Iceland Liechtenstein Norway grants

STRENGTHS AND WEAKNESSES OF DISTANCE EDUCATION

RESEARCH REPORT

TEDIS

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The project "Tools and techniques supporting lecturers and teachers in distance learning" (TEDIS) benefits from funding of approximately EUR 147,000 received from Iceland, Liechtenstein, and Norway under the EEA grants.

ABOUT THE RESEARCH

The research is carried out as part of the project “Tools and techniques supporting lecturers and teachers in distance learning”. Its main objective is to analyse the organisations of the project partners and their environment in terms of the strengths and weaknesses of distance education. The acquired knowledge will contribute to the development and implementation of improvements.

According to the project assumptions, the data collected and conclusions drawn will help to adapt the project results, i.e. e-learning courses, to the current expectations and needs of university lecturers and secondary school teachers in the field of distance teaching methods and techniques.

The following report provides a brief overview of the partners in the TEDIS project, a description of the methodology used and the results and interpretation of each partner’s data. The report ends with a summary including the topics of the prepared courses.

TEDIS

TOOLS AND TECHNIQUES SUPPORTING TEACHERS AND LECTURERS IN DISTANCE LEARNING

PARTNERS

WSB MERITO UNIVERSITY IN POZNAŃ

leading private university in Wielkopolska, part of the WSB university group. It offers first cycle, second cycle, long cycle, and postgraduate courses in areas such as economics, management, law, computer science, and education. It brings to the project knowledge of the Polish academic environment and experience in distance education.

UNIVERSITY OF AKUREYRI

public university in Iceland. It offers courses in areas such as law, psychology, education, and business. The University of Akureyri has many years of experience in distance education. In addition to this experience, it brings to the project knowledge of the local context and Icelandic academia.

EDULABOR TRAINING AND ADVISORY CENTRE

educational institution operating in Kalisz since 2014. It specializes in postgraduate teacher education and courses in special education, didactics, and educational management. It is also active in mediation, training (for business and education), and research. EDULABOR's contribution to the project is its knowledge of the teacher and headmaster community and the realities of distance teaching in the field of pedagogy.

METHODOLOGY: RESEARCH QUESTIONS

The study was designed to answer the following research questions. Two of them (question 1 and 2) are the main questions of the study. Question 3 is a supplementary question, arising from the function that the study is intended to serve: to provide a reference point for the course preparation process.

QUESTION I

What are the strengths and opportunities of distance education in the organisations of the Project Partners and their environment?

QUESTION II

What are the weaknesses and problems of distance education in the organisations of the Project Partners and their environment?

QUESTION III

Do the data obtained confirm the previously adopted course topics or do they suggest modifications?

METHODOLOGY: TOOLS AND SAMPLE

Each partner conducted the study using an online survey (CAWI) sent to the target research group. The survey questions were prepared by each partner taking into account the characteristics of their environment and therefore differ from each other. In addition to the survey, analysis of existing data was used (including analysis of previous research and national reports). Qualitative data generated during the expert discussion at the project meeting and interviews with representatives of university lecturers and teachers were also used.

The sample was selected on the basis of the availability of respondents, while maintaining certain criteria. All respondents from the WSB Merito and UNAK environment are university lecturers employed by these institutions (in the case of WSB Merito, lecturers from other universities in the WSB group were also included). The respondents from the EDULABOR environment are secondary school teachers.

The WSB Merito study (conducted as part of the Brand Attributes Analysis carried out at this university) included 866 lecturers, while the UNAK study included 60. EDULABOR surveyed 52 secondary school teachers.

RESULTS AND CONCLUSIONS

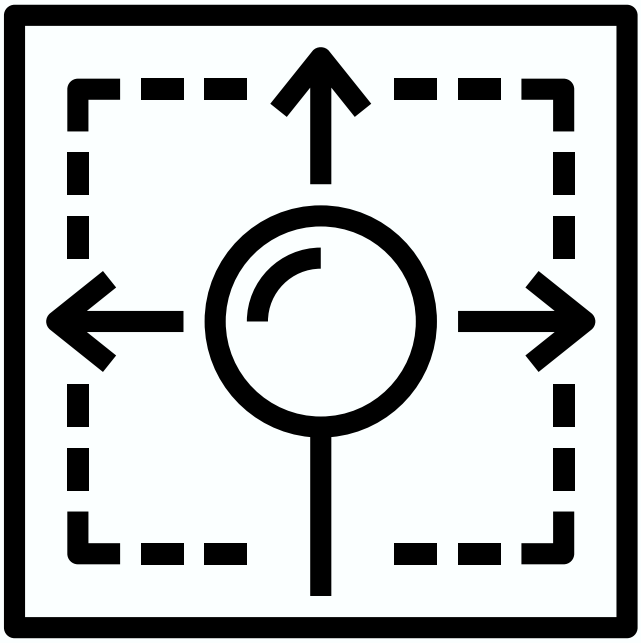
study sample: university lecturers n = 866

WSB MERITO – AREAS

The identified strengths and weaknesses of distance education in the WSB Merito environment relate to the following areas:

- skills of lecturers
- existing problems
- distance teaching tools
- support for university staff
- training needs

The remainder of the report focuses on the indicated areas.



WSB MERITO – SKILLS OF LECTURERS

The strengths of distance education in the WSB Merito environment include the fact that the **general self-assessment of lecturers with regard to the skills required for distance education is at a fairly good level** (average 4.46 out of 5). Many areas (e.g. conducting lectures remotely) are highly rated.

Strength: fairly high average self-assessment of lecturers' skills

On the other hand, **it is possible to indicate areas where self-esteem is lower**. These include conducting practical classes (4.38/5), **using Moodle** (4.14/5), and **using Virtual Laboratories** (3.50/5 – this is a dedicated technological solution for IT studies).

Weakness: areas where self-assessment of skills is lower: Moodle, Virtual Laboratories

WSB MERITO – SKILLS OF LECTURERS

It is also worth noting how **lecturers' skills** are perceived by students. As nationwide research shows, **these skills are mostly perceived as average** (47.6% of respondents) or even low (23.4%). [FLOW Research Centre, 2020].

Weakness: students' assessment of lecturers' skills

WSB MERITO – EXISTING PROBLEMS

Some of the problems should be considered quite rare, which is a strong point of distance education. They are presented in the chart below:

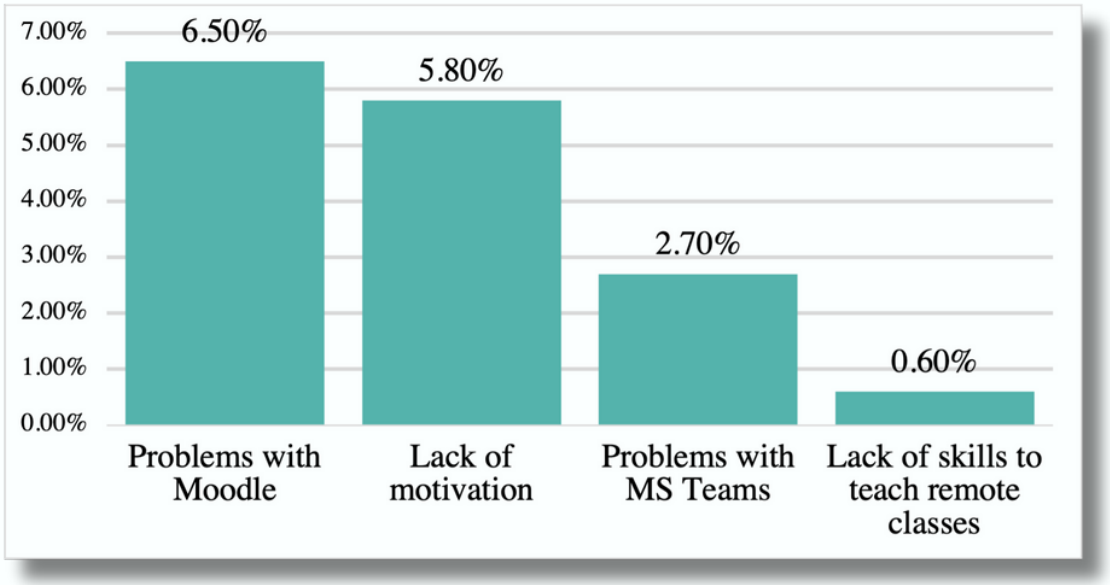
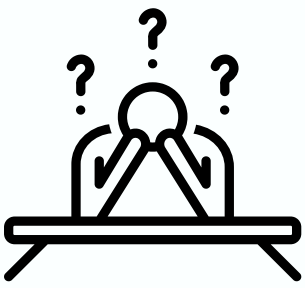


Chart 1. Rare problems – percentage of respondents who encountered them



Strength: Some of the problems are relatively rare

WSB MERITO – EXISTING PROBLEMS

However, **there are problems that more than half of respondents have encountered**. This is a situation where **students do not turn on their cameras** during distance classes (56.7%) and there is no direct contact with students (50.6%). The most common problems are shown on the chart below. The expert discussion highlighted a **common denominator of these problems – they relate to student engagement**. It was also pointed out that not turning on the cameras may not be a sign of lack of engagement and there may be many other reasons. However, such an interpretation can be seen in conversations with some lecturers.

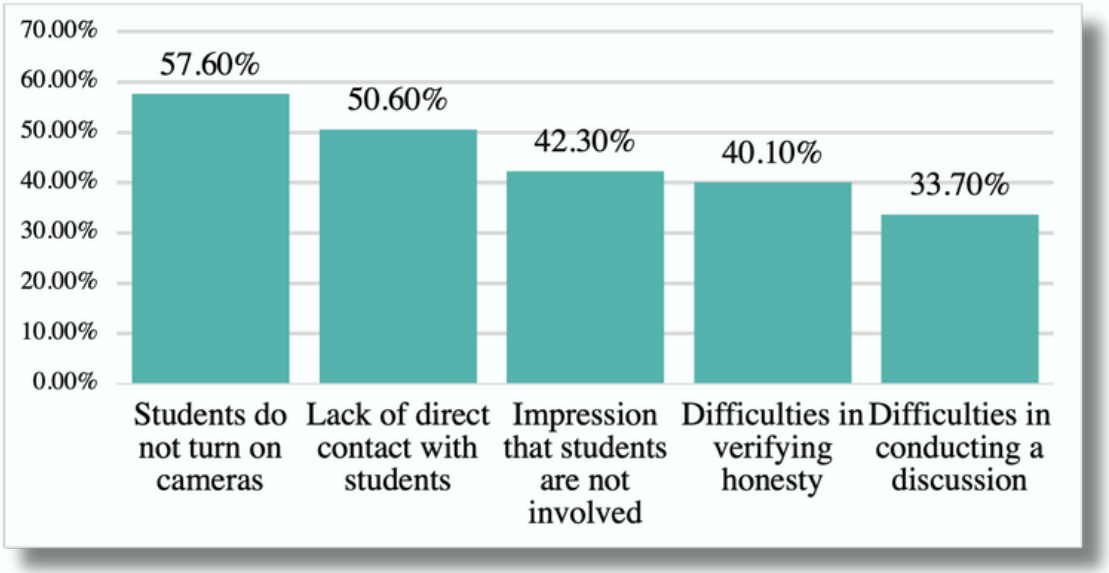
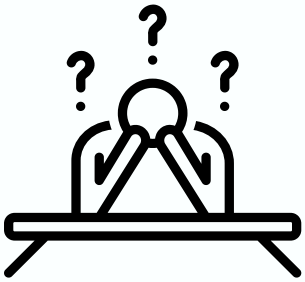


Chart 2. Frequently occurring problems – percentage of respondents who encountered them

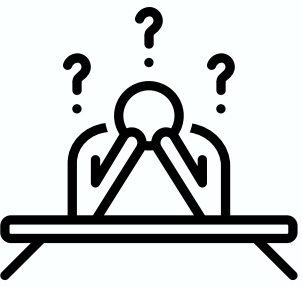


Weakness: frequently occurring problems relate to student engagement and contact

WSB MERITO – EXISTING PROBLEMS

It is worth noting that there is a statistically significant relationship ($p<0.05$, contingency coefficient = 0.305) between the perception of difficulties in conducting active forms of teaching and the feeling that students are disengaged. In the group of respondents who did not experience difficulties in conducting active forms of teaching, the feeling of disengagement among students was reported less frequently – 40.8% of respondents compared to 76.7% in the group who experienced difficulties in conducting active forms of teaching. This suggests that **proficiency in active forms of teaching quite significantly reduces the feeling that students are disengaged**. It is similar with experiencing difficulties in conducting discussions during classes. Again, there is a statistically significant relationship with the impression that students are disengaged ($p<0.05$, contingency coefficient = 0.291).

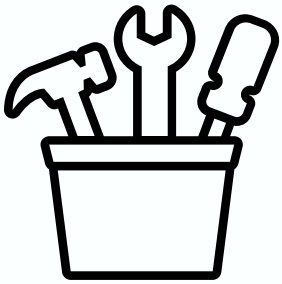
Nationwide research also points to other problems associated with distance learning at an academic level. These include problems such as: **poor contact with the lecturer** (45.12% of respondents) or **reduced effectiveness** (54%). This suggests that problems with feelings of disengagement and difficulties in maintaining contact are experienced not only by lecturers but also by students.



Weakness: lecturers are disengaged and difficult to contact

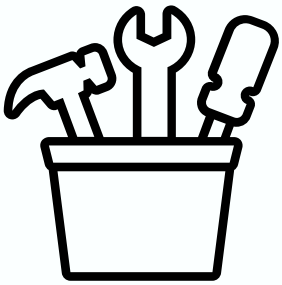
WSB MERITO –TOOLS FOR DISTANCE TEACHING

The strengths associated with distance teaching tools include a **fairly good overall rating for MS Teams** (average = 4.32 out of 5). This result varies between the different universities from the WSB group. In some universities it is very high (e.g. WSB in Warsaw, where the average is 4.65).



Strength: relatively high rating of MS Teams as a distance teaching tool

The weakness appears to be the significantly **lower average score of the Moodle e-learning platform**, which is 3.90 out of 5. It is also worth noting the universities in the WSB group where this score is even lower – e.g. DSW (3.25) or WSB Gdansk and Gdynia (3.60).

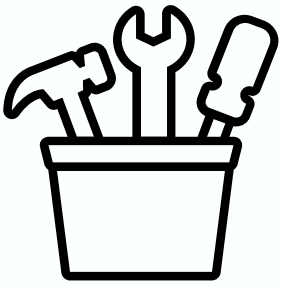


Weakness: relatively low rating of Moodle as a distance teaching tool

Moodle's lower score is a significant weakness as MS Teams and Moodle are intended to be functionally complementary with MS Teams as a videoconferencing tool and Moodle as a material transfer and credit management tool.

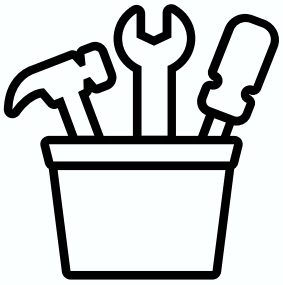
WSB MERITO – TOOLS FOR DISTANCE TEACHING

Strengths and weaknesses are also evident in the assessment of individual elements and features of Moodle and MS Teams. In the case of Moodle, respondents appreciated the **posting of materials** (mean score of 4.32/5) and **assignments** (4.18). MS teams scored well on **conducting remote lectures** (4.62), **presenting materials during classes** (4.49), and **conducting practical classes** (4.42).



Strength: some features and elements of Moodle and MS Teams are scored well

However, there are features and elements of these two platforms that were rated lower. These include (**Moodle**) the **appearance** (3.54), **ease of navigation** (3.57), **communication with students** (3.58), and **checking achievement of learning outcomes** (3.98). In the case of MS Teams, the functions or elements with lower scores were: **checking achievement of learning outcomes** (3.98) and **working in breakout rooms** (4.11). It is worth noting that both tools were rated lower for verifying the achievement of learning outcomes. This suggests that evaluation in the broadest sense is a particular problem area in distance education. During the expert discussion, it was emphasised that **the problem is exacerbated** by the growing interest in **AI content generation** (e.g. chatGPT).



Weakness: lower scores for some features and elements, particularly in terms of verifying the achievement of learning outcomes and the issue of using AI.

WSB MERITO – TOOLS FOR DISTANCE TEACHING

The results regarding distance teaching tools also show some interesting relationships. Among other things, there is a statistically significant relationship between the use of tests on Moodle and difficulties in verifying students' honesty ($p<0.05$, contingency coefficient = 0.168). **In the group of respondents who used Moodle tests**, 47.4% **experienced difficulties in verifying students' honesty**. Among the respondents who did not use Moodle tests, this percentage was 30.5%.

The data also show **the importance of developing the ability to use remote working tools.** It turns out that the better the self-assessment of the ability to use a particular tool, the higher the average rating of the tool. **The more familiar we are with a tool, the better we rate its individual functions and elements** (for Moodle: $p<0.05$, $R=0.597$, for MS Teams: $p<0.05$, $R=0.325$).

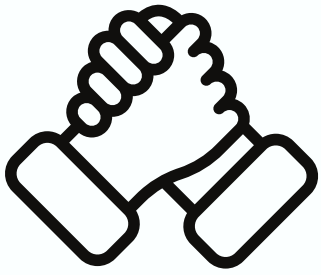
A nationwide report [University of Warsaw, 2020] suggests that the use of distance teaching tools **can be time consuming** compared to standard face-to-face teaching. However, during the expert discussion it was pointed out that **this may be due to the low level of skills in using remote tools** (the report was produced at a time when university teachers were just becoming familiar with remote working tools and therefore their skills in this area were still relatively low). **With a high level of proficiency** in the use of remote tools, **time consumption can be the same or even lower than in on-site education.**

WSB MERITO – SUPPORT FOR UNIVERSITY STAFF

Support for university staff is – as the data show – a very important area. **It has a real impact on the overall assessment of the work at WSB Merito University** (methodological support: $p<0.05$, $R=0.512$, support in the field of teaching tools: $p<0.05$, $R=0.422$). Areas that were rated well by respondents include **methodological training** (4.06) and **tool training** (4.04). The respondents are also satisfied with **the support for remote teaching tools** (4.24).

Strength: high ratings of methodological and tool training as well as support in the field of distance teaching tools

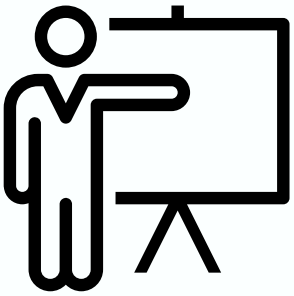
However, support in some areas was rated lower. These include support in **preparing activities for students** (e.g. quizzes, assignments, group projects) (3.57), **support in preparing courses on Moodle** (3.79), and **support in choosing the right teaching method** (3.79).



Weakness: support in some areas is rated lower

WSB MERITO – DEMAND FOR TRAINING

The overall demand for training is not very high (3.13 out of 5). This is certainly a weakness, but **it also suggests that perhaps a more attractive training offer should be provided to lecturers.**



Weakness: not very high general level of demand for training

The chart below shows the willingness to participate in training on a particular topic. It is worth paying attention to the most frequently selected areas:

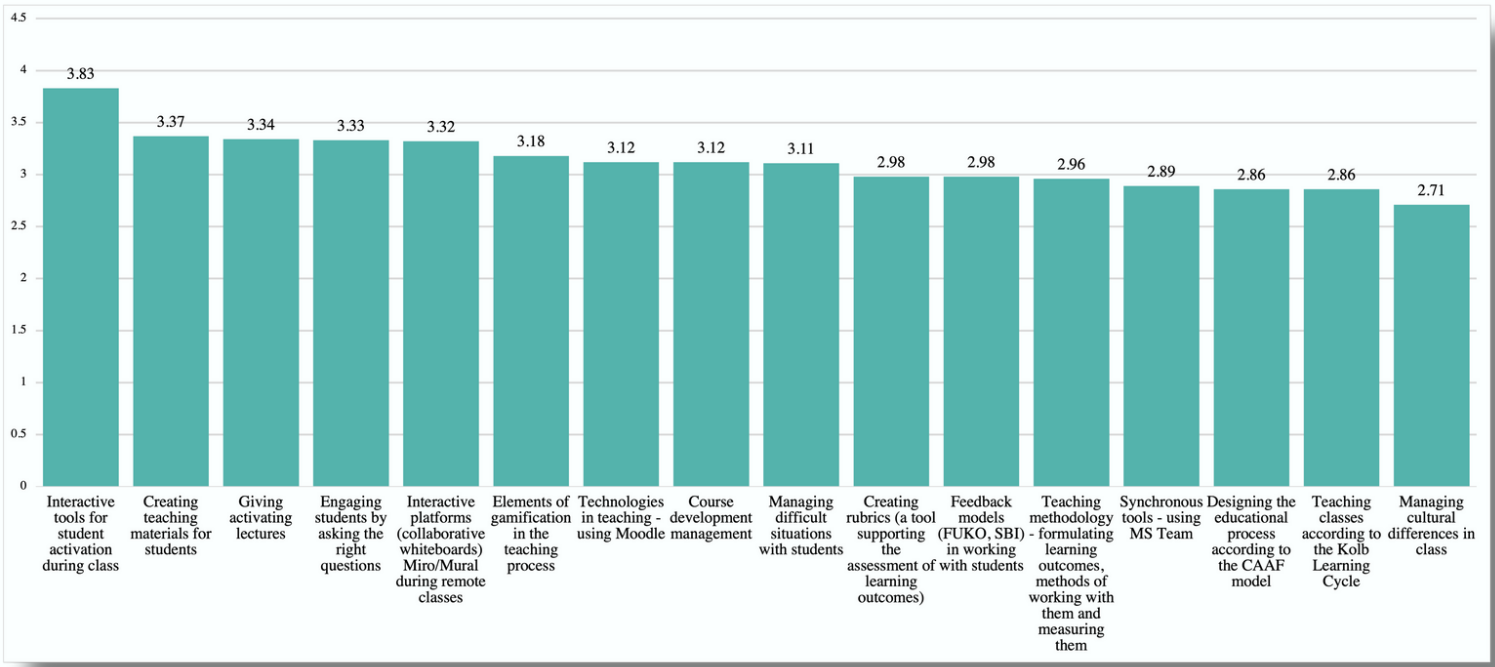


Chart 3. Demand for training on a given topic (scale 1-5, where 5 is the maximum willingness to participate in a given training)

WSB MERITO – SUMMARY

When interpreting the above data, **two points of key importance come to the foreground**. These represent areas where action should be taken to eliminate or minimise the weaknesses identified. These activities will be supported by the strengths identified during the study.

The first area is **engagement**. It seems that in the case of distance education, there is **a two-sided problem of perceived inadequacy of engagement in the didactic process** – students point to problems of communication, while teachers report difficulties in activating teaching. It is therefore necessary to **provide teachers with effective teaching tools and training to develop digital competences**. The solution to this problem is supported by the fact that, among other things, **there is a high demand for training in interactive activation tools or giving activating lectures**. A positive perception of existing trainings on methodology and tools is certainly also important.

The second area relates to **assessment and evaluation**. The low ratings of the available assessment tools and the frequent difficulties in verifying the fairness of grades indicate **the importance of providing teachers with the latest knowledge on the tools and methods for assessing and evaluating the achievement of learning outcomes**. This is particularly relevant in an era of widespread access to generative **artificial intelligence**.

RESULTS AND CONCLUSIONS

Háskólinn á Akureyri
University of Akureyri

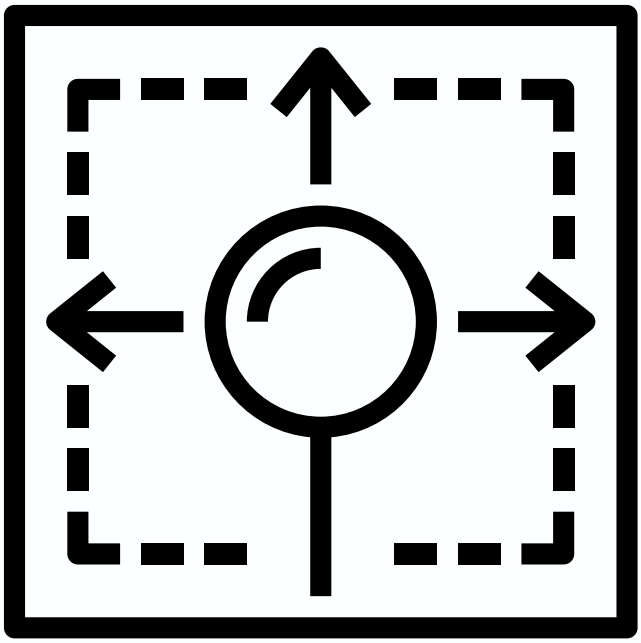
study sample: university lecturers n = 60

UNIVERSITY OF AKUREYRI – AREAS

The identified strengths and weaknesses of distance education in the environment of the University of Akureyri relate to the following areas:

- support for university staff
- demand for quality training
- qualitative data on the Centre of Teaching, Learning, and IT

The remainder of the report focuses on the indicated areas. It should be noted that in Iceland – as in the case of Poland – distance learning is not something relatively new and implemented as a result of the pandemic experience. Due to the climate, **Icelandic higher education has long operated using distance teaching techniques.** This makes the analysis of the strengths and weaknesses of distance education inherently limited, because (as pointed out during the expert discussion) **distance education is normal, standard education in Iceland.**



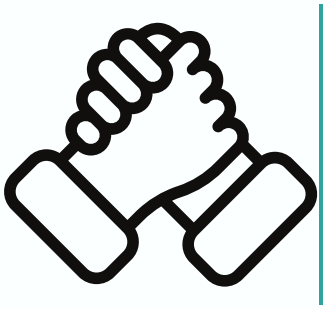
UNIVERSITY OF AKUREYRI – STAFF SUPPORT

The support for distance education at the University of Akureyri takes three forms: **distance workshops** (held every week on different topics), **"Open hours"** (a special time when you can connect via Zoom and get help from the staff of the Centre for Teaching, Learning, and IT), **instructional consultations** (one-off meetings or regular consultations with the staff of the Centre for Teaching, Learning, and IT).

The overall rating of the support offered by the University **is high** (4.37 out of 5). This is certainly a strength of distance education in the environment of the University of Akureyri.

Strength: high overall rating of the support provided by the University

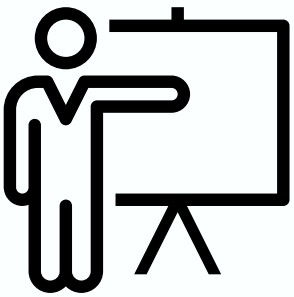
Two forms of support were rated particularly high, i.e. **instructional consultations** (4.42) and **"Open hours"** (4.58). **Distance workshops** were rated slightly lower (4.13). This rating is not a weakness, as it is still high and positive, but it could be a signal to improve this area of activity.



Strength: good ratings for teaching consultations and "Open hours", slightly worse rating for distance workshops, which nevertheless remains high

UNIVERSITY OF AKUREYRI – DEMAND FOR TRAINING

The overall demand for training is not very high, but **remains at a good level** (3.89). It should also be noted that the level of demand may be related to the frequency of training, which is significant – online workshops are organised every week.



Strength: demand for training at a high level

The most popular topics include **artificial intelligence** (4.13) and **increasing student activity** (4.12). On the other hand, the lowest average demand is for **on-campus teaching** (3.68). The chart below presents all thematic areas covered by the study:

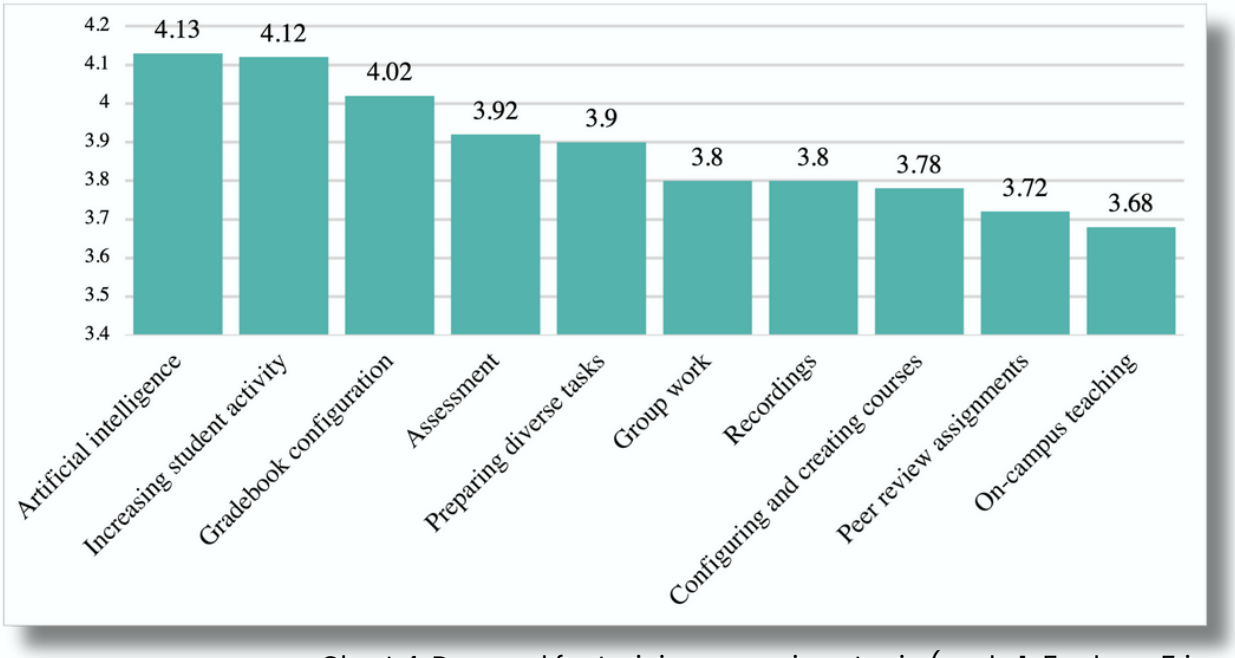
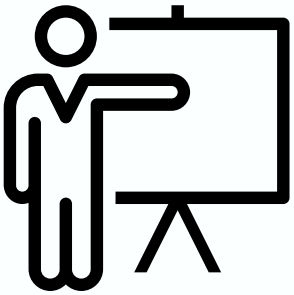


Chart 4. Demand for training on a given topic (scale 1-5, where 5 is the maximum willingness to participate in a given training)

UNIVERSITY OF AKUREYRI – DEMAND FOR TRAINING

It is worth noting that there are interesting correlations between different training areas. **As interest in improving group work increases, so does interest in developing competences in increasing student activity** ($p<0.001$, $R=0.698$). Such a correlation exists between different areas of training, including between assessment and group work, and between assessment and tasks based on peer assessment. This is a strength in that it shows that **the lecturers are interested in a variety of subjects** – interest in one subject leads to interest in others.

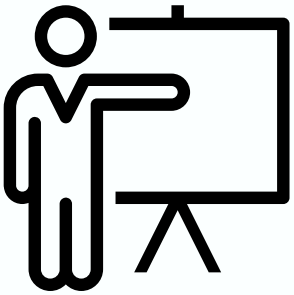


Strength: interest in some areas is positively correlated with others – interest in one subject leads to interest in others

There is also a relationship between the demand for certain areas of training and the rating of the forms of support offered by the University. **The better the remote workshops are rated, the higher the need for improvement in the area of increasing student activity** ($p<0.05$, $R=0.440$). "Open hours", on the other hand, are correlated with preparing diverse tasks ($p<0.05$, $R=0.398$) and artificial intelligence ($p<0.05$, $R=0.384$).

UNIVERSITY OF AKUREYRI – DEMAND FOR TRAINING

There are also some weaknesses in terms of the demand for training. A two-stage cluster analysis indicates the existence of **two groups of respondents**. One of them (larger – 51.7% of respondents) is **on average more interested in the proposed areas of further training**. **The second group** (smaller – 48.3% of respondents) **is on average less interested**. In certain areas, such as assessment, there are quite significant differences. The average for the first group in this area is **4.94**, while the average for the second group is only **2.83**.



Weakness: there is a group of lecturers who are much less interested in improving their skills in the indicated areas

Similar conclusions can be reached using hierarchical cluster analysis, which also takes into account the forms of support. **Three groups were identified.** The first group has a high average level of interest. This is the largest group. **The second group seems to be an interesting case**. It has **the lowest average level of interest** and its **respondents have used none or almost none of the support** offered by the University. The third group has a lower level of interest than the first group, but higher than the second group. The graphic below presents the clusters (C1 – first group, C2 – second group, C3 – group 3):

UNIVERSITY OF AKUREYRI – DEMAND FOR TRAINING

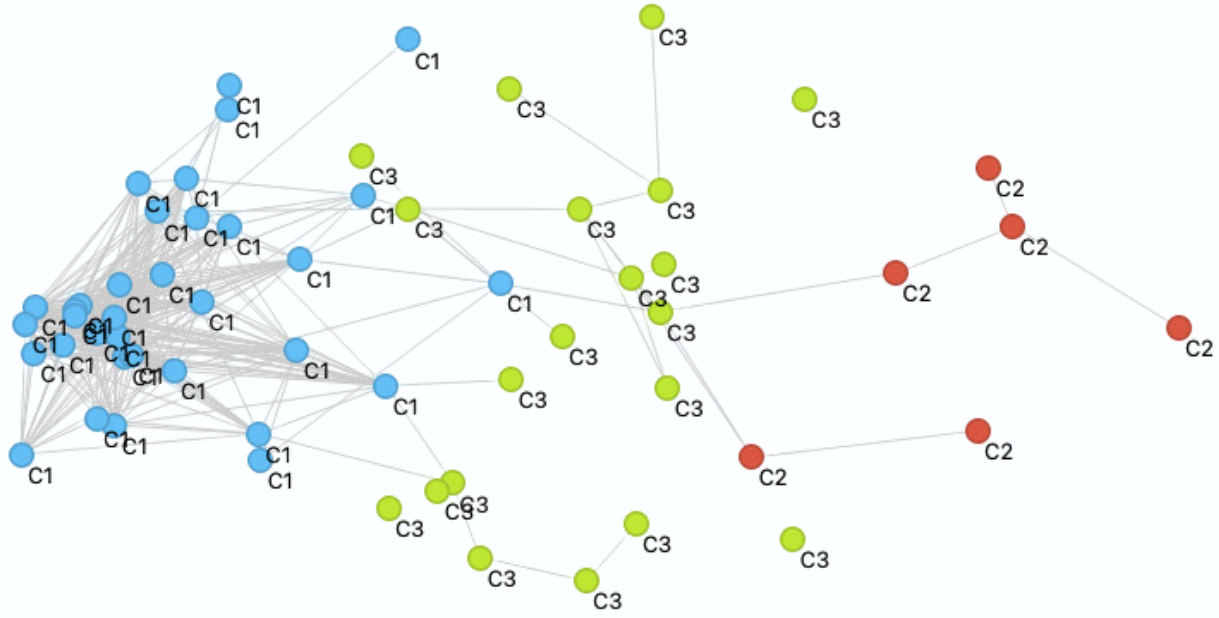
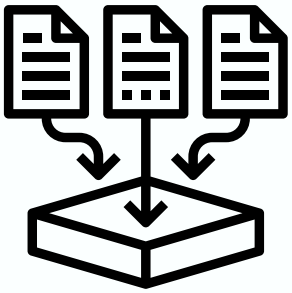


Chart 5. Multidimensional scaling – groups created based on the research material

Weakness: there is a group of lecturers who have very little interest in the proposed areas and often do not take advantage of the forms of support provided

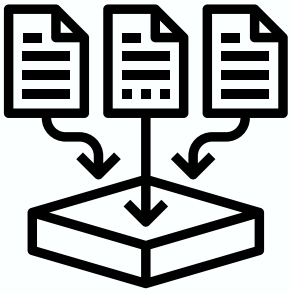
UNIVERSITY OF AKUREYRI – QUALITATIVE DATA CONCERNING THE CENTER

The qualitative data provides information on a very important strength, namely **the positive perception of the Centre's staff**, including their professionalism.



Strength: very positive perception of the Centre's staff

The respondents point out some weaknesses that are not related to the work of the Centre, but to other lecturers. One respondent mentioned that **there are some lecturers who still use old recordings and their online courses are based on simple and unattractive tasks.**



Weakness: some lecturers do not improve their courses and use old and unattractive materials

UNIVERSITY OF AKUREYRI – SUMMARY

In the case of the University of Akureyri, **a particularly important strength is the support provided to lecturers**. The unit set up for this purpose works well. **The courses** developed as part of the project **can respond to emerging weaknesses** – they can be a source of inspiration for lecturers who need to update their materials or increase their interest in developing competences related to distance teaching.

RESULTS AND CONCLUSIONS

EDULABOR
education & business

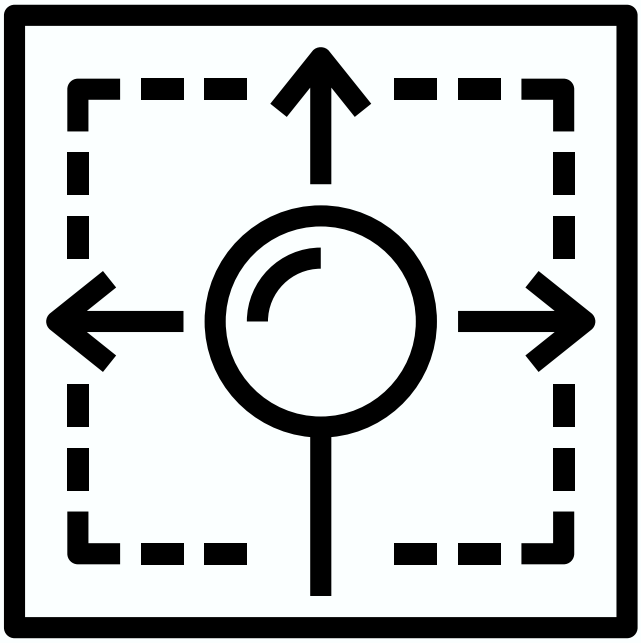
study sample: secondary school teachers n = 52

EDULABOR – AREAS

The identified strengths and weaknesses of distance education in the environment of EDULABOR relate to the following areas:

- teacher skills
- existing problems
- distance teaching tools
- school support
- demand for training

The remainder of the report focuses on the indicated areas.



EDULABOR – TEACHERS' SKILLS

The average self-assessment of teachers' skills in using remote working tools **was at a high level** (4.12 out of 5). This positive **average is higher in the group of teachers with professional experience of more than 10 years** (4.33). These are the strengths.

Strengths: fairly high average self-assessment of teachers' ability to use remote working tools, high average in the more experienced group

However, **there is a worrying phenomenon among teachers with low seniority** (up to 5 years). The average in this case is only **3.75**. Interviews with teachers suggest that the reason for this may be that some of the respondents started working after the period of distance teaching. There was therefore no opportunity to improve these competences in practice.

Weakness: worse self-assessment of skills among teachers with less experience (up to 5 years)

EDULABOR – TEACHERS' SKILLS

The self-assessment described above was a general self-assessment. However, **when asked about specific skills** (distance teaching, grading in distance education, and conflict solving in distance teaching), **the average is only 3.51**. The lowest rated skills are the ability to **solve conflicts in distance teaching** (3.33) and **grading** (3.49). These are potentially problem areas that require improvement.

Weakness: low self-assessment in: grading and conflict solving in distance teaching

On the other hand, it is a strength that **experienced teachers rate their skills higher** in the areas mentioned above.

Strength: higher self-assessment of skills by more experienced teachers

EDULABOR – PROBLEMS

A number of particularly common problems associated with distance teaching were identified in the study sample. They are presented in the chart below:

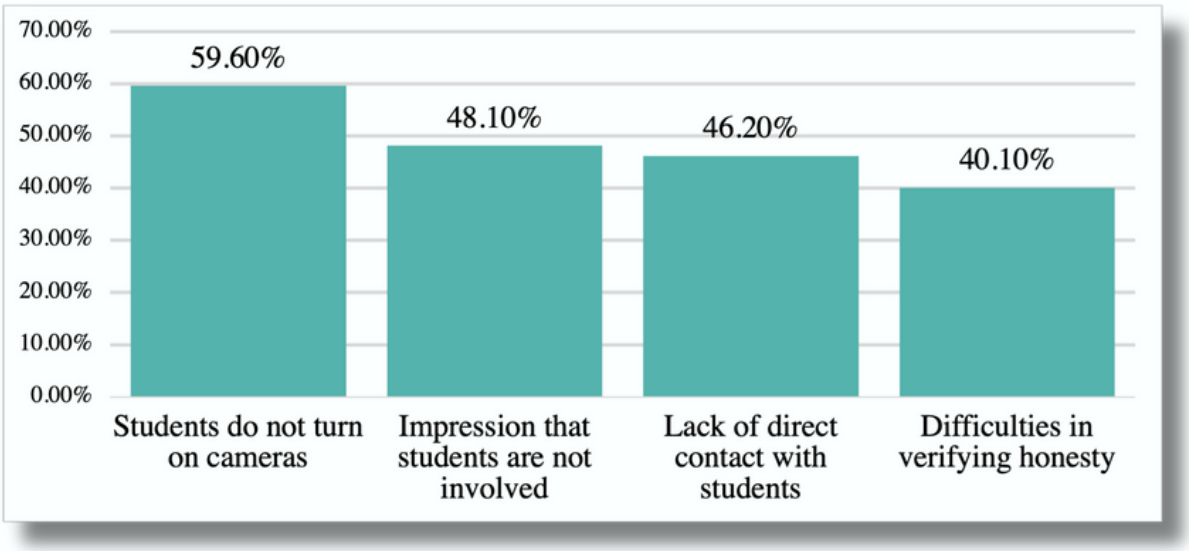
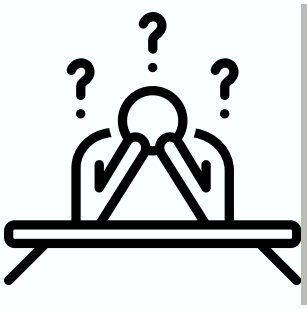


Chart 6 Frequent problems – percentage of respondents who encountered them

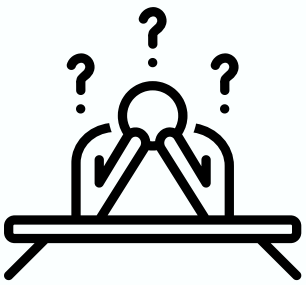
The problems faced by teachers are therefore **very similar to those faced by university lecturers**. Some problems occur less frequently (e.g. difficulties in conducting discussions during classes – 25% of respondents or cheating during tests/quizzes – 28.8%). However, this can hardly be seen as a strength, as the proportion of respondents who have experienced these problems, although smaller, is still significant.



Weaknesses: frequent problems, including those related to student engagement

EDULABOR – PROBLEMS

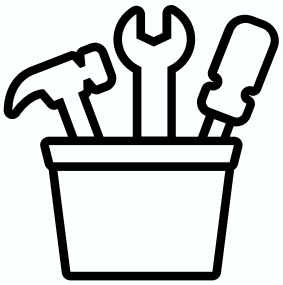
Two more weaknesses can be identified based on the research material. Teachers generally agree with the statement that **student motivation is lower in distance education** (4.00 out of 5, where 5 is full agreement with the statement). They also believe that **conflicts are more difficult to recognise when education takes place remotely** (4.05).



Weakness: perception that student motivation is lower in distance education, difficulty in recognising conflicts in remote teaching conditions

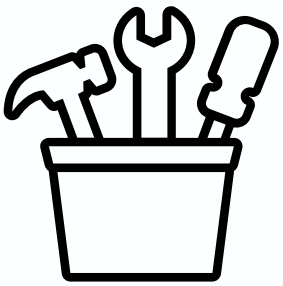
EDULABOR – TOOLS FOR DISTANCE TEACHING

Within the group of teachers there is quite a wide **variation in the tools used for distance teaching** (according to the interviews with teachers, different solutions are used in different schools). The study therefore focused on the teachers' general beliefs about the tools in three dimensions: fair and reliable assessment, efficient organisation of group work, efficient assignment and checking of homework. What stands out positively in relation to the other dimensions is the teachers' opinion of **the tools for efficient homework** (3.88 out of 5).



Strength: relative high rating for homework assignment tools

Other dimensions were rated lower – **fair and reliable grading** received an average rating of 3.62 and **efficient organisation of group work** – 3.74. All these dimensions add up to a rather low average: 3.75.



Weaknesses: low average rating for distance learning tools and low ratings in the dimensions: organisation of group work, fair and reliable assessment

EDULABOR – SCHOOL SUPPORT

The **school's support** for improving distance teaching skills seems to be a major weakness with the average rating of 3.55 (out of 5).

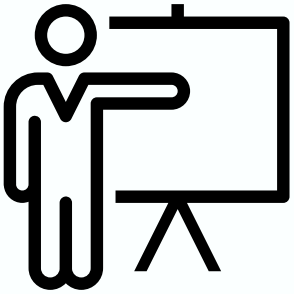
Weakness: low average rating for the school's support for improving distance teaching skills

However, the support is **rated quite positively by the group of teachers with the most experience**. In connection with the better self-assessment of skills related to remote work, there is an opportunity to **transfer knowledge and skills**: from more experienced teachers to less experienced ones.

Strength: higher rated support in the most experienced group of teachers, opportunity for knowledge transfer

EDULABOR – DEMAND FOR TRAINING

The average demand for training among secondary school teachers **is high** (4.15 out of 5). This is a strength because it signals that **teachers want to improve their skills** in remote working tools.



Strength: high average demand for training

Topics of interest to the teachers were also explored. The results are presented in the chart below:

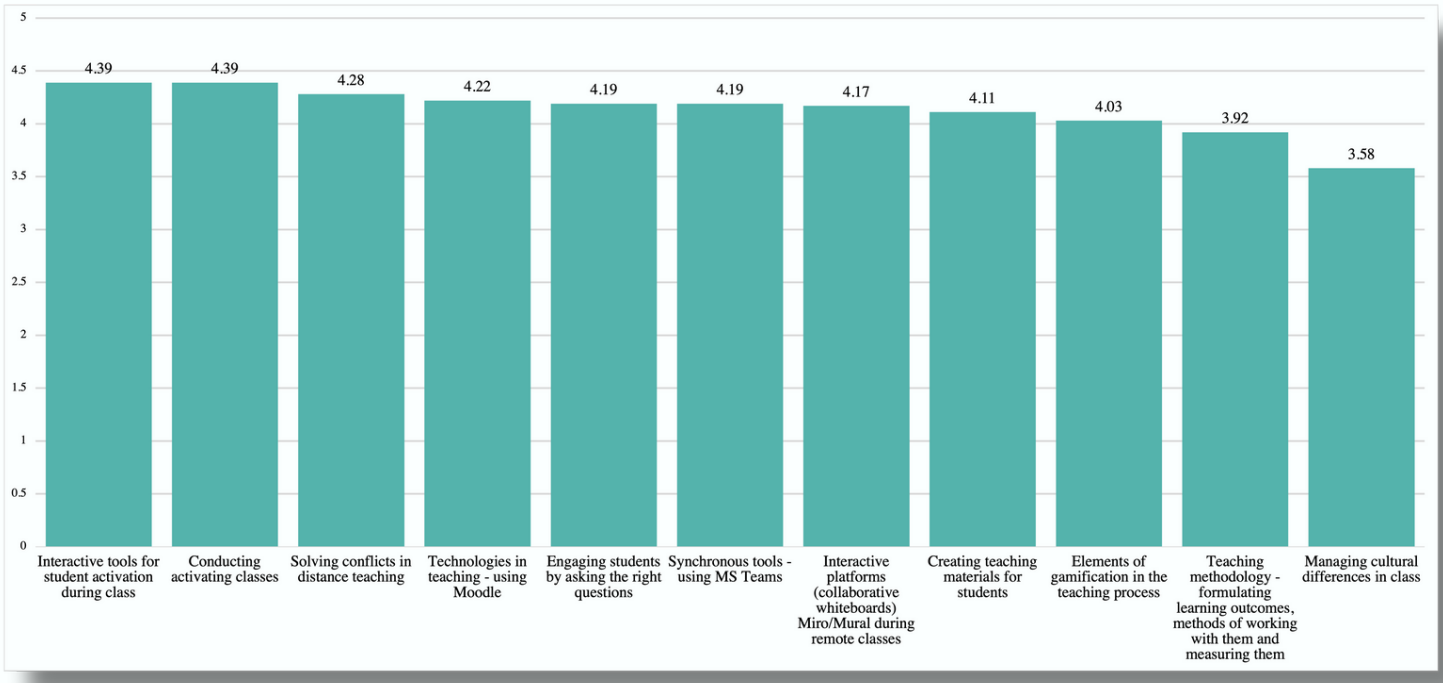


Chart 7 Demand for training on a given topic (scale 1-5, where 5 is the maximum willingness to participate in a given training

EDULABOR – SUMMARY

Important areas that emerge from the analysis of the research material are: engagement and conflict, tools used for distance education, and less experienced groups of teachers.

A very high proportion of teachers surveyed had experienced problems with **student engagement in distance education**. This was **reflected in the demand for training** in areas that involve activating students. The obstacle in this case is **insufficient institutional support**. Therefore, it seems that teachers should be provided with high quality training in this area. Another area where this training is needed is **conflict solution and recognition**. Teachers **perform poorly in conflict solving in remote settings** and find **it harder to identify conflict** in such circumstances. At the same time, t**hey are willing to train** in this area.

When it comes to teaching tools, it is worth working on identifying the tools and how to use them **effectively in group work and assessment**. It is also partly a solution to the problems with engagement.

Finally, it seems important to provide **younger teachers** with appropriate tools and competences. They are the ones who rate their own skills lower and feel more strongly about insufficient support from the institution. It is a positive sign that **the teachers with more experience** rate these two elements higher – they can therefore provide valuable support to their less experienced colleagues.

RESULTS AND CONCLUSIONS VS. COURSE TOPICS

RESULTS, CONCLUSIONS, AND COURSE TOPICS

The key objective of the research was to determine whether the assumed course topics are relevant to the organizations and environments of the project partners. It was particularly important to establish whether the proposed topics address the weaknesses of remote education and whether they capitalize on some of the positive phenomena in the analysed organizations and environments. In this section, the results presented in the preceding section of the report are collated with the proposed course topics. This will help determine if the topics have been selected appropriately and provide course authors with guidance as to what content should be covered or emphasized. This section discusses the results with respect to the following courses:

Use of interactive Miro/Mural “collaborative whiteboard” platforms for interactive distance teaching
Use of interactive quizzing tools to engage students during distance classes
How to teach and engage students by asking the right questions?
Gamification of the learning process – How to turn online classes into a gaming process?
Tools supporting teachers and lecturers in working with conflicts in distance learning conditions
Oxford debate as a method of distance teaching
Design and use of interactive quiz tools for student evaluation in distance learning

USE OF INTERACTIVE MIRO/MURAL "COLLABORATIVE WHITEBOARD" PLATFORMS FOR INTERACTIVE DISTANCE TEACHING

The **rationale behind the preparation of the course** on interactive "collaborative whiteboard" platforms is the high number of weaknesses identified in the report. **Strengths that indicate the need for creating such course** may also prove important.

This course **may help change students' perception of lecturers' skills as average** (p. 9 of the report). This is because the course is designed to introduce teachers to new tools and thoroughly prepare them to use them. There is also **a chance to solve a problem** revealed in the group of teachers, i.e. **low scores for remote teaching tools within the scope of organizing group work** (p. 34).

The course is also a response to problems related to the **perception of students as uninvolved** (p. 11). The tools covered in the course aim to **activate students** and foster a sense that the lecturer is involved in classes, which also addresses a weakness (p. 12). Potentially, the course may also contribute to **solving student engagement problems** diagnosed in the group of teachers (p. 32).

The subject matter may also **attract groups of lecturers who are less willing to attend training** (pp. 24-25). It also responds to the demand for training: at WSB Merito University, this course was one of the most frequently selected (p. 17). Lecturers at Akureyri University, on the other hand, **frequently selected courses** on increasing student activity (p. 22), which is facilitated by the tools proposed in the course. Although the course was not the most frequently selected by the surveyed teachers, the average demand for this course was nevertheless fairly high (p. 36).

USE OF INTERACTIVE QUIZZING TOOLS TO ENGAGE STUDENTS DURING DISTANCE CLASSES

Creating the course on using interactive quizzing tools **is justified by the identification of various strengths and weaknesses** in the study material.

The course **addresses the need to engage university students** (p. 11) **and high school students** (p. 32). It is also an **opportunity to improve self-assessment of the ability to use remote teaching tools** among the least experienced teachers (p.30). Moreover, **assessment skills are among the lowest rated competencies** in remote education by high school teachers (p.31).

At WSB Merito University, assessment also proved to be a problem area with both Moodle and MS Teams rating relatively low (p. 14). An interactive quizzing tool could complement the functionality of the above tools.

The issue of assessment also seems relevant in the context of the **increasing popularity of AI** (p. 14).

The course also **addresses training needs** in the studied groups. In the case of Akureyri University, **assessment is among four most popular training areas** (p. 22). Additionally, increasing student activity ranks prominently (p. 22), and the course combines both of these areas. **Interactive tools** (in general, not only for quizzes) **are also a desired training topic** for WSB Merito lecturers (p. 17) and teachers surveyed by EDULABOR (p. 36).

HOW TO TEACH AND ENGAGE STUDENTS BY ASKING THE RIGHT QUESTIONS?

The course on teaching and fostering student engagement by asking the right questions, much **like the previously discussed courses, is closely linked to identified strengths and weaknesses.**

Common problems reported by WSB Merito lecturers include **difficulties in managing discussions** (p. 11) and **lack of direct contact with class participants** (p. 11), which was also reported by teachers (p. 32). **The course may translate into mitigating these weaknesses.**

The course may also help address the **bilateral sense of lack of engagement** (pp. 11-12) observed by students and lecturers alike. The problem with engagement was also reported by teachers (p. 32). The course provides an opportunity to use **activating methods that will eliminate the impression that the other party is not involved during classes.**

It is also important to **provide an appealing training offer for groups where the average demand for training is lower**, similarly to the activity aimed at increasing skills related to distance teaching (p. 25). This is because this course offers not only building skills that are useful in remote teaching, but also supports general competences that can be applied in traditional teaching. Therefore, it is an **opportunity to activate** the aforementioned groups.

The course also meets the reported training needs. It is **among the most popular course topics** at WSB Merito University (p. 17) and received a high average score among teachers (p. 36). It also **addresses the need of lecturers** at Akureyri University to improve their competence in engaging students (p. 22).

GAMIFICATION OF THE LEARNING PROCESS – HOW TO TURN ONLINE CLASSES INTO A GAMING PROCESS?

Gamification of the educational process, similarly to previous courses, is also **related to the diagnosed strengths and weaknesses of distance education**.

The course related to gamification directly **addresses the weaknesses related to the engagement of university students** (p. 11) and high school students (p. 32). It may also be useful in **improving self-assessment of the ability to use distance education tools** among the least experienced group of teachers (p. 30) and **responds to the general high demand for training** among teachers (p. 36) and lecturers (p. 22).

The course **can also motivate lecturers** who have not updated their courses and methods in a long time (p. 26) to tweak their teaching process. Since research has shown that interest in one topic attracts interest in another (p. 23).

The course also has the potential to **inspire lecturers and teachers** to discover other tools or techniques used in distance education. The proposed course also aligns with the training requirements of the studied groups. They meet the **need for training on engaging students** (p. 22), and **gamification has a fairly high average score** among teachers (p. 36). WSB Merito University also reports moderate demand for this course (p. 17).

TOOLS SUPPORTING TEACHERS AND LECTURERS IN WORKING WITH CONFLICTS IN DISTANCE LEARNING CONDITIONS

The course on tools for working with conflict **also addresses the weaknesses and strengths presented in the report.**

High school teachers **rate their conflict solving skills in remote setting quite low** (p. 31). They also believe that **identifying and resolving conflicts becomes more challenging** when classes are taught remotely. The course may therefore improve the overall level of conflict solving skills, thereby **mitigating this weakness.**

This course, like the one related to engaging students by asking the right questions, **can also be used in standard, on-site education**. Thus, it can also convince those who are not too keen on learning tools and techniques used in distance education (p. 25). **Taking this course, participants can be gradually introduced to topics related to distance education.**

The course also addresses the training needs reported by both lecturers and teachers. For teachers, courses on **managing difficult situations with students and conflict solving** rank within the top four most commonly mentioned topics (p. 36). University lecturers were moderately interested in a course related to managing difficult situations with students (p. 17).

OXFORD DEBATE AS A METHOD OF DISTANCE TEACHING

The course related to Oxford-style debates **provides an opportunity to address various weaknesses, and it is supported by the strengths** present in the organizations and environments of project partners.

Oxford debate is a method that enables activating students during class. Therefore, it **enables mitigating the weakness associated with the lack of involvement** of university (p. 11) and high school (p. 32) students during classes.

It also **stimulates discussion**, thereby addressing the problem of impeded discussion during remote classes both at universities (p. 11) and in schools (p. 32). **It also makes it possible to establish a more direct contact with students** than in a traditional classroom setting. Contact-related challenges were observed among both university lecturers (p. 11) and high school teachers (p. 32).

Oxford debate is also a group/team activity. This makes it possible to **mitigate the weaknesses associated with the difficulties of working in groups.** This problem (in terms of remote working tools) was brought to our attention by teachers (p. 34).

The course also responds to training needs, including among teachers: conducting activating classes (p. 36) and among lecturers at Akureyri University: group work and engaging students during classes (p. 22).

DESIGN AND USE OF INTERACTIVE QUIZ TOOLS FOR STUDENT EVALUATION IN DISTANCE LEARNING

The course on evaluation and interactive quizzing tools **is also related to the weaknesses and strengths identified during the research.**

The course **responds to the weaknesses** in the report **related to evaluation**. These include **problems with verifying honesty** encountered by lecturers (p. 14) and teachers (p. 32). In addition, **the tools currently used for verification of the achievement of learning outcomes scored low** (p. 14).

Interactive quizzing tools also **enable engaging students in the educational process**, which makes them one of the answers to the problem of low engagement, which is apparent both in universities (p. 11) and in schools (p. 32).

Interest in generative artificial intelligence (p. 14) is relevant in the context of evaluation in that it often **makes it difficult to verify the achievement of learning outcomes.**

The course also **responds to the training needs of teachers and university lecturers**. Interactive tools (in general) are a popular training topic among teachers (p. 36) and lecturers at Akureyri University (p. 22) and WSB Merito University (p. 17).

SUMMARY

The strengths and weaknesses outlined in the report provide a rationale for the proposed course topics. This is because all of them respond to specific problems or risks identified in the analysed data. They also respond to training needs reported in the environments and organizations of project partners. They are also a source of knowledge for course authors, i.e. they provide guidance on what to consider when developing course content.

It is worth noting that the problems identified arise in more than one organization/environment (such as the problem of student engagement and difficulties in evaluation). Each course will therefore be useful in two or even three organizations/environments.