, 4 respondents (2.5%) - Yes, it would decrease significantly.

- Checking current tests and control work: 34 respondents (21.5%) - Yes, would increase significantly, 43 respondents (27.2%) - Yes, would increase, 60 respondents (37.9%) - No, would not change, 18 respondents (11.4%) - Yes, would decrease, 3 respondents (1.9%) - Yes, would decrease significantly.

- Preparation and checking of final tests in the form of a quiz or exam: 39 respondents (24.7%) - Yes, would increase significantly, 53 respondents (33.5%) - Yes, would increase, 48 respondents - (30.3%) - No, would not change, 15 respondents (9.5%) - Yes, would decrease, 3 respondents (1.9%) - Yes, would decrease significantly.

The results are presented graphically in Fig.2.20.

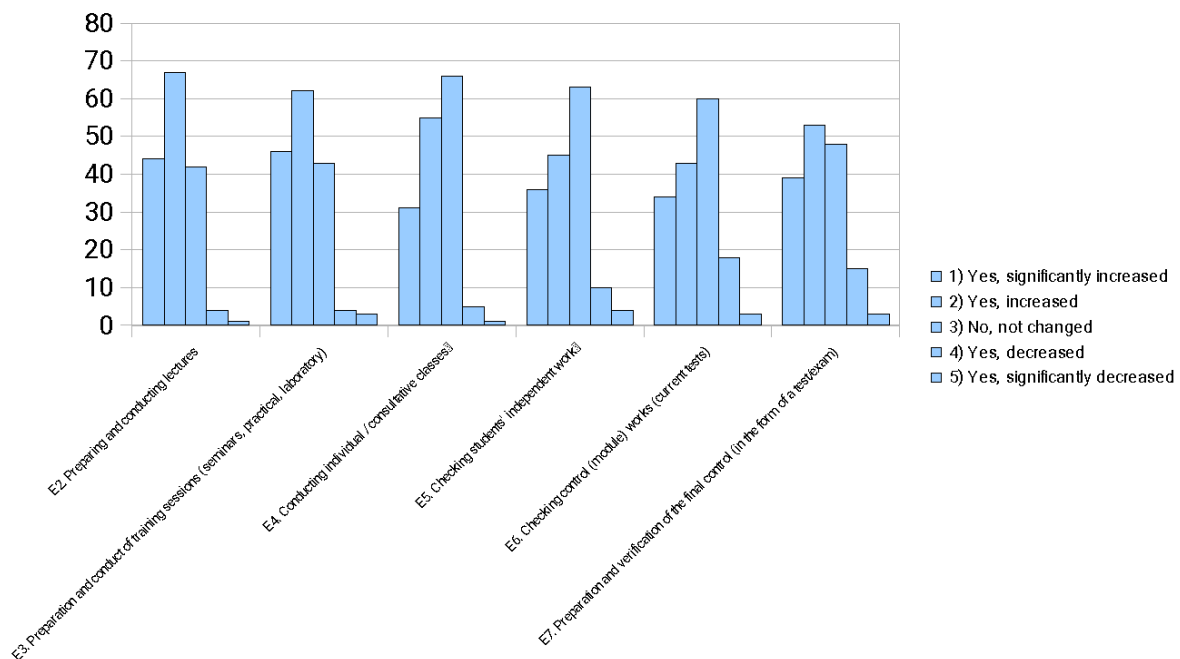


Fig.2.20. Extent to which the actual time spent on certain types of blended/distance learning activities would change

The next question asked of academic staff is *Are you prepared for additional elements of administrative documentation for lessons delivered online?* We find that 57.6% (91 respondents) said - it depends on the specific number of these additional elements; 29.1% (46 respondents) - no, the bureaucratic burden on the teacher is already too high; 13.3% (21 respondents) - yes, I am prepared, this format requires additional recording elements (see Fig. 2.21.)

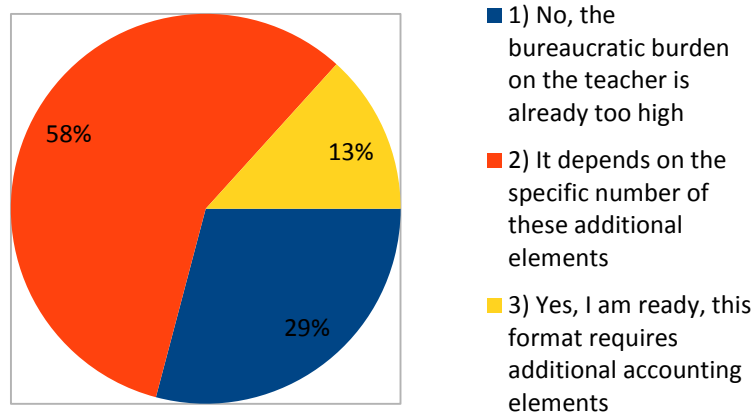


Fig. 2.21. Degree of preparedness of academic staff for additional elements of administrative documentation for lessons conducted in online format

2.6. Teaching staff on the organization of control and accounting in distance education

The study also provides background information on the relationship between synchronous and asynchronous interactions in distance education, technologies for additional accounting of distance courses and consultations, the need for creating a specialized software system (learning content management systems, LMS) for distance education, the situation regarding academic integrity would be influenced by the transition to distance education, the need for special regulation of the intellectual property rights of teachers, who would create content for distance learning studies, the spaces for teaching online courses, the quality of the internet in the teaching place, the devices used to regularly participate in online courses, the importance of connecting cameras during online courses.

Fig. 2.22. shows graphically the opinion of teachers, what should be the ratio of synchronous and asynchronous interactions in distance learning? We find that 44.3% (70 respondents) believe that synchronous components should be the main ones, while asynchronous components can only complement and develop them; 22.8% (36 respondents) - synchronous components should prevail, but asynchronous components are also appropriate; 21.5% (34 respondents) mentioned that the ratio between synchronous and asynchronous components would not be crucial for the effectiveness of distance learning and can be either; 7% (11 respondents) - asynchronous components should take precedence over synchronous ones, although the latter are important; 4.4% (7 respondents) specified that asynchronous components should form the basis of distance learning, synchronous components should be used as an exception.

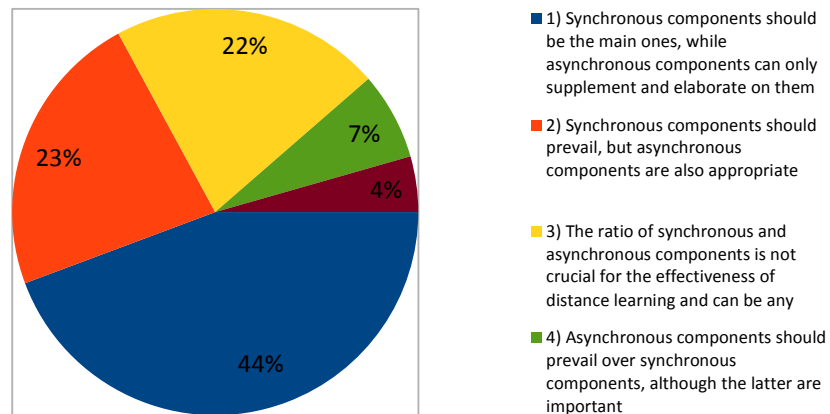


Fig.2.22. Teachers' opinion, what should be the ratio between synchronous and asynchronous interactions in distance learning

In the survey, teachers were asked to evaluate methods and technologies for additional accounting of distance learning courses and consultations. Thus, the following answers were provided:

Item 1. Presence of a representative of the administration/department/dean's office in an online course.

- 57 respondents (35.6%) - I find this unacceptable
- 62 respondents (38.8%) - I think it is appropriate
- 41 respondents (25.6%) - Cannot assess

Item 2. Conducting courses exclusively on platforms with video recording of the professor's presence and activity

- 35 respondents (22%) - I find it unacceptable
- 91 respondents (57.2%) - I think it is appropriate
- 33 respondents (20.8%) - Cannot evaluate

Item 3. Students' evaluation of teacher performance

- 18 respondents (11.4%) - I find it unacceptable
- 117 respondents (74%) - Think it is appropriate
- 23 respondents (14.6%) - Cannot rate

The generalised data are presented in Fig. 2.23.

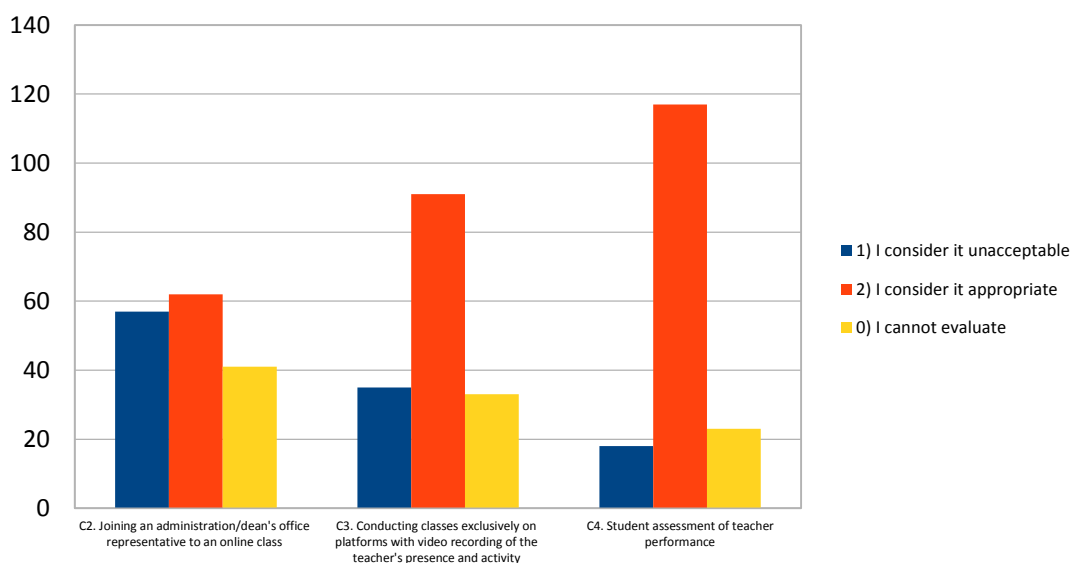


Fig.2.23. Evaluation of methods and technologies for additional accounting of distance learning courses and consultations

2.7. Professional development of teachers

The study provides background information on the need for organised professional development in the use of digital technologies required for distance learning, areas of professional development, most effective forms of teaching in distance learning, main concerns of academic staff for placing educational materials (course texts, presentations, videos, etc.) on the internet, most effective forms of teaching in distance learning, ways of formulating preferred assignments.

Fig. 2.24. shows graphically the answers to the question Do you feel the need for organised professional development in the use of digital technologies needed for distance learning? Thus, 47.5% (75 respondents) mention - yes, because digital technologies are developing very fast, 19% (30 respondents) pointed out - not sure about the answer, it depends on the specific circumstances; 15.2% (24 respondents) - no, because I have the necessary level of knowledge of these technologies, 13.3% (21 respondents) - no, if necessary, I can improve my knowledge on my own, 5.1% (8 respondents) - yes, because there are difficulties in using the technology.

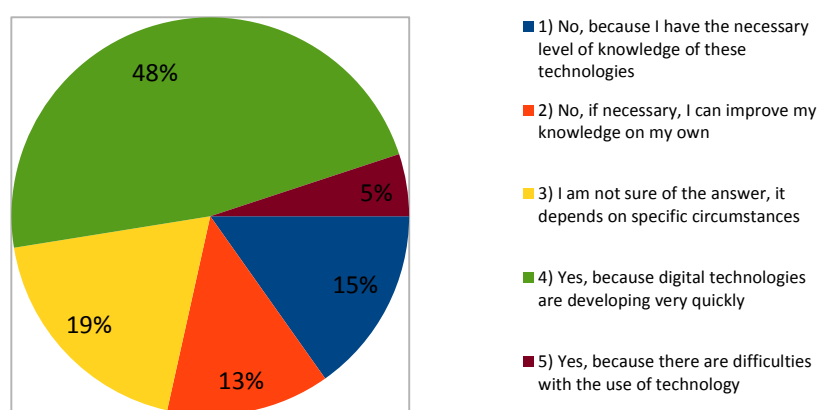


Fig. 2.24. Need for organised professional development in the use of digital technologies required for distance learning

The areas of professional development were presented. Respondents were asked to rate which of them would be interesting and useful to them. From the answers provided we note:

- **New methods and approaches to distance learning:** 9 respondents (5.7%) - not at all interested, 56 respondents (35.4%) - interested but not very much, 93 respondents (58.9%) - very interested.
- **Skills in preparing video materials, video recording:** 8 respondents (5%) - not at all interested; 64 respondents (40.5%) - interested, but not very much; 86 respondents (54.5%) - very interested.
- **Skills working with video editors, editing:** 12 respondents (7.6%) - not at all interested; 60 respondents (38%) - interested but not very much; 86 respondents (54.5%) - very interested.
- **Acting skills, working in front of the camera:** 8 respondents (5%) - not at all interested, 64 respondents (40.5%) - interested but not very much, 86 (respondents (54.5%) - very interested.
- **Diction development, microphone work:** 44 respondents (27.8%) - not at all interested, 66 respondents (41.8%) - interested but not very much, 48 respondents (30.4%) - very interested.

We note that teachers are interested in all areas of professional development, with the exception of the area of diction development, working with the microphone (see Fig. 2.25.)

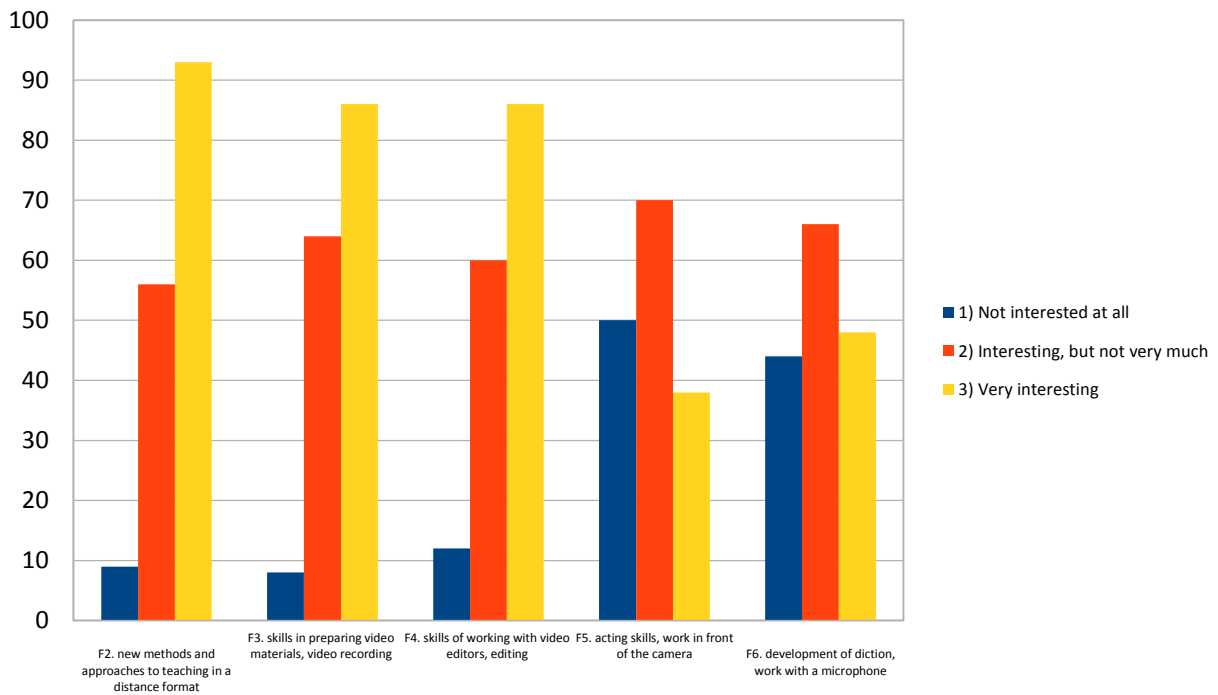


Fig. 2.25. Areas of professional development, most effective forms of teaching in distance education

In the survey, it was revealed that in distance learning, it is necessary to place educational materials (course texts, presentations, videos, etc.) on the Internet. Thus, teachers were asked to specify: Which of the following are your main concerns?

The data presented in Fig. 2.26. shows that 42.4% (67 respondents) specified - requires extra time for work, 21.5% (34 respondents) - is a threat to your copyright, 15.8% (25 respondents) - limits necessary contacts with students, 12.7% (20 respondents) - none of the above, 7.6% (12 respondents) - hinders students' productive study.

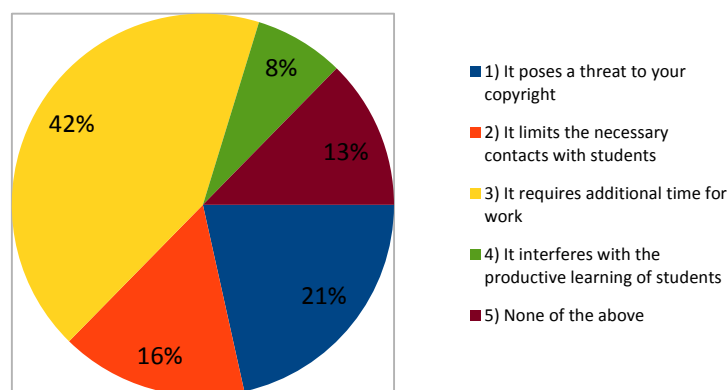


Fig. 2.26. Main concerns of academic staff for placing educational materials (course texts, presentations, videos, etc.) on the Internet

2.8. Copyright and intellectual property

Fig. 2.27. shows graphically the opinion of teachers on whether the academic integrity situation would be influenced by the transition to distance learning? We find that half of the respondents, 50.6% (80 respondents) said that no, this transition would not have a fundamental impact on

academic integrity. At the same time, we find that 29.7% (47 respondents) believe that - yes, it would make it more difficult to monitor compliance with academic integrity standards and 19.6% (31 respondents) said that - yes, it would make it easier to monitor compliance with academic integrity standards.

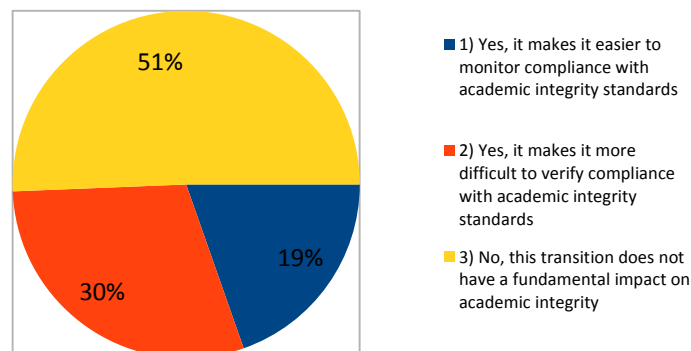


Fig.2.27. Academic integrity situation would be influenced by the transition to distance learning

Academic staff were asked for their views on the need for special regulation of the intellectual property rights of teachers who would create content for distance learning studies. A graphical presentation of the responses is given in Fig.2.28. It can be seen that the vast majority of respondents consider it necessary to regulate the intellectual property rights of teachers who create content for distance learning: 52.5% (83 respondents) - yes, it would be necessary to improve the regulation of intellectual property rights, taking into account the specificities of distance learning; 33.5% (53 respondents) - yes, it would be necessary to have separate procedures for regulating intellectual property rights for distance learning. Only 13.9% (22 respondents) said no, the regulation of intellectual property rights provided for full-time and non-full-time forms of education are sufficient.

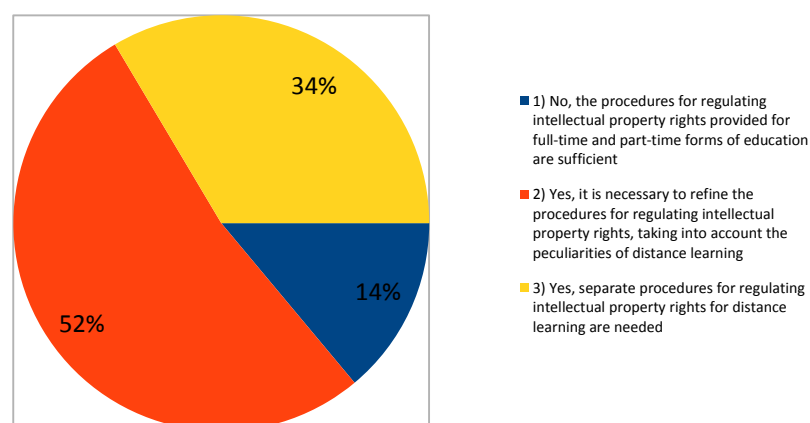


Fig.2.28 Need for special regulation of intellectual property rights of teachers who would create content for studies in distance learning

2.9. Effectiveness of distance education in the assessment of teachers

As a conclusion, academic staff involved in the questionnaires were asked to express their views: to what extent do you agree or disagree with the following statements?

Distance learning

... responds better to the demands of modern society than traditional ones (in the audience)

15 respondents (9.5%) - Total disagreement

15 respondents (9.5%) - Strongly disagree

77 respondents (48.7%) - Partially agree

34 respondents (21.5%) - Mostly agree

17 respondents (10.7%) - Strongly agree

... does not provide an opportunity to build trusting communication with students

13 respondents (8.2%) - Strongly disagree

25 respondents (15.8%) - Strongly disagree

55 respondents (34.8%) - Partially agree

38 respondents (24%) - Mostly agree

27 respondents (17.2%) - Strongly agree

... is just a simulation of the teaching-learning process

37 respondents (23.4%) - Strongly disagree

36 respondents- (22,8%) Strongly disagree

49 respondents (31%) - Partially agree

20 respondents (12.6%) - Mostly agree

16 respondents (10.2%) - Strongly agree

... is universal for almost all specialities in higher education

30 respondents (19%) - Strongly disagree

33 respondents (20.9%) - Mostly disagree

61 respondents (38.6%) - Partially agree

26 respondents (16.4%) - Mostly agree

8 respondents (5.1%) - Strongly agree

...does not provide the same quality of knowledge, skills and abilities as traditional (face-to-face audience)

20 respondents (12.6%) - Strongly disagree

24 respondents (15.2%) - Strongly disagree

51 respondents (32.2%) - Partially agree

30 respondents (19%) - Mostly agree

33 respondents (21%) - Strongly agree

...this is the higher education of the future

16 respondents (10.1%) - Strongly disagree

18 respondents (11.4%) - Strongly disagree

53 respondents (33.5%) - Partially agree

43 respondents (27.3%) - Mostly agree

28 respondents (17.7%) - Strongly agree

(See Fig. 2.29.)

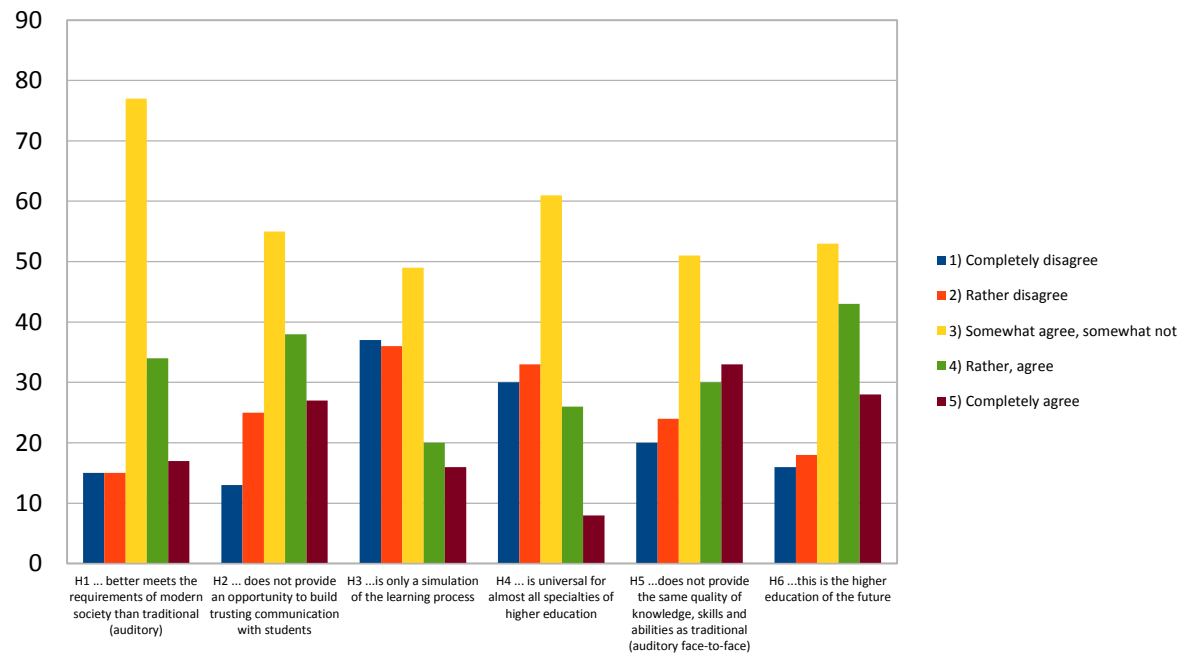


Fig. 2.29. Views of academic staff on distance learning

Section III. Management of higher education institutions about distance education

3.1. General information about the sample of managers

In this study, we analyze the results obtained in the survey. We mention that an experimental group of the 33 managerial personnel working in higher educational institutions participated in the questionnaire. The survey was completed in the period from May 12 to May 22, 2023.

The results obtained shows that the subjects who filled out the questionnaire are male and female (Fig.3.1).

Your gender

33 responses

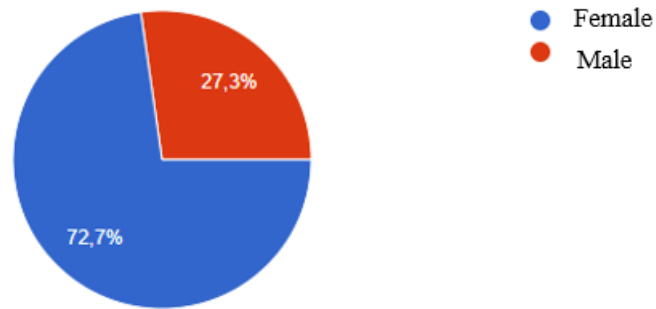


Figure 3.1. Gender of the subjects

Of the total number of managerial personnel who participated in the survey, 72.7% (24 subjects) belong to the female sex, and 27.3% (9 subjects) belong to the male sex. Accordingly, we emphasize that the group is not proportional in favor of female subjects.

Figure 3.2 graphically shows the data related to the functions they occupy at the university.

Your position at the University (if there are several part-time positions, please select the highest)

33 responses

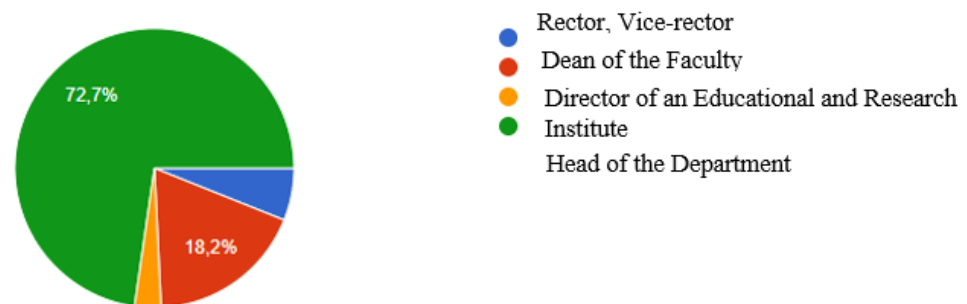


Fig. 3.2. Functions of managerial personnel at the University

Of the total number of surveyed subjects, 6.1% (2) occupy the function of rector, vice-rector; 18.2% (6) – dean of the faculty; 3.0% (1) – director of a research institute and the majority -72.7% (24) - work as head of the department.

The experience of the survived management personnel in the administrative function differs. The answers related to this question are shown in Figure 3.3.

Your experience in an administrative position

33 responses

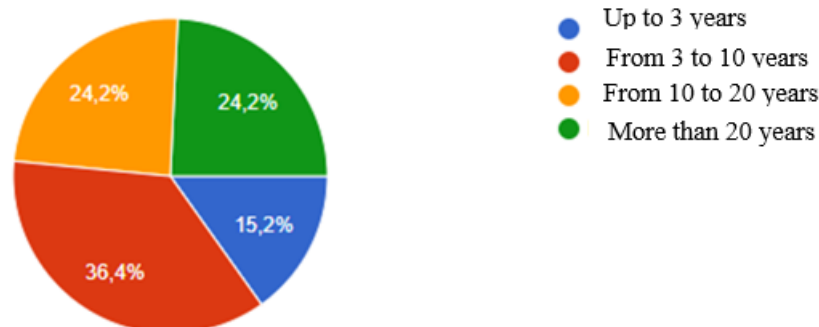


Fig. 3.3. Experience of the administrative function of the interviewed management personnel
From Figure 3.3, we could that 15.2% of the subjects have experience in the administrative sphere, in the field of education up to 3 years; 36.4% have experience from 3 to 10 years; 24.2% – from 10 to 20 years; and 24.2% have experience in the administrative sphere for more than 20 years. Most subjects fall into the second category, which includes the experience of an administrative function from 3 to 10 years.

Figure 3.4 graphically shows the results with reference to the experience of teaching managerial personnel.

Your teaching experience.

33 responses

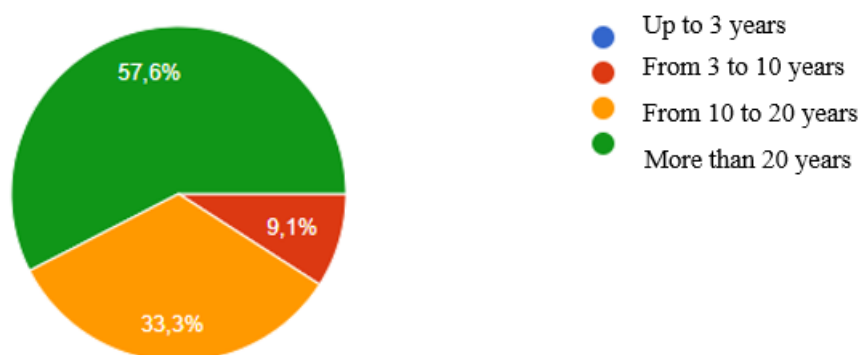


Fig. 3.4. Teaching experience of the management personnel

Thus, we emphasize that according to the results obtained (Fig.3.4) for the first level, which indicates teaching experience up to 3 years, we do not identify any subjects. In this vein, we highlight the results that indicate that only 9.1% of the surveyed managerial personnel have teaching experience from 3 to 10 years; 33.3% have teaching experience from 10 to 20 years, and, for the most part, 57.6% of the total number of subjects are managerial personnel with teaching experience of more than 20 years old.

The interviewed experimental group noted that it works in 2 higher educational institutions of the Republic of Moldova (Fig.3.5).

In which higher education institution do you work? (If there are several, please select the main one)

33 responses

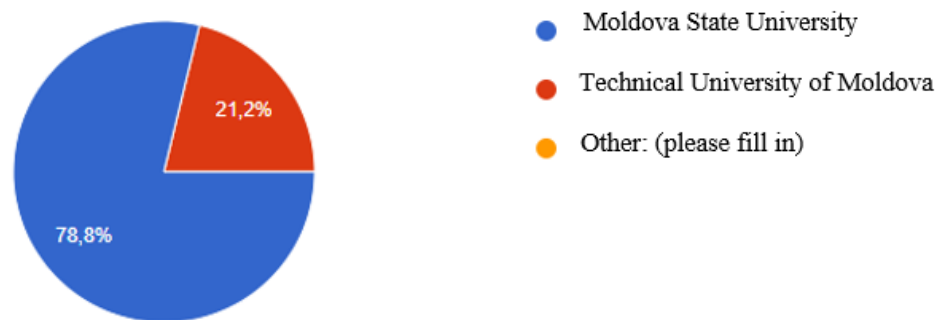


Fig. 3.5. Higher educational institution where management personnel work

According to the responses provided about the institution in which the subjects work, we note that out of the total number of subjects: 78.8% (26 people) work at the Moldova State University and only 21.2% (7) subjects work at the Technical University of Moldova.

3.2. The attitude of managers of higher education institutions (HEI) to distance learning.

The is very important answer to the question *What is the first thing that comes to your mind when you hear the phrase distance education?*

The answers represent a situation where management personnel know the details about the *distance learning*."Note that the answers are different.

In general terms, the members of the management staff indicate that the first things they think about when they hear the phrase *distance learning*"are as follows: *distance learning involves the maximum participation of the student in the learning process; the large access for studying and vocational training for multiple recipients; education that can be done by anyone at any time; great flexibility; the studying process conducted with minimal student presence; many activities in an online environment; a form of education that would be good to be introduced in the university's proposal; new experience; distance learning programs using ICT in accordance with the requirements of beneficiaries and the necessities of the labor market, through the flexibility of the higher education process and improving its efficiency, which can easily respond to crisis situations; online learning; quality education, as well as offline one; full student involvement in their own learning process and calls for the use of effective strategies for managing available resources; digitization; more students from outside the country; increased responsibility; autonomy; flexibility of schedule; innovation; flexible learning system; participation in the learning process of citizens of the Republic of Moldova who want to study remotely; the situation of force majeure; information technology; modern way of learning; the need for effective platforms.*

In the same context, some personnel of the management staff indicate that the first idea they think about when they hear the phrase "distance learning" is: *lack of quality; questionable quality; impossible; the need for a good Internet connection; lack of knowledge and indifference of students over time, etc.*

Figure 3.6 shows the results related to the emotions that the transition to distance learning can cause.

What emotions did the transition to the distance learning cause in you?

33 responses

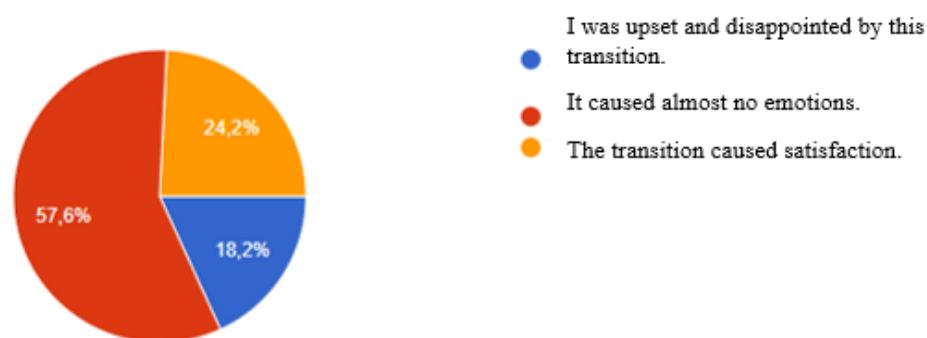


Fig. 3.6. Emotions caused by the transition to distance.

The results presented in Figure 3.6 show that for 57.6% of management personnel, the transition to distance learning did not cause any emotions; for 24.2% of the subjects, the transition to distance learning caused satisfaction and pleasure; and for 18.2% of management personnel, the transition to distance learning caused irritation and disappointment with this transition.

Management personnel indicated the training format (1 – face to face (full-time); 2 – no difference; 3-remote format), to which the statement comparing face to face and distance learning is best applied. The results are presented in Table 3.1.

Table 3.1. The table below shows various statements comparing face-to-face (full-time) and distance learning.

Statements comparing face-to-face (full-time) and distance learning:	Format of learning to which the statement applies to best: 1 - in a full-time format 2 – no differences; 3 – in a distance format		
	1 in a full- time format	2 no differences	3 in a distance format
It is more difficult to organize the work environment...	2	10	21
Psychologically more comfortable...	19	10	4
Less independent work, less homework...	8	21	4
More workload for students...	2	16	15
It is possible to get a better education...	17	15	1
It is more difficult to motivate yourself to study...	3	17	13
It is more convenient to combine study and work...	4	8	21
Students are more likely to miss classes...	16	8	9
Teachers are better at lecturing...	8	24	1
Causes more fatigue...	3	13	17
Students participate more actively in the classroom...	21	10	2
Teachers are better able to conduct seminars and laboratory classes...	29	4	-
It is easier to establish friendships and work relationships...	24	8	1
Teachers have more work to do...	1	13	19
It is more pleasant to study...	19	13	1

From the data included in Table 3.1, we could note that managerial personnel consider:

- The statement “*is more difficult to organize the working environment*” is best suited for learning formats in the following sequential order: *online education* – 21 subjects; *no difference* – 10 subjects; *face to face (full-time)* - 2 subjects.

- The statement „*Psychologically more comfortable*” is best suited for learning formats in the following sequential order: *face to face (full-time)* - 19 subjects; *no difference* – 10 subjects; *online education* – 4 subjects.

- The statement „*Less independent work, less homework*” is best suited for learning formats in the following sequential order: *no difference* –21 subjects; *face to face (full-time)* - 8 subjects; *online education* – 4 subjects.

- The statement “*More workload for students*” is best suited for learning formats in the following sequential order: *no difference* –16 subjects; *online education* – 15 subjects; *face to face (full-time)* - 2 subjects.

- The statement “*It is possible to get a better education*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 17 subjects: *no difference* –15 subjects; *online education* – 1 subject.

- The statement “*It is more difficult to motivate yourself to study*” is best suited for learning formats in the following sequential order *no difference* –17 subjects; *online education* – 13 subjects; *face to face (full-time)* - 3 subjects.

- The statement “*It is more convenient to combine study and work*” is best suited for learning formats in the following sequential order *online education* – 21 subjects; *no difference* –8 subjects; *face to face (full-time)* - 4 subjects.

- The statement “*Students are more likely to miss classes*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 16 subjects; *online education* – 9 subjects; *no difference* –8 subjects.

- The statement “*Teachers are better at lecturing*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 16 subjects; *online education* – 9 subjects; *no difference* –8 subjects.

The statement “*Causes more fatigue*” is best suited for learning formats in the following sequential order *online education* – 17 subjects; *no difference* – 13 subjects; *face to face (full-time)* - 3 subjects.

The statement “*Students participate more actively in the classroom*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 21 subjects; *no difference* –10 subjects; *online education* – 2 subjects.

The statement “*Teachers are better able to conduct seminars and laboratory classes*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 29 subjects; *no difference* –4 subjects; *online education* – 0 subjects.

The statement “*It is easier to establish friendships and work relationships*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 24 subjects; *no difference* –8 subjects; *online education* – 1 subject.

The statement “*Teachers have more work to do*” is best suited for learning formats in the following sequential order *online education* – 19 subjects; *no difference* –13 subjects; *face to face (full-time)* - 1 subject.

The statement “*It is more pleasant to study*” is best suited for learning formats in the following sequential order *face to face (full-time)* - 19 subjects; *no difference* –13 subjects; *online education* – 1 subject.

Figure 3.7 shows the results with reference to the opinion of management personnel about the price of distance learning.

In your opinion, the price of distance education should be...

33 responses

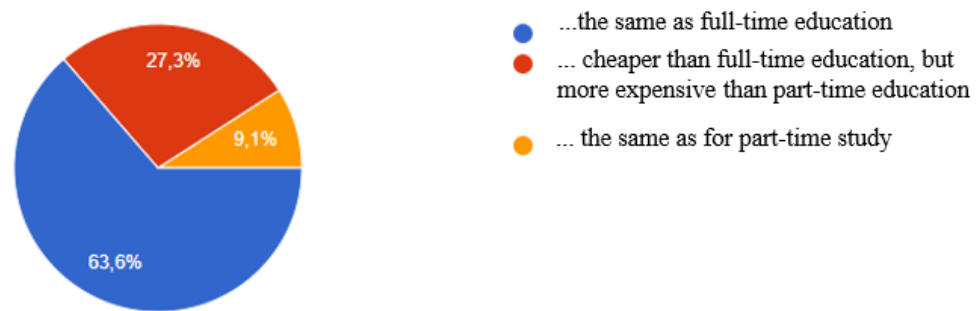


Fig. 3.7. Visions about the price of distance learning

From the results included in Figure 3.7, we could conclude that 63.6% of members of management staff declare that the price of distance learning should be the same as face to face one; 27.3% of management personnel claim that the price of distance learning should be cheaper than frequency, but more expensive than low-frequency; and consistently 9.1% management personnel believe that the price of distance learning should be the same as in the part-time study.

The penultimate paragraph of section 2 refers to the opinion of management personnel about “has the workload changed in distance learning compared to full-time education?” (Table 3.2).

Table 3.2. Vision of managerial personnel about the workload during the distance learning compared to face-to-face learning.

The workload during the distance learning compared to face-to-face learning	The extent to which the workload changed:				
	1	2	3	4	5
	1 – Yes, it has significantly increased; 2 – Yes, it has slightly increased; 3 – No, it has not changed; 4 – Yes, it has slightly decreased; 5 – Yes, it has significantly decreased.				
For students	12	8	10	6	1
For teachers	19	9	5	-	-

The results are presented in Table 3.2. This demonstrates that, from the point of view of managerial personnel, the workload during the distance learning has increased significantly compared to face-to-face education for both students and teachers.

The last paragraph of section 2 concerns the opinion of management personnel about the possibility of simplifying the admission procedure to distance learning programs (Fig.3.8).

Is it possible to simplify the procedure for admission to distance learning programmes?

33 responses

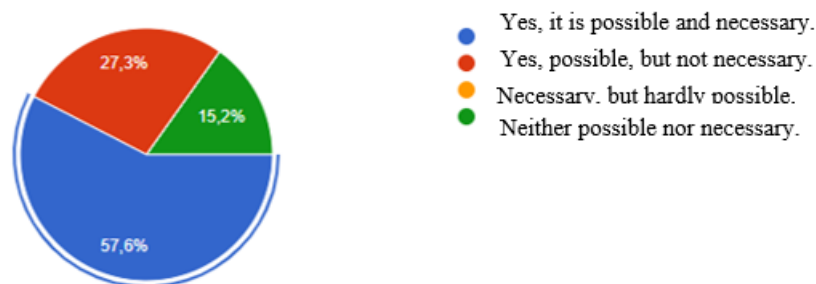


Fig. 3.8. The opinions about the possibility to simplify the procedure for admission to distance learning programs

Analyzing the data in Figure 3.8, we could note that 57.6% of the total number of management personnel surveyed claim that simplification of the admission procedure to distance learning programs is possible and necessary; 27.3% - consider that it is possible, but there is no need to simplify the admission procedure to distance learning programs; and 15.2% of the total number of management personnel surveyed claim that simplification of the admission procedure to distance learning programs is impossible and is not required.

3.3. Heads of higher educational institutions on the organization of distance learning.

Thus, the first system in this section refers to the opinion of management personnel regarding the ratio of synchronous and asynchronous interactions in distance learning (Fig.3.9).

In your opinion, what should be the ratio of synchronous and asynchronous interactions in distance learning?

33 responses

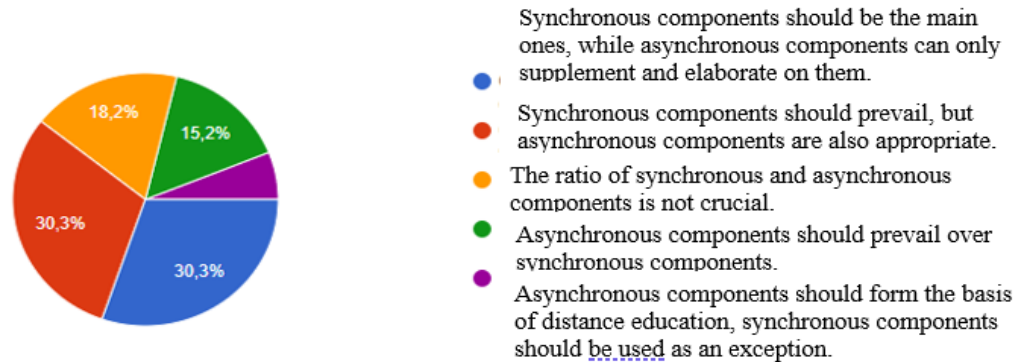


Fig. 3.9. Views on the relationship between synchronous and asynchronous interactions in distance learning

According to the analyzed results (Fig.3.9), 30.3% of the surveyed managerial personnel claim that synchronous components should be the main ones in distance learning, whereas asynchronous components can simply complement and develop them. The same number of respondents, 30.3%, claim that synchronous components should prevail in distance learning, but asynchronous components are also appropriate, while in sequential order, 18.2% of the surveyed managerial personnel claim that in distance learning, the ratio of synchronous and asynchronous components is not decisive for the effectiveness of distance learning and can be any. At the same time, 15.2% of management personnel believe that asynchronous components should prevail over synchronous ones in remote training, although synchronous components are important, too. Only 6.1% of respondents claim that asynchronous components should form the basis of distance learning in remote training, and synchronous components should be used as an exception.

The supervisors evaluated the methods and technologies for further accounting of courses and remote consultations. The results are presented in Table 3.3.

Table 3.3. Evaluation of methods and technologies for further accounting of courses and remote consultations

Evaluation of the following methods and technologies for additional accounting of lectures and consultations in a distance format:	The signification of choice: 1 - I consider it unacceptable; 2 – I consider it appropriate; 3 – I cannot evaluate		
	1	2	3
Joining an administration/dean's office representative to an online class	14	11	8
Conducting classes exclusively on platforms with video recording of the teacher's presence and activity	10	22	1
Student assessment of teacher performance	4	27	2

The results included in Table 3.3 on the *evaluation of methods and technologies for further accounting of courses and remote consultations* indicate that: 14 members of management staff consider the presence of a representative of the administration/department of the dean's office on the online course unacceptable; 11 management personnel consider it appropriate to have a representative of the administration/department of the dean's office on the online course; and 11 management personnel the cadres indicated that they could not evaluate this item.

In this context, the statement about *conducting classes exclusively on platforms with video recording of the teacher's presence and activity* is considered relevant by 22 respondents; 10 managerial personnel consider it unacceptable, respectively, one subject indicated that he could not evaluate this element. By the way, answering the third question, 27 management personnel consider it appropriate to evaluate the performance of teachers by students; 4 management managers consider this type of assessment unacceptable; and 2 management managers indicated that they could not evaluate this item.

One of the points of the survey refers to the necessity to creation of the specialized software system (educational content management system, LMS) for distance learning (Fig.3.10).

Is there any need for specialized software systems (learning content management systems, LMS) for distance education?

33 responses

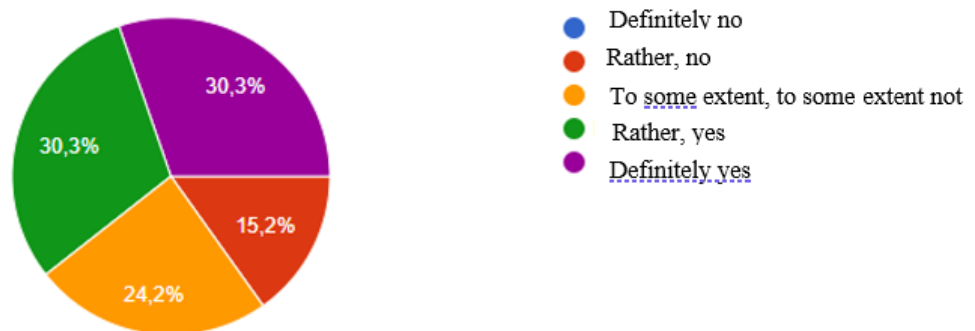


Fig. 3.10. Opinions of management personnel on the necessity to create a specialized software system for distance learning.

According to the results presented in Figure 3.10, for the degree to which the creation of a specialized software system (educational content management system, LMS) for distance learning is required - not a single subject answered - *categorically no*; 15.2% of management personnel answered - *rather no*; 24.2% of management personnel answered - *to some extent, to some extent not*; 30.3% of experimental the subjects answered - *rather, yes* and *definitely yes*. In other words, well over half of the group of managers interviewed consider the extent to which there is a need for a specialized software system (learning content management systems, LMS) for distance learning to be high.

The next item in section 2 refers to the opinion of managers on whether academic integrity would be affected by the transition to distance learning (Figure 3.11).

Does the transition to distance learning affect the situation with academic integrity?

33 responses

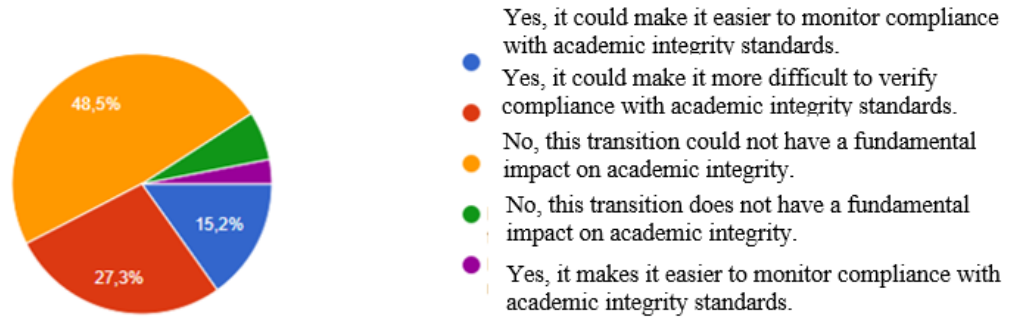


Fig. 3.11. Opinions on the influence of the transitions to distance learning to the situation with academic integrity.

From Figure 3.11 we see that there are different views among managers on the extent to which the academic integrity situation would be influenced by the transition to distance learning. Thus 15.2% of respondents say - yes, it would make it easier to monitor compliance with academic integrity standards; 15.2% of respondents say - yes, it would make it more difficult to monitor compliance with academic integrity standards; 48.5% - no, this transition would have no fundamental impact on academic integrity; 6.1% - no, this transition has no fundamental impact on academic integrity; 3.0% of the total group surveyed say - yes, it makes it easier to monitor compliance with academic integrity standards.

Figure 3.12 shows the results with reference to the intellectual property rights of teachers who would create content for study in distance education would require special regulation.

Do the intellectual property rights of teachers who create learning content for distance education require special regulation?

33 responses

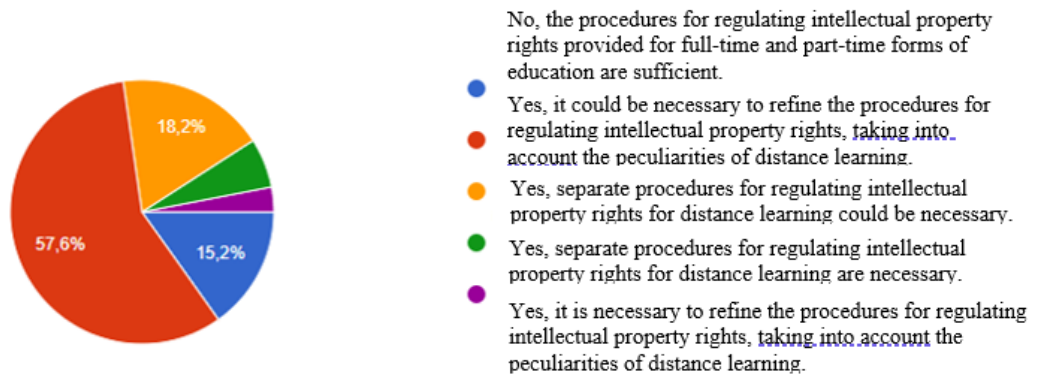


Fig. 3.12. Intellectual property rights of teachers who will create content for distance learning

The results presented in Figure 3.12 show that for 15.2% of managers no, the regulation of intellectual property rights provided for full-time and non-full-time forms of education are sufficient; 57.6% of managers answer that, yes, it would be necessary to improve the regulation of intellectual property rights, taking into account the particularities of distance education; 18.2% - no, the regulation of intellectual property rights provided for full-time and non-full-time forms of education are sufficient.

3.4. Managers on workload during distance learning.

The first item in this section concerns managers' opinion on the main reason for choosing a distance learning system. (Figure 3.13).

What should be the main reason for choosing a distance learning system?

33 responses

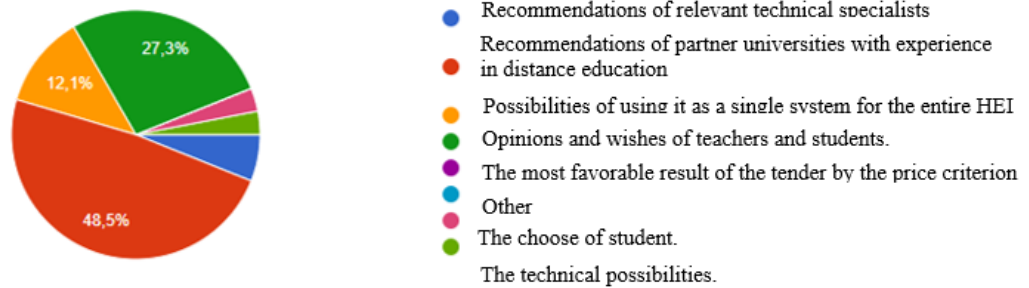


Fig. 3.13. The main reason for choosing a distance learning system.

On this topic, according to the results analyzed (Figure 3. 13), a large number of interviewed managers - 48.5%, claim that the main reason for choosing a distance learning system should be - recommendations of partner universities with experience in the field of distance learning; 27.3% - opinions and wishes of teachers and students; 12.1% - possibilities of use as a single system for the whole higher education institution; 6.1% - recommendations of relevant technical specialists; and 6.0% indicated other reasons: student choice; existence of technical possibilities for potential students and their desire to learn.

Another item of the survey refers to the extent to which it is necessary and appropriate to invest resources in the development of distance certified courses, as well as in the development of monographs, textbooks, etc. (Figure 3.14).

Is there any need and opportunity to pay for the development of certified distance learning courses, as well as the development of monographs, manuals, etc.

33 responses

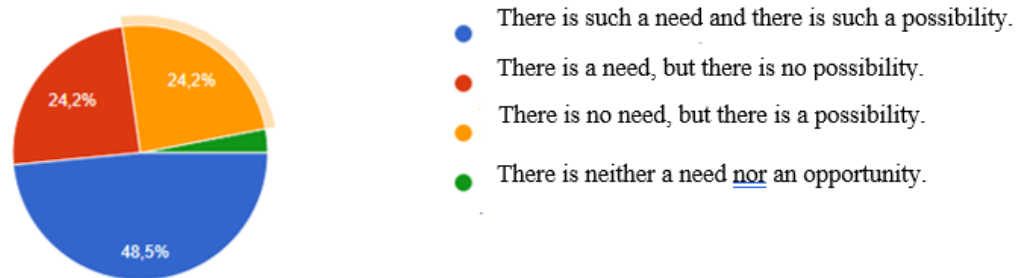


Fig. 3.14. Opinions of management personnel on the need to invest resources for the development of certified online courses, as well as for the elaboration of monographs, textbooks, etc.

According to the results presented in Figure 3.14, the views of managers on the need to invest resources in the development of certified distance learning courses, as well as in the development of monographs, textbooks, etc. are as follows: 48.5% - there is such a need and there is such a possibility; 24.2% - there is a need, but there is no such possibility; 24.2% - there is no need, but there is a possibility; 3.0% - there is neither a need nor a possibility.

Figure 3.15 shows the views of managers on the need to create a separate organizational structure for distance learning.

Does distance learning require a separate organizational structure?

33 responses

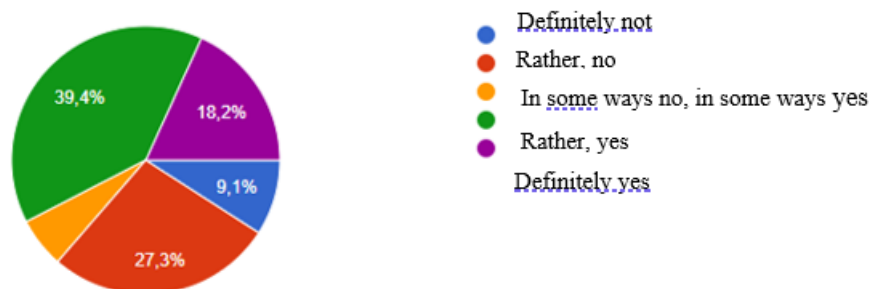


Fig. 3.15. Opinions of management personnel on the need to create a separate organizational structure for distance learning.

From the results presented in Figure 3.15, we conclude that the views of managers on the need to create a separate organizational structure for distance learning are as follows: 39.4% people - *rather yes*; 27.3% - *rather no*; 18.2% - *definitely yes*; 9.1% - *definitely no*; and only 6.1% - opt for the answer *in some ways no, in some ways yes* on the need to create a separate organizational structure for distance learning.

Managers also gave answers on the need to create a separate structural unit for distance learning. The results are presented in Table 3.4.

Table 3.4. Vision of the need to create a separate structural unit for distance learning.

Is there a need to create separate structural unit for distance education:	The signification of choice: 1 – Yes, definitely; 2 – It has some sense; 3 – Definitely not		
	1	2	3
Support and maintenance of the distance learning system	18	13	2
Logistical support of distance learning	21	11	1
Management of distance learning	17	13	3
Methodological support of distance learning	19	14	-
Ensuring information security for distance learning	26	7	-

The data in Table 3.4. are illustrated graphically in Figure 3.16.

Is there a need to create separate structural unit for distance education?

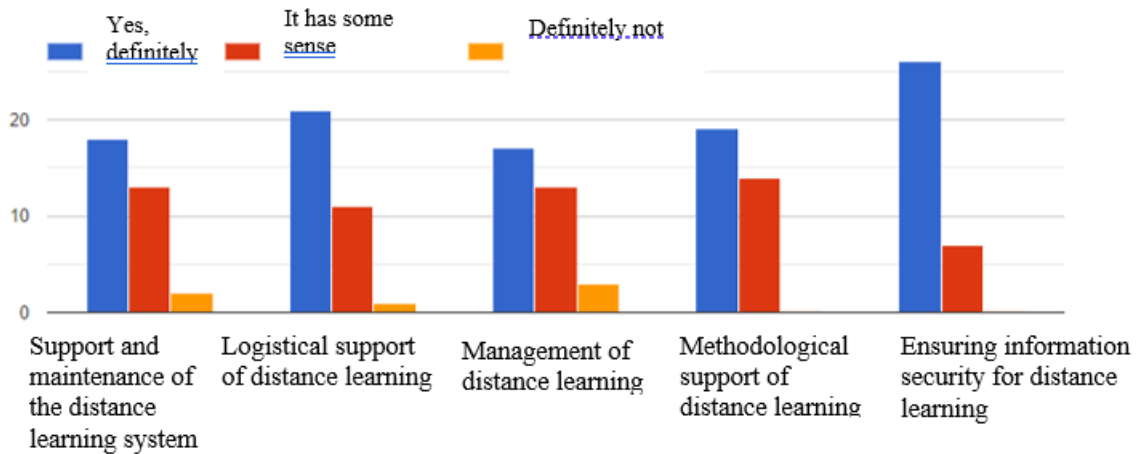


Fig. 3.16. Opinions of management personnel on the need to create a separate structural unit for distance learning.

Managers have different views on the *need for a separate structural unit for distance learning* (Table 3.4 and Figure 3.16). Thus, most managers consider *categorically necessary*: - support and maintenance of the distance learning system (18 persons); logistical support for distance learning (21 persons); management of distance learning (17 persons); methodological support of distance learning (19 persons); information security of distance learning (26 persons).

Still another item of the survey refers to the extent to which there would be a need and opportunity for additional financial expenditure for the purchase of servers, software, video labs and other technical means for distance learning (Figure 3.17).

Is there any need and opportunity for additional financial expenditures for the purchase of servers, software, video laboratories and other technical means for the distance format?

33 responses

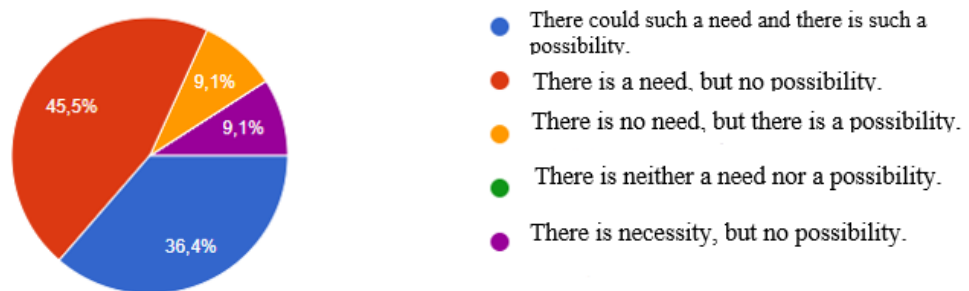


Fig. 3.17. Opinions of management personnel on the necessity and expediency of additional financial costs for the purchase of servers, software, video labs and other remote format hardware

Here, the results presented in Figure 3.17, with the opinions of managers about the need and opportunity for additional financial expenditure for the purchase of servers, software, video labs, and other technical means for distance learning are as follows: 45.5% - there would be a need, but there is no such possibility; 36.4% - there would be such a need and there is such a possibility; 9.1% - there would not be a need, but there is a possibility; 9.1% - there is a need, but there is no such possibility.

3.5. Managers on the organization of control and accounting for distance learning

Thus, we will analyze managers' opinions on the extent to which they agree with some statements concerning distance learning (Table 3.5).

Table 3.5. Vision of management staff about the distance learning

Distance education...	The signification of choice: 1 – Completely disagree; 2 – Rather disagree; 3 – Somewhat agree, somewhat disagree; 4 – Rather agree; 5 – Completely agree.				
	1	2	3	4	5
... better meets the requirements of modern society than traditional (classroom) education	6	6	13	4	4
... does not allow to build trustful communication with students	2	12	9	3	7
... is only an imitation of the educational process	12	7	6	5	3
... is universal for almost all specialties of higher education	8	12	11	1	1
... does not provide the same quality of knowledge, skills and abilities as traditional (classroom) education	7	7	6	7	6
... is the higher education of the future	4	5	12	6	6

Analyzing the results presented in Table 3.5. we deduce that: there is a large number of managers - 13 persons, who *partly agree, partly disagree* that distance education responds better to the requirements of modern society than traditional (auditorium) education; there is a large number of managers - 12 persons, who *rather disagree* that distance education does not allow to build trustful communication with students; the number of managers is high - 12 persons, who *completely disagree* that distance education is only an imitation of the educational process; the number of managers is high, who *rather disagree* (12 persons) or *partly agree, partly disagree* (11 persons) that distance education is universal for almost all majors in higher education. The opinions of managers differ with regard to the statement: *distance education does not offer the same quality of knowledge, skills and abilities as traditional (classroom) education*, as follows: 7 persons - *completely disagree*; 7 persons - *rather disagree*; 6 persons - *partly agree, partly disagree*; 7 persons - *rather agree*; 7 persons - *completely agree*.

For the statement: distance education is the higher education of the future, managers have the following views: 4 persons - *completely disagree*; 5 persons - *rather disagree*; 12 persons - *partly agree, partly disagree*; 6 persons - *rather agree*; 6 persons - *completely agree*. From the responses to this statement, we conclude that most managers partly agree and partly disagree that distance education is the higher education of the future.

In conclusion we note that managers expressed their opinions about the effectiveness of distance education and managers' views on distance education differ. At the same time, some suggestions were made with reference to the way the survey was designed, indicating that for some items the answers were not appropriate, forcing to select one of the alternatives offered. Other suggestions refer to the fact that this type of education can be alternative, then by impact it will be necessary to assess the timeliness and the expected effect.

Section IV. Employers about distance education

4.1 General information about the sample of employers

Seventeen people, employers of graduates of the State University of Moldova, were involved in the study. The group of respondents was randomly selected, the basic principle of the group's constitution being accessibility (how accessible they were to be contacted and to have the questionnaire distributed to them) and willingness to be involved in the survey.

These incidental criteria led to the composition of the group, according to the pre-established indicators.

In terms of gender, 59.9% women and 47.1 men participated in the survey. We consider this to be a gender balance, which will not accentuate certain gender-dependent findings in the responses. The call to employer partners was not accompanied by certain restrictions or limiting access from gender positions. All partners were encouraged to participate in the survey: both women and men (Fig. 4.1).

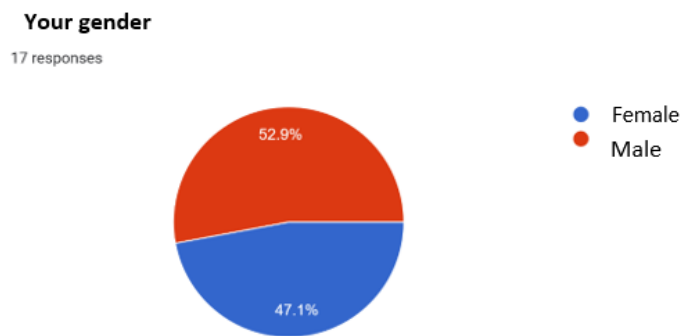


Fig.4.1. Gender representativeness of respondents

In terms of the field of professional activity, we note the presence of representatives from 8 fields: education, health and social work; financial and insurance activities; trade; manufacturing; agriculture, forestry and fishing; scientific and technical activities; other services (Fig.4.2).

What kind of economic activity is your organization engaged in?

Please choose the most suitable one, if there are more choose the main/ favorite.

7 responses

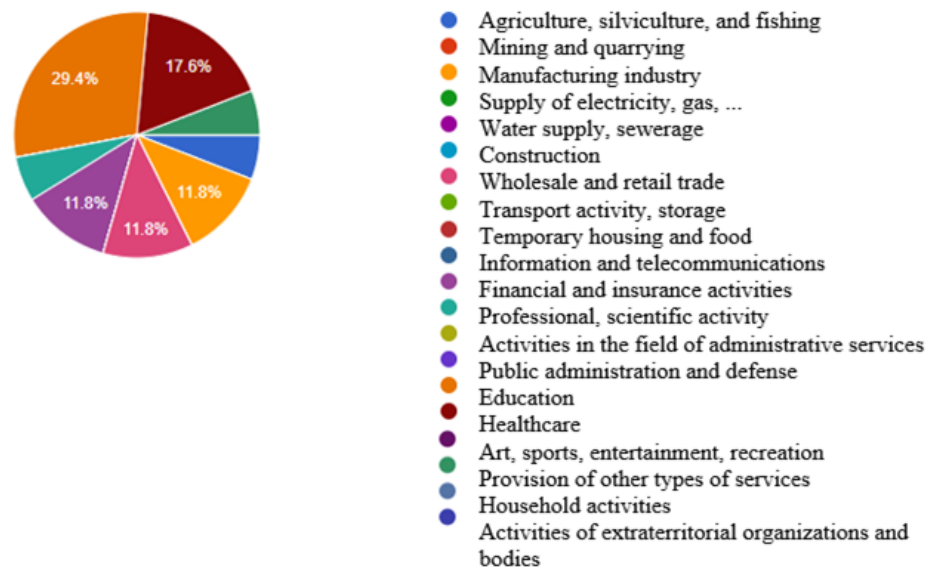


Fig.4.2. The field of professional activity of respondents

In the group of respondents, we identified representatives of various types of institutions: from very

small enterprises (about 41%) to small enterprises (17.6%) (Fig.4.3).

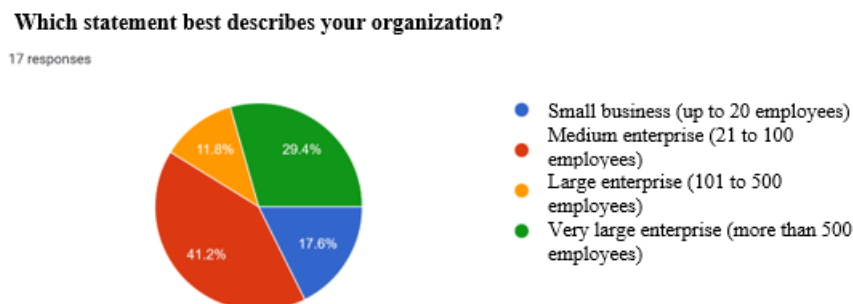


Fig. 4.3. Organization size

Diversity is also observed in terms of the form of ownership of the institution/organization where they are employed, but private sector organizations predominate (47.1%) (Fig. 4.4). In this respect respondents have diverse business experience. Obviously, those employed in state institutions lack this experience.

Your organization has...

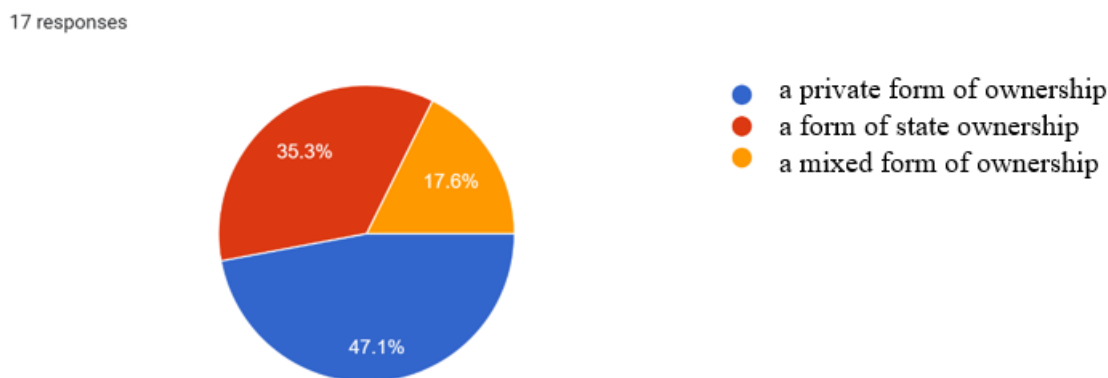


Fig. 4.4. Business experience

In terms of education and qualification level, more than half of the respondents (58.8%) have a Master's degree, 17.6% reported having some higher education, or even a scientific degree (Fig. 4.5). No respondent had a degree lower than bachelor's degree.

Studiile d-stra.

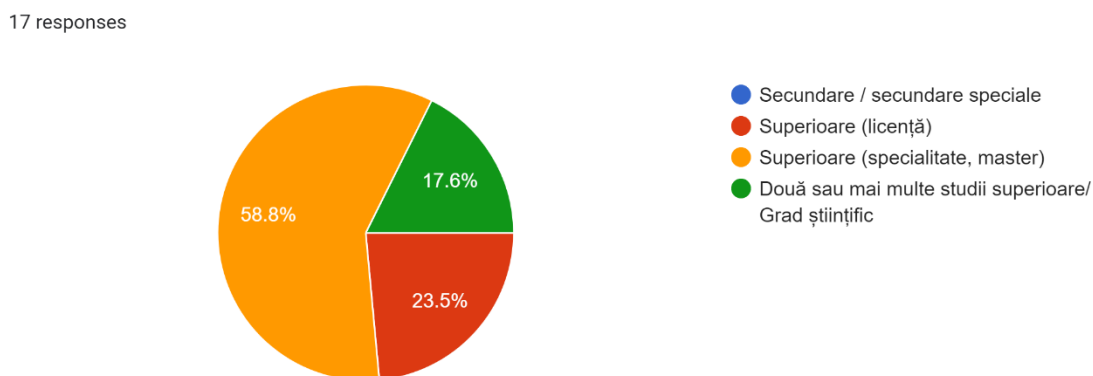


Fig. 4.5. Respondent studies

We believe that the respondents were able to answer the questions in an informed manner, knowing

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quite well how an organization works, as most of them, 88.2% of them are in managerial positions, having a different managerial stage (Fig. 4.6).

Experiența dumneavoastră în funcții de conducere.

17 responses

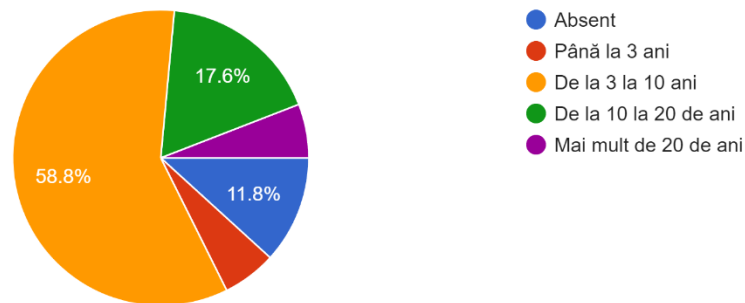


Fig. 4.6 Work experience in management positions

Being representatives of various fields of activity, however, a good part of the respondents consider that they need specialists in economics and management.

Based on the results presented, we deduce that the group of employers was diverse, but we cannot say that it was representative due to a small number of respondents.

Asked to rate how employees in the company are involved in their work: online, or with presence, priority is given, or rather, work with presence in the institution is requested. We deduce this from the analysis of the data - 76.5% request that almost all or most employees perform their job functions at work, but at the same time we note that some work can also be done remotely (Fig.4.7).

In your organization,

17 responses

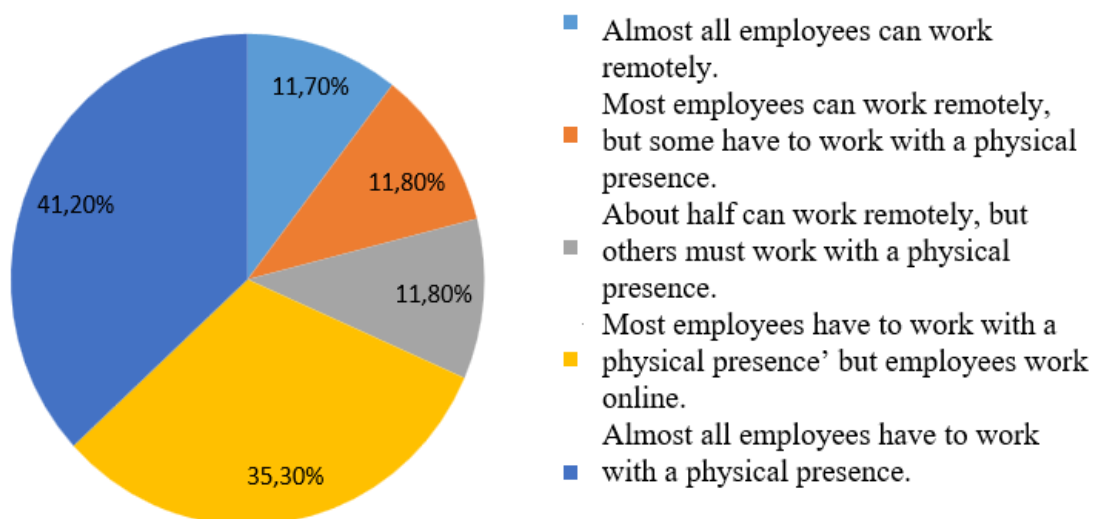


Fig. 4.7. Remote work opportunities

4.2 Experience of distance education

The association of distance learning is vastly different and relates to devices (computers); appreciation of studies (quality, but also low quality and efficiency); diversity of conditions (flexibility, opportunities, alternatives); pandemic.

When asked about their experience of distance learning, only about a quarter answered that u had studied at a distance (we assume that this is related to their age and the time when they did their studies), the rest of the respondents had different experiences: from a program completed completely online to studying only some courses (Fig. 4.8).

Do you have any distance learning experience?

17 responses

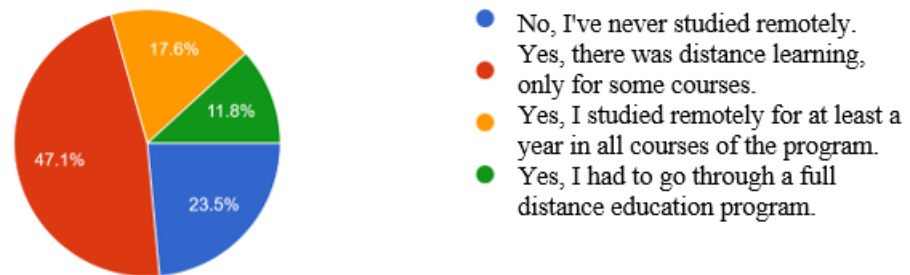


Fig.4.8. Respondents' experience of learning from a distance

Another situation is when they state whether someone in their family has studied at a distance. In this case all noted involvement of children or other family members in online activities, either at school, or higher education (Fig. 4.9).

Has anyone from your family studied at a distance?

17 answers

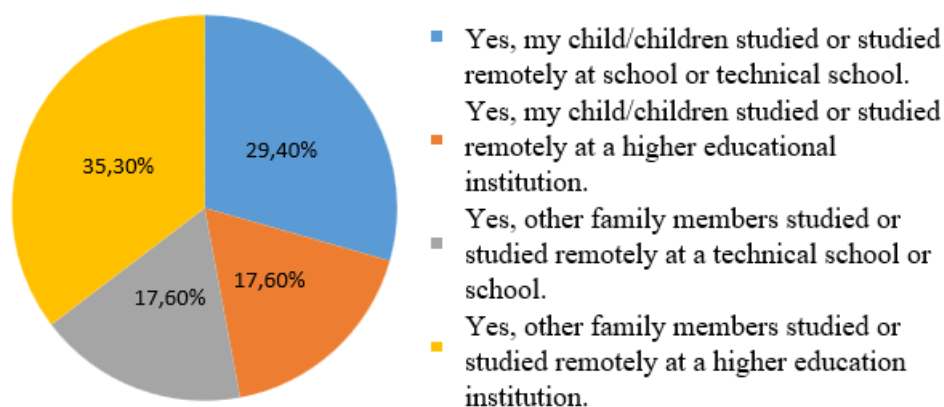


Fig. 4.9 Intention to recommend distance studies

Respondents' perception of the price of distance learning is, in our view, less cost-effective. Only about 1/3 of respondents think that the price should be the same as in full-time education, while 2/3 think it should be either the same as in part-time education, or between the price of full-time and part-time education (Fig. 4.10).

In your opinion, the price for the form of distance higher education should be...

17 responses

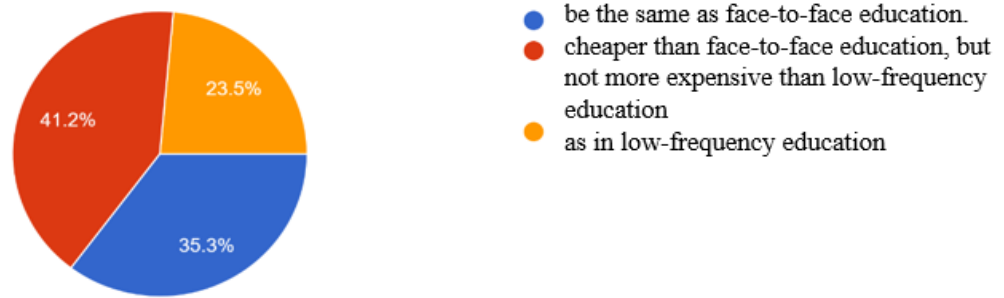


Fig. 4.10 *The perception of the price of distance learning*

The configuration of the employees of the partner enterprises differs in terms of how they obtained or are obtaining their education. 35.3% of respondents claim either that they do not know how their employees have learned, or that they have learned by attendance, but some 59% say that there are one or more employees in their organization who have done, or are doing, their studies at a distance (Fig. 4.11).

Do you have employees or subordinates who have studied or are studying in distance learning?

17 responses

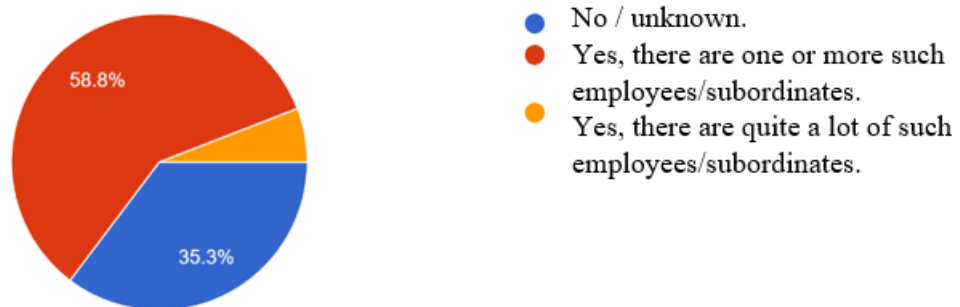


Fig. 4.11 *Employees of the company who studied remotely*

Opinions also differ on the quality of distance learning. Nobody rates distance learning studies higher in quality than those with attendance, the majority 76.5%, consider that there is no difference in quality, but still about 1/4 consider distance learning studies lower in quality than those with attendance (Fig. 4.12).

In your opinion, the fact that a person studied in a distance format

17 responses

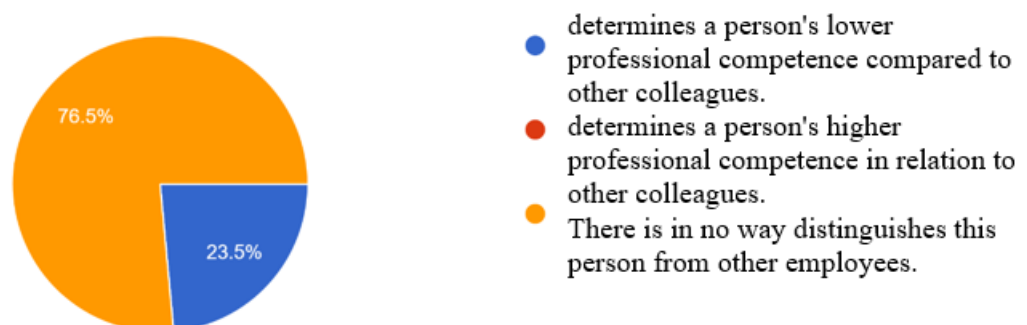


Fig. 4.12. *The assessment of remote professional training*

When asked which form of training they would prefer for further education, we find that the responses were divided: some considered the traditional form more preferable because it is more familiar to them; more quality; better accepted by others; provides fundamental knowledge and skills, others would prefer distance learning because it saves time, you learn more easily, it is a modern option, it provides modern knowledge and skills. From what has been presented, we see percentage wise, the persistence of stereotypes and pragmatic reflections: time saving and easier study (Fig.4.13).

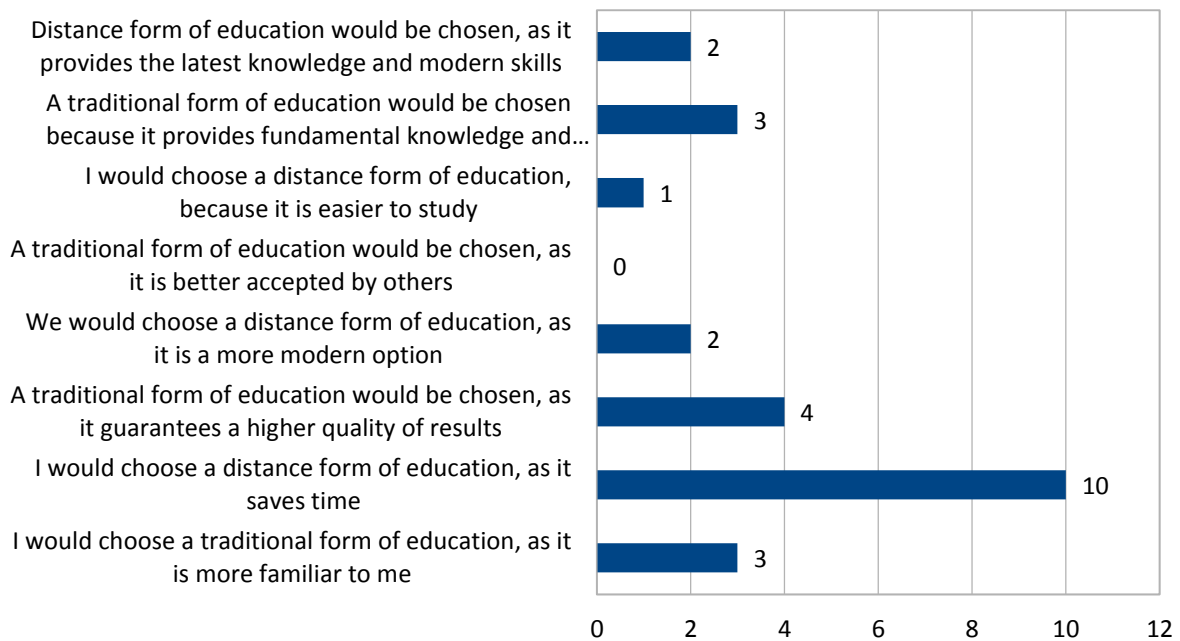


Fig.4.13 *Types of form of training for further education*

4.3 Attitudes and evaluation of distance education

The form of education and training could also influence employment to some extent. It is true that the majority of respondents noted that the mode of study would not influence the employment decision - 70.6%. However, about 1/3 mentioned that they would be more careful in hiring those who had studied at a distance: 5.9% said they would give preference to those who had studied traditionally (when compared to other assessment criteria the situation of candidates is the same), and 23.5% said they would check more carefully the professional qualities of those who had studied at a distance (Fig.4.14).

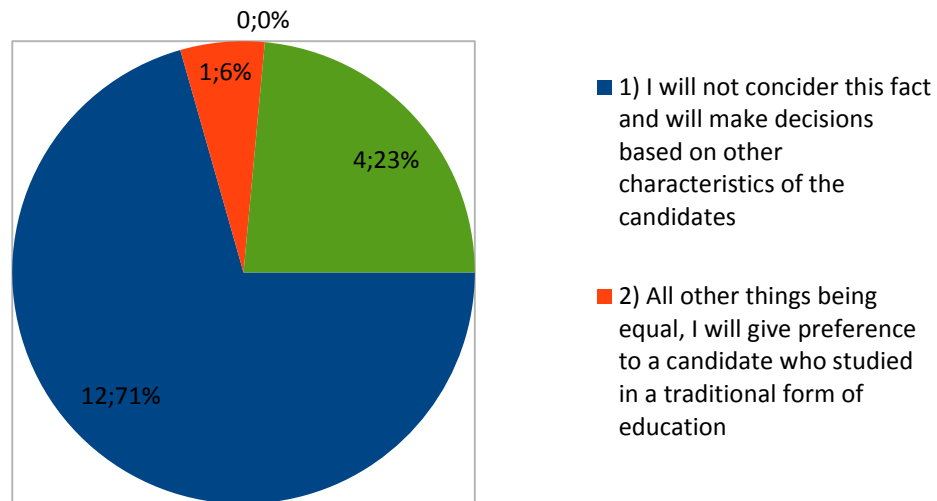


Fig.4.14. Hiring people who studied at a distance.

The control question, which highlights the respondent's attitude towards distance learning, was about the choice of a particular mode of study, if advice was given to a close person. 76.5% responded that they would advise their loved one to follow a traditional mode of education (Figure 4.15).

If a loved one - one of your children, relatives, friends - asked for advice when choosing a form of education, what would you advise?

17 responses

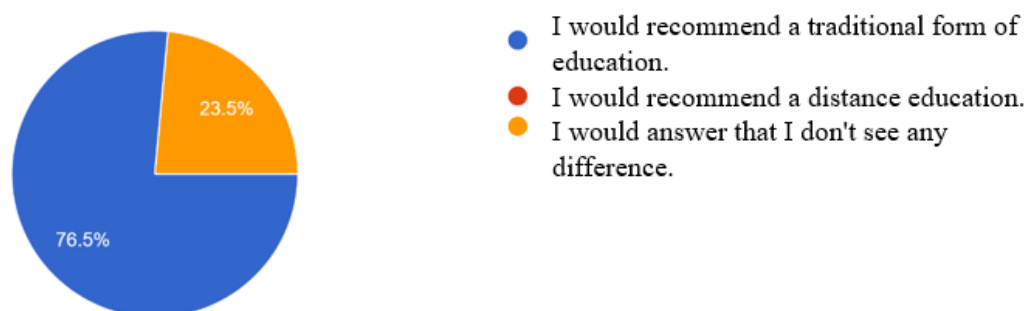


Fig.4.15. Intention to recommend near distance learning.

Although in the previous questions on the quality of training and attitudes towards distance learning there was a positive and non-discriminatory attitude, however, when the emphasis was placed on the affective aspect - advice for a close person, we inferred a reservation for distance learning. This finding denotes an unequivocal position: the respondent expresses his/her attitude through the perception of an expected positive response. Perhaps he does not want to be reflected

in a negative image, not to be considered retrograde, conservative, or not in step with modern technologies.

Concerns about the difficulties that may arise when employees have studied at a distance are reflected in the graph below.

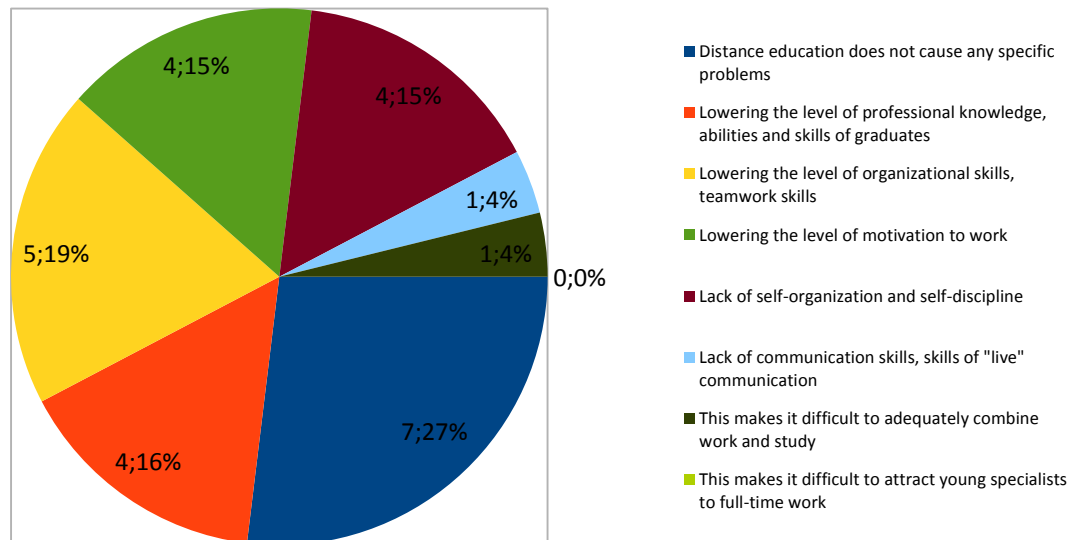


Fig. 4.16. *Potential problems that distance learning could generate.*

From the analysis of the data, we conclude that employers are nevertheless concerned about the quality of distance learning: lower levels of knowledge and skills; lower levels of motivation for work; difficulties in combining studies with work and even difficulties in attracting specialists for full-time employment. Concerns about negative effects were expressed by 50% of respondents, while some 41% said they did not see any problems.

We consider, however, that at the moment the issue of distance learning is a relatively new one for employers. There is no consolidated opinion and attitude towards the different aspects of this way of training. People have not yet formed convictions about the different aspects of the issue. This is presumably due to a lack of concrete and lasting experience (people learn mainly from experience). Our assertion is based on the data provided by the questionnaires and is sometimes contradicted by the answers given to various questions. Thus, when asked about the advantages for employers of a mass transition to distance learning, the respondents give contradictory opinions to those expressed in the question on the problems: they consider the transition to combine study and work to be beneficial. Distance learning is also seen positively because new technologies are learned, information is managed more quickly, the speed of completing tasks increases, etc.

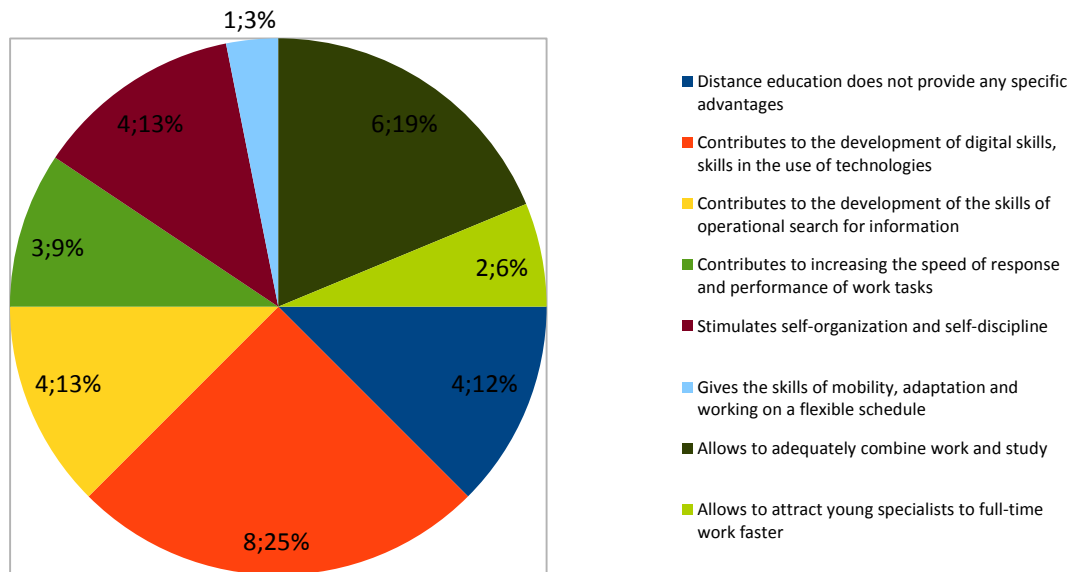


Fig.4.17 Advantages of distance learning

A hesitant attitude and uncertain appreciation of distance learning can be seen from the complex graphical representation reflecting several appreciations of distance learning, including the expression of the opinion that distance learning is a perspective of higher education (Figure 4.18).

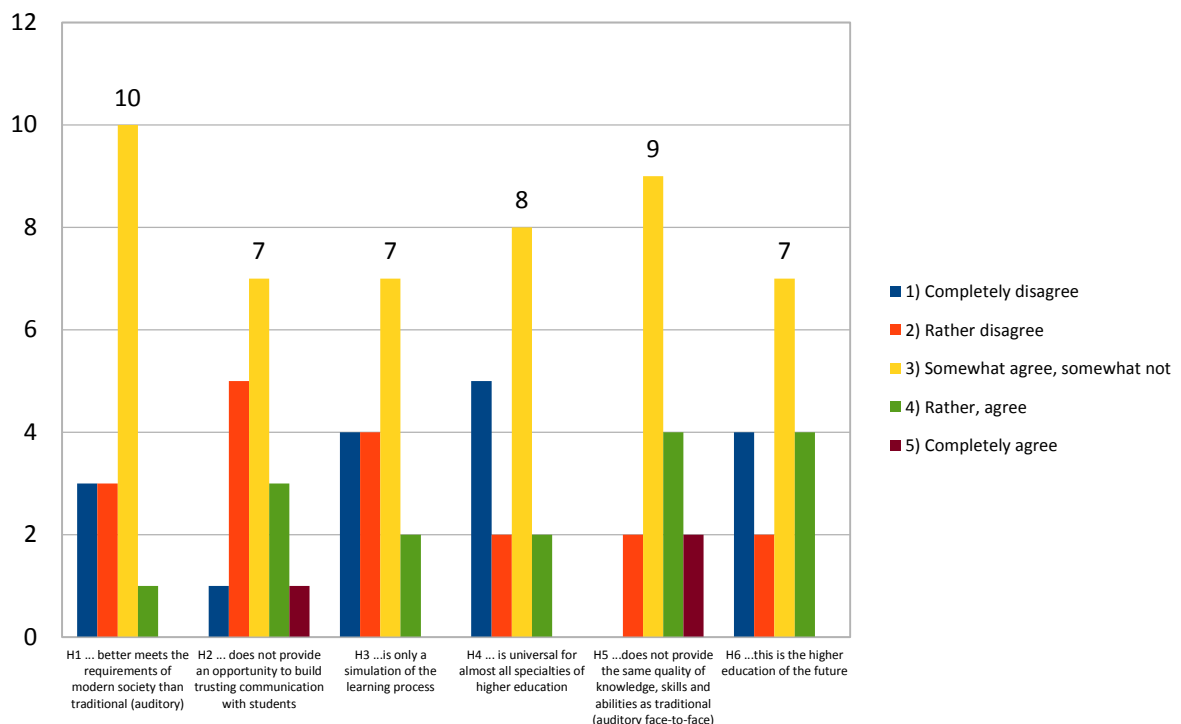


Fig.4.18. Multi-aspect assessment of distance learning

The open-ended answers we selected from the questionnaire are also a manifestation of a reserved attitude:

- I believe, that distance learning needs improvement

- Only after a few online trainings (2020-2022) I realized how many resources and time we can save, to get the necessary skills!
- The smell of the book can't be played through the monitor, but business can't be romantic
- Distance learning is welcome for professional development and not for all specialties. The motivation for distance learning would be competitions to have continuous training for performance in different fields.

4.4 Control, accounting and participation in the organization of distance education

We believe that employers are not yet aware of their role and how they can be involved in the vocational training of future employees when they study at a distance, possibly because they are not clearly aware of the defining aspects of these forms of training, nor do they have any experience of them. The attitude of hesitation is manifested in the fact that no employer responded affirmatively to the categorical statement about not involving them in distance learning, choosing (about 30%) the variant: rather not. 35% also chose a variant that indicates uncertainty: in some respects, yes, in some respects no, and only about 12% responded that it is definitely necessary to involve employers in distance vocational training (Figure 4.19).

Does the form of distance learning require greater involvement of employers in the process of organization and control?

17 responses

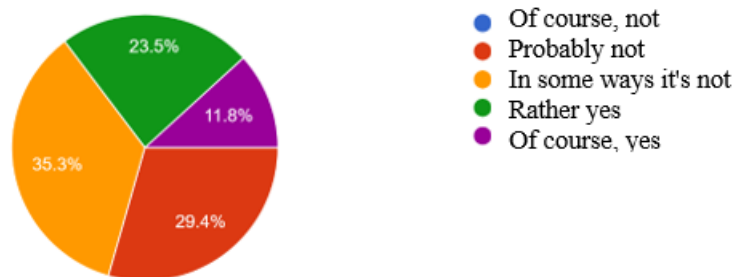


Fig.4.19. *Involvement of employers in the organization of distance learning*

An openness has been shown to support distance learning. Some 60% said that their organizations have interest and opportunities to support course publishing and other learning resources. Some 30% said there is interest but no opportunity, which is plausible because the motivational aspect is present, and no action can be taken to identify resources. Equally encouraging is the fact that no one said they had neither interest nor opportunity. We accept as a result of the diversity of opinions the response of 11% who said that opportunities could be found but there is no interest (Figure 4.20).

Do you think it is interesting and possible for the organization you represent to pay for the development of certified remote courses, online monographs, textbooks, etc.?

17 responses

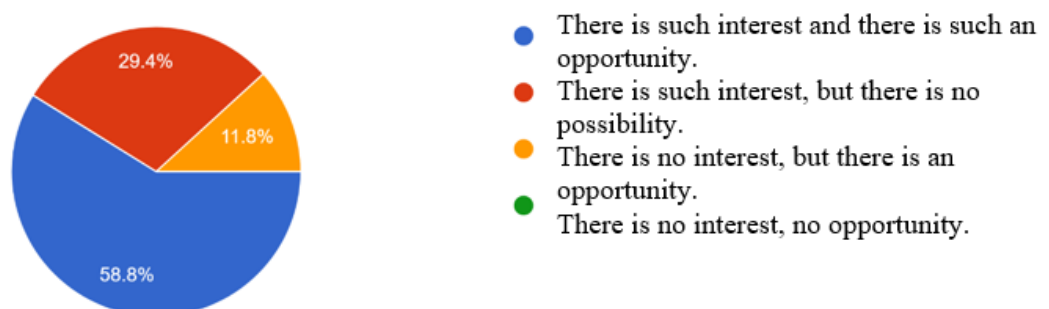


Fig.4.20 *Employers' support for remote education*

There were different opinions on how employers should be involved in the implementation of distance learning. We are pleased that a good proportion of respondents mentioned that they should be involved in setting the content (although this does not necessarily reflect involvement in the organization and delivery of distance learning). About 1/3 of respondents consider that employers should be involved in teaching as experts (Figure 4.21).

What type of employer participation should there be in the organization and implementation of distance learning?

17 responses

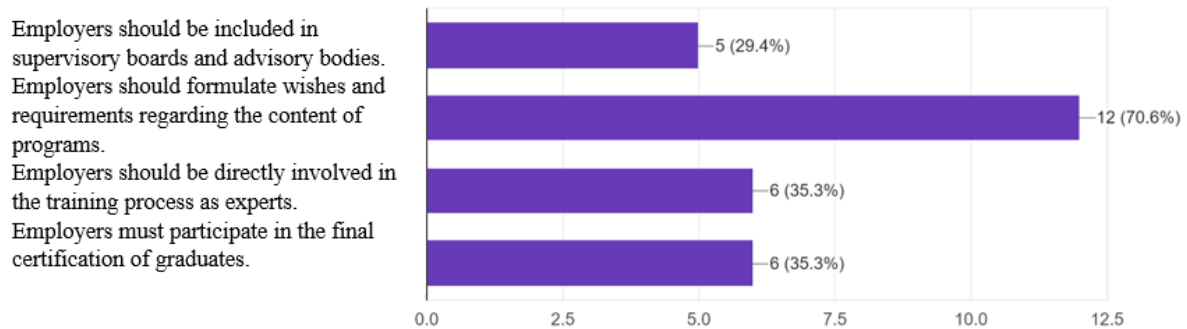


Fig.4.21 A way to support distance learning by employers.

The majority of employers interviewed showed a positive attitude and willingness to get involved in supporting distance learning by providing the technology base (Figure 4.22).

Will there be interest and opportunity to sponsor the organization that you represent when buying servers, software, creating laboratories, and other technical means for the format at a distance?

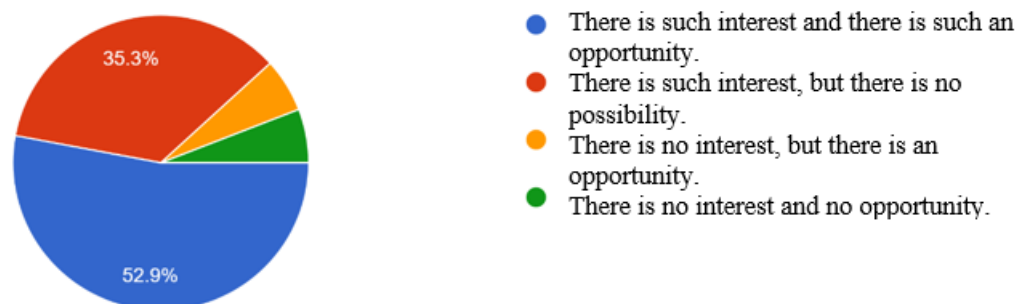


Fig.4.22. Involvement of employers in the creation of technical conditions for the organization of distance learning

From what has been reported, we deduce that companies have experience engaging in distance learning programs for their own employees. Some 82% stated that they participate in online training, of which more than 23% in programs developed by themselves and around 60% in programs they access from external providers (Figure 4.23).

Does your company participate in corporate trainings through remote programs?

17 responses

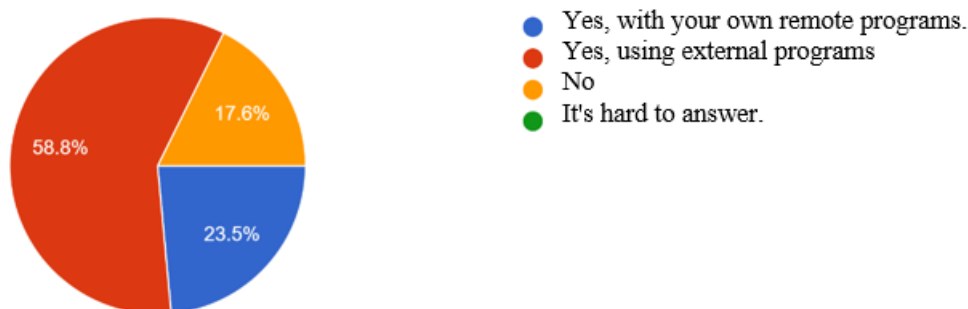


Fig.4.23. *Involvement of organizations in employee training using remote programs*

4.5 Staffing needs

There is a shortage of professionals in the labor market in the Republic of Moldova, with more than 40% of respondents saying that they would need to fill about half of the positions they have in the company. About 30% mentioned that the shortage of young specialists is insignificant, and another 30% mentioned that they have no shortage of young specialists, in a situation where about 53% want to maintain their number of employees and 41% want to expand their number of employees (Figure 4.24 and 4.25).

Do you feel a shortage of young specialists?

17 responses

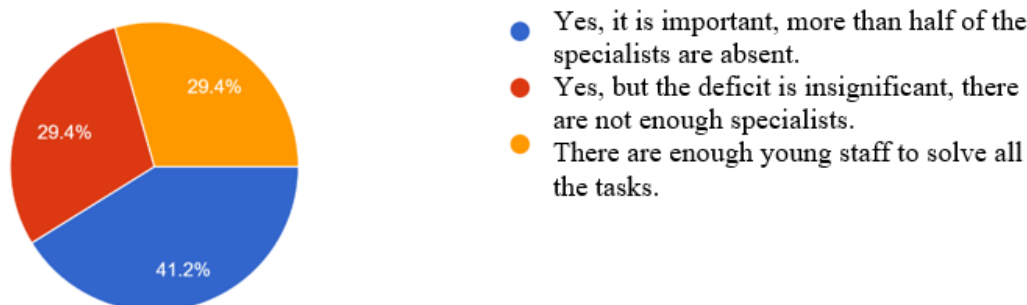


Fig.4.24. *Providing institutions with young professionals*

Your organization plans in the near future (in the coming years)

17 responses

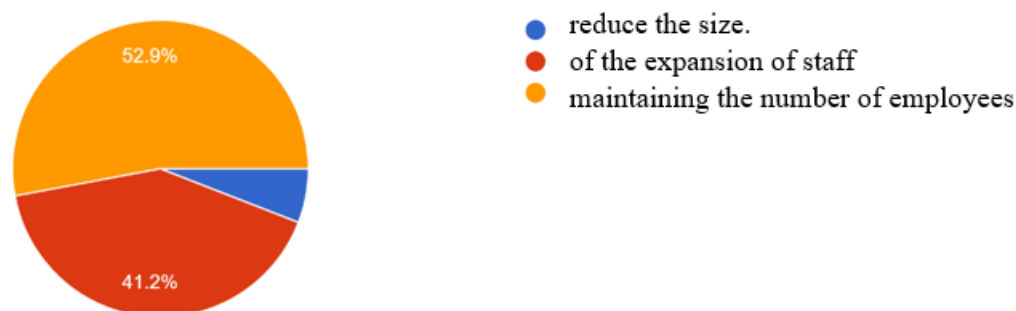


Fig.4.25. *Intentions to strengthen and expand the institutions in which they work.*