Presentation of research findings regarding the IECAT2020 participants' views on the thematic context of the conference

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Abstract: The 3rd International Experiential Conference on Applied Teaching (IECAT 2020), was organized by the Scientific and Cultural Association "Educational Circle" (educircle, n.d.) and in collaboration with 13 Universities in Greece and abroad. The purpose of the conference was to highlight innovative practices, trends, perspectives, modern pedagogical guidelines and explore the new challenges for education through ten key components, which were the thematic areas of the conference. In this context, we designed and implemented a research study in order to record the views of the participants in relation to the thematic context of the conference. The results underscore the pedagogical basis at any innovative practice used in teaching, as the students seem to be placed at the center of the educational and teaching process. Moreover, the majority of teachersstate that the goal of their teaching is the comprehensive development of students at all levels of knowledge, skills, and attitudes. Therefore, they ask for more opportunities for professional development and support at integrating distance learning techniques and methodology at all levels of education.

Keywords: IECAT2020, experiential conference, research study, questionnaire, challenges in education.

Introduction

The 3rd International Experiential Conference on Applied Teaching (IECAT, 2020), was organized by the Scientific and Cultural Association "Educational Circle" (educircle, n.d.) and in collaboration with 13 Universities in Greece and abroad.

The purpose of the conference was to highlight innovative practices, trends, perspectives, modern pedagogical guidelines and explore the new challenges for education through ten key components, which were the thematic areas of the conference.

An innovation of the conference was that we conducted this research, in order to make its results known to the scientific community. So, the main conclusions of the research are published here. These conclusions, which are independent of the publication of the proceedings, will constitute a proposal and at the same time a framework for a dialogue and

further elaboration by the educational community.

1. Research aim

The aim of this research was to record the views of the participants in relation to the thematic context of the 3rd International Experiential Conference on Applied Teaching, IECAT2020 "New Challenges in Education".

The scope of IECAT 2020 included the following topics:

- Searching for quality in education

- Internationalization of education

- Modern educational and pedagogical approaches to education

- Teaching and Pedagogy in Higher Education

- Current trends and perspectives in Lifelong learning, Adult education, Open and Distance learning and Teachers training

- Educational use of New Technologies in teaching and learning, Online learning, MOOCs (Massive Open Online Courses), Social Networks

- Innovative educational practices through STEAM (Science, Technology, Engineering, Arts and Mathematics) and Educational Robotics

- Integration and Diversity in modern education, Intercultural education, Refugee and Immigrant education and Special education

- Students' Engagement in School and Interactivity in Education

- Sustainability training.

2. Research Method

2.1 Data collection

In order to collect data, we used an online questionnaire. As the questionnaire was addressed to Greek teachers all over the world, it was designed for the internet. Developed in Microsoft Visual Studio 2019 with ASP.NET Web Forms ver.5 technologies and in C # (C sharp) programming language. JavaScript D3.js Slider technology was used for greater convenience and faster selection (Fig.1) of queries in the Likert scale. The address of the questionnaire is: http://autosoft.gr/educircle/ (2019)

24. Σε ποιον βαθμό συμφωνείτε ή διαφωνείτε ότι η δομή στην οποία υπηρετείτε χρησιμοποιεί στρατηγικές κατευθύνσεις για την αντιμετώπιση της διαρροής ή της πρόωρης εγκατάλειψης των σπουδών;

Fig 1 JavaScript D3.js Slider

This questionnaire was designed in the context of the implementation of the 3rd International Conference on Experiential Learning and was designed based on the thematic categories of the conference. It is addressed to teachers of all levels of education, as well as to executives of education, in order to record their views in relation to the general thematic context of the conference.

The first seven questions of the questionnaire aimed to capture the characteristics of the participating teachers. The questions are gender, place of teaching and area of instruction. Then we asked the teachers about the teaching area, whether they are permanent or deputies and the position of the teacher in education. Finally we asked the teachers to tell us their specialty and their years of experience in education.

The questionnaire continues with 23 questions on the five-point Linkert scale with the additional option "I do not answer". The above questions are related to the topics of the conference.

2.2 Data analysis

Since Visual Studio 2015 (Update 3 or higher), there are new tools called R Tools for Visual Studio (RTVS). RTVS tools are a free open-source Visual Studio extension, released under the MIT license and offer Data Mining capabilities and hence Learning Analytics capabilities (Samaras,Ch., Panagiotakopoulos, C., S. Verykios,V. 2018). We used R Tools for Visual Studio (RTVS) to create the graphs that are the answers to our questionnaire.
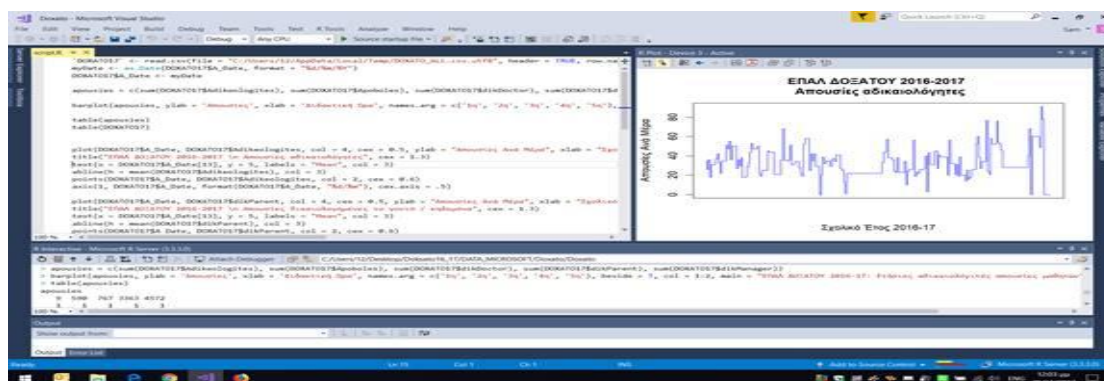

Fig 2 R Tools for Visual Studio (RTVS)

Microsoft Power BI was used to create dynamic visualization with the same data format as in the previous graphs to develop the online map of Graph 1.

Another tool that helped us in our research is Google Analytics. Google Analytics is a web analytics service offered by Google that tracks and reports website traffic, currently as a platform inside the Google Marketing Platform brand. Google launched the service in November 2005. With Google Analytics we tracked the movement of users and their sites in real time we also got the graphs Figure 1, 2.

2.3 Validity& Reliability

For the correct configuration of the questionnaire, we went through the pilot application phase (pre-test). After we created the first questionnaire, we gave it to 64 teachers to answer. From the above answers with IBM SPSS ver 20. we found that 5 five questions did not have an acceptable degree of correlation with the other questions. Of the five questions, we rephrased the three, changed one and deleted one. As the pilot phase had an acceptable degree of Reliability, we did not repeat the process.

We measured the reliability of the research with the IBM SPSS v.20 and the Cronbach´s Alpha Test analysis. The Reliability test at Cronbach's alpha is 0.926. Our conclusion is that it has then it has good test – retest reliability. The above measurement was made with IBM SPSS ver.20.

3. Research Sample

In this research participated 1476 users, 87% of whom live and work inGreece (Graph 1).
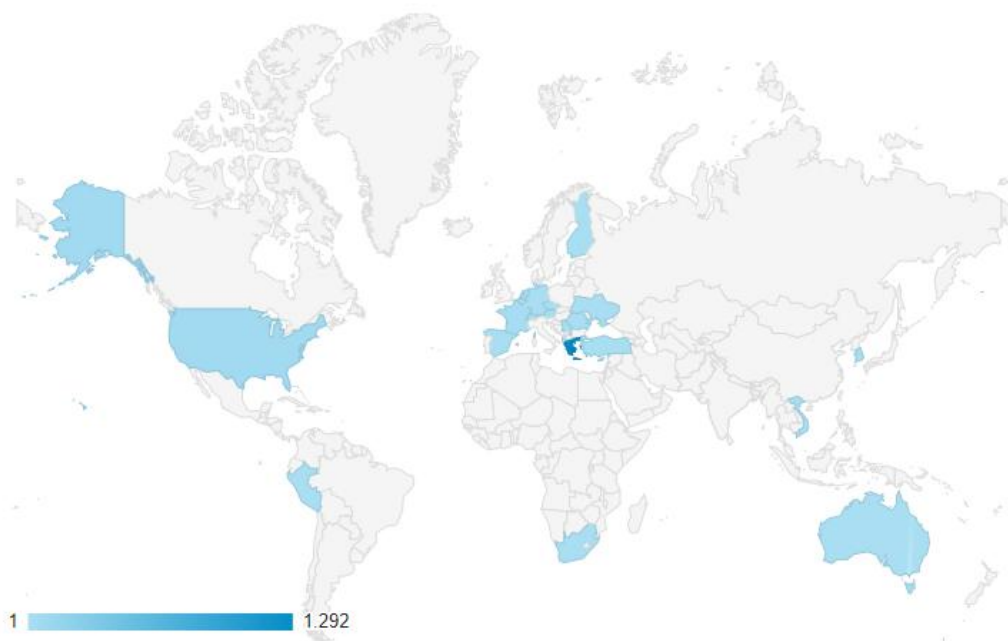
**Graph 1. Countries where participants live in**

Regarding the gender and age of the participants, 64,2% of them were women and 35,8%

men. More than 35% belong to the age group of 45-54, while almost 21% are 35-44 years old (Graph 2).
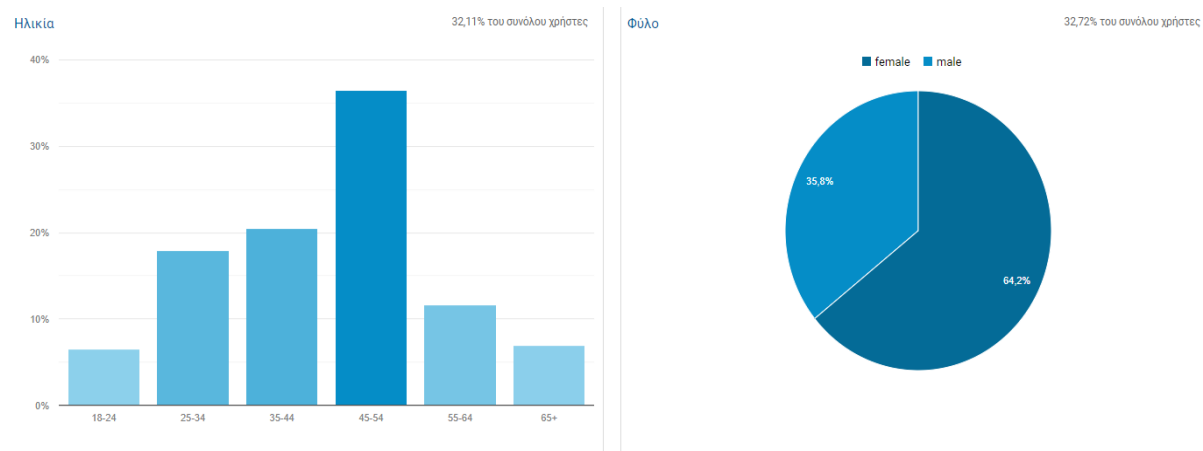
Graph 2. Age and gender of the participants

Regarding the rest demographic data of the participants, the majority of them work in typical educational systems and come from the Social Science field (Graph 3).
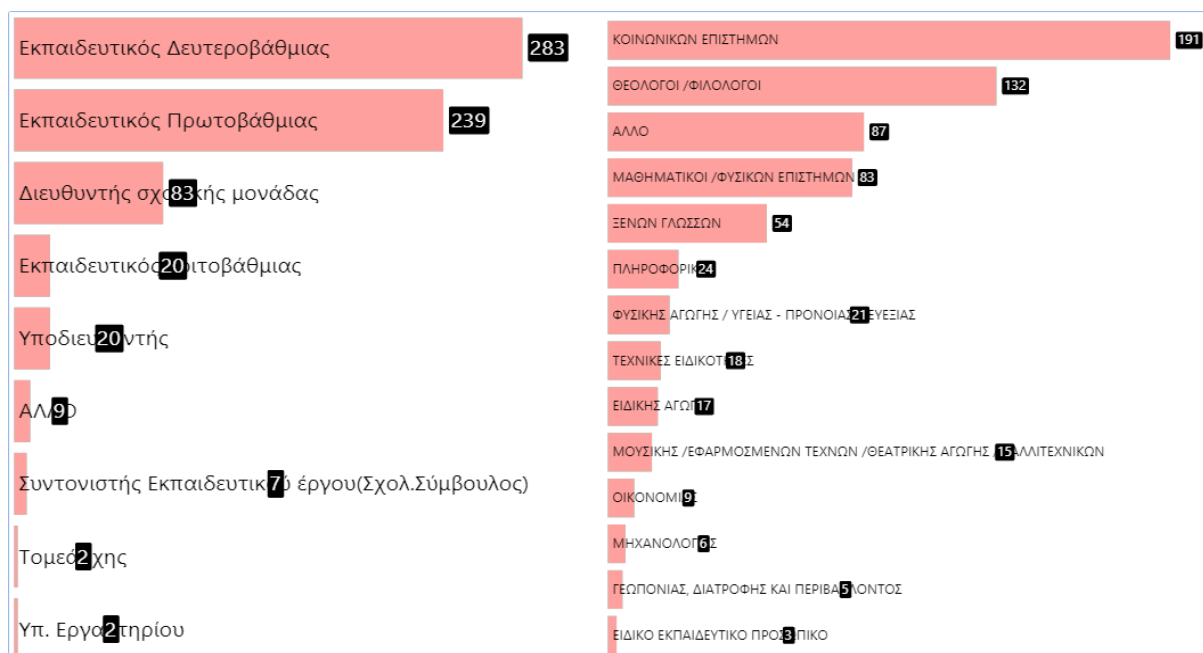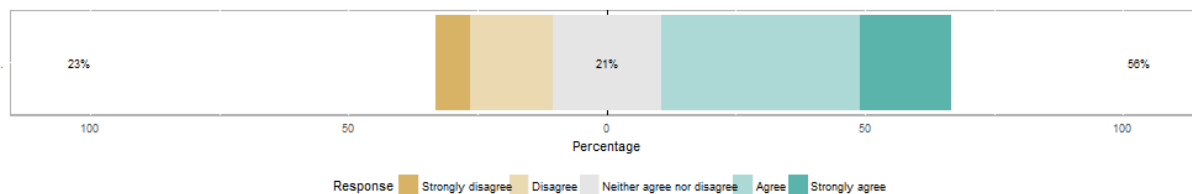

Graph 3. Work field of participants

4. Research Findings

In this section, we briefly present the research findings that we collected during the two phases.

Regarding the support of comprehensive development of learners, the majority (56%) affirm that there are serious efforts towards this direction at the educational institution where they

work (Graph 4).

23%		21%		56%

Graph 4. Comprehensive development of learners

Slightly more of a percentage of 1/3 of participants state that at the educational institution where they work forms of differentiated pedagogy are applied. What is interesting here is that the exact same percentage claim otherwise; they cannot affirm the use of differentiated pedagogy at the schools of educational institutions where they work (Graph 5).
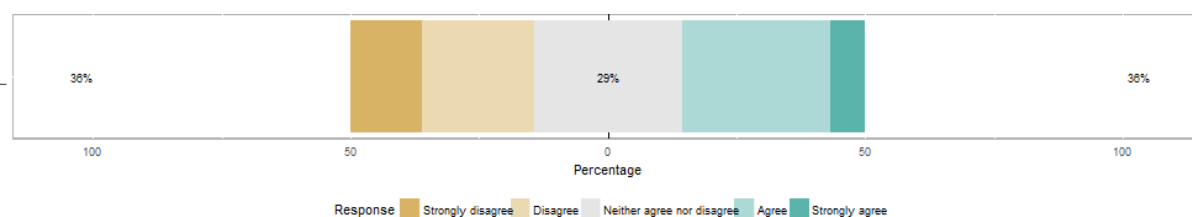

Graph 5. Application of differentiated pedagogy

53% of the participants claim that issues such as multiculturalism, racism, social inclusion, diversity are not only addressed, but are priority in their teaching (Graph 6).
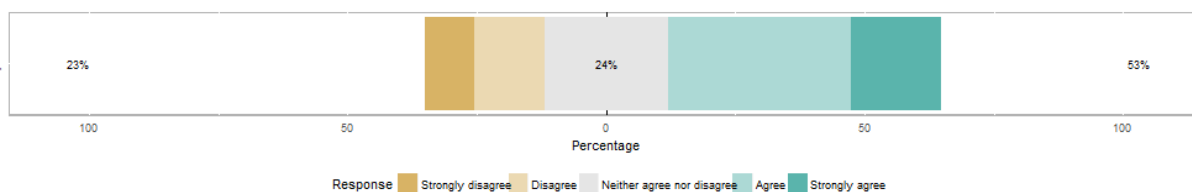
Graph 6. Priorities in teaching

Slightly under the 2/3 of participants (58%), state that there is effort to develop not only cognitive skills for their students, but competences as well (Graph 7).Reflection, critical thinking & creativity are the most "popular" competence that teachers and educators try to cultivate to their students through their teaching (Graph 8).
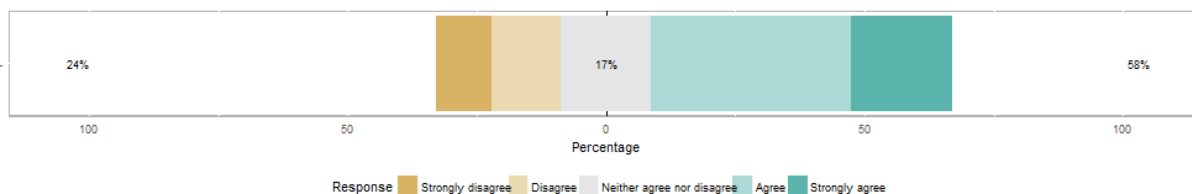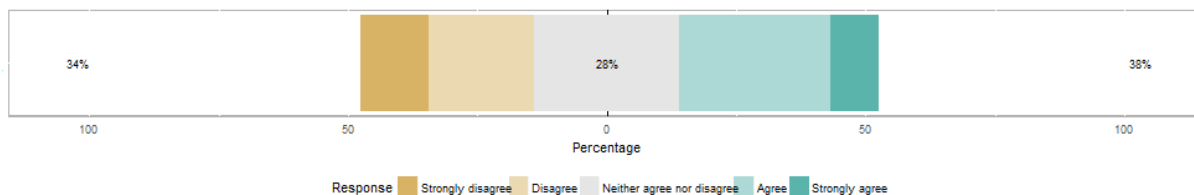

**Graph 7. Development of skills**
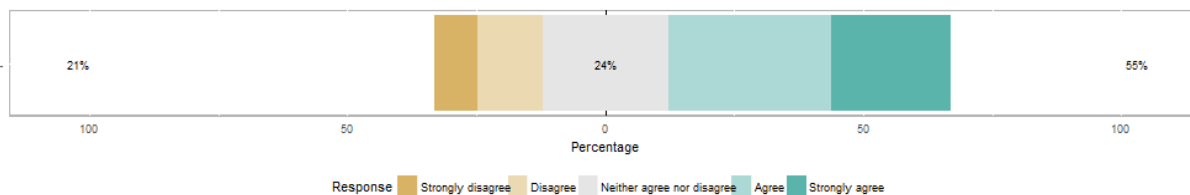
Graph 8. Reflection, critical thinking & creativity as priorities

However, a small percentage (38%) asserts that meta-cognitive skills are being developed as a result of the formal educational practices (Graph 9).

Graph 9. Meta-cognitive skills

In the same vain, the issue of sustainability in education does not seem to be a priority in most of educational institutions, as only the 29% of participants acknowledge that as a priority in their practice (Graph 10).
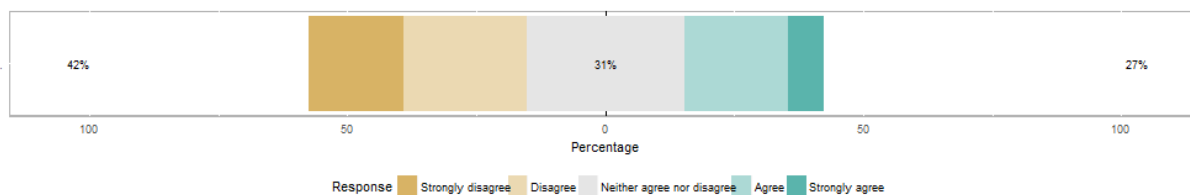
Graph 10. Sustainability education

Regarding the use of teaching methods that support the development and changeof attitudes, the 55% of the participants claim that this is part of their teaching plan. Only 19% of participants state that they do not use any teaching technique that supports change of attitudes (Graph 11).
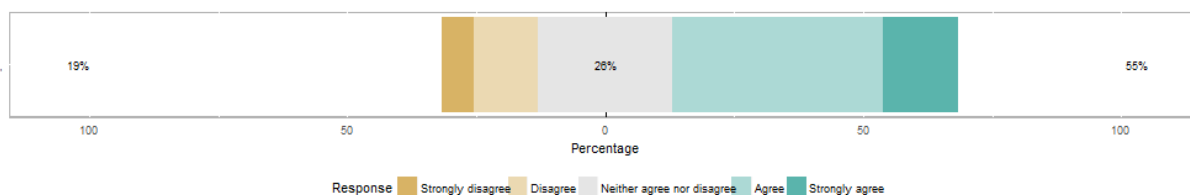
Graph 11. Change of learners' attitudes

Almost half of the participants (47%) also state that they design and form the teaching objectives & content based on the needs of their students (Graph 12).
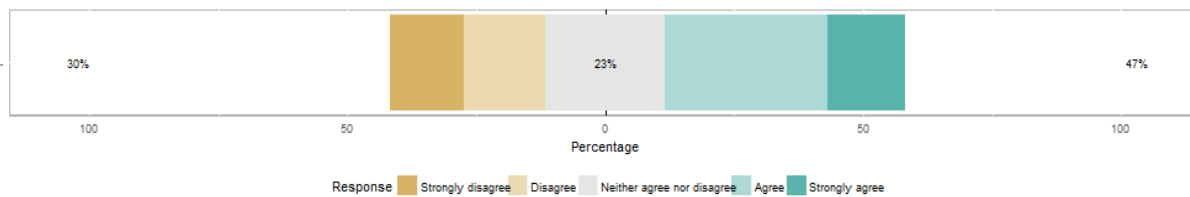
Graph 12. Formulation of teaching objectives & content

Regarding the use of various methods and tools, 59% of participants use a variety of teaching methods in educational practice (Graph 13), while 43% state that have used STEAM, in order to help their students developing critical thinking (Graph 14).
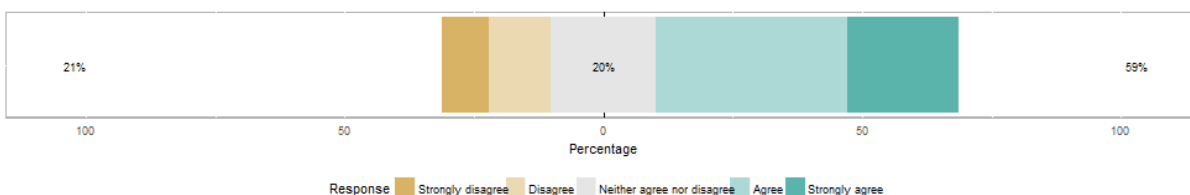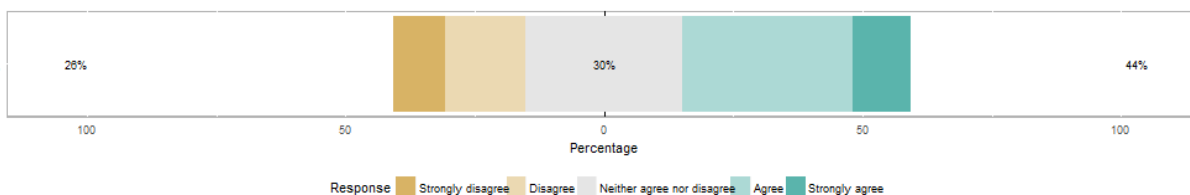

**Graph 13. Utilization of a variety of teaching methods in educational practice**
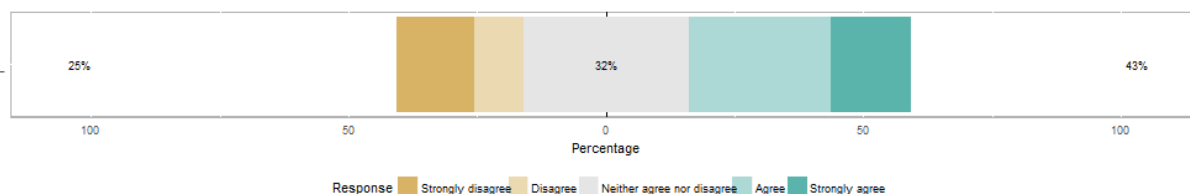
Graph 14. Utilization of STEAM in developing critical thinking

Hence, it is not a surprise that 44% of participants claim that the integration of New Technologies in teaching may have an impact on students' commitment to learning (Graph 15).
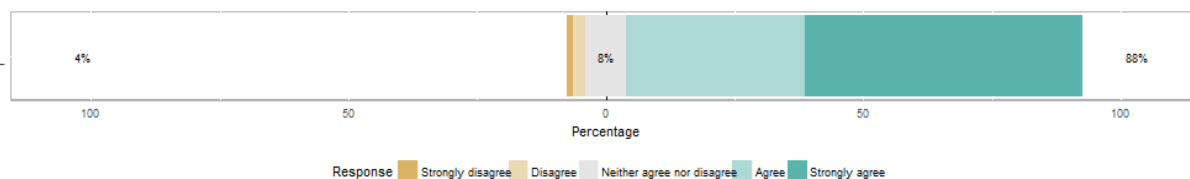

Graph 15. New Technologies in teaching

In the same vain, the findings regarding the fact that students' internal motives for education are seemed to be low (Graph 16), can be linked with the findings that support the need for integrating innovation practices in education (Graph 17).
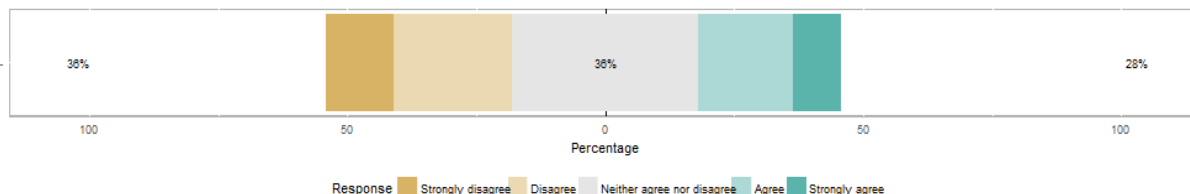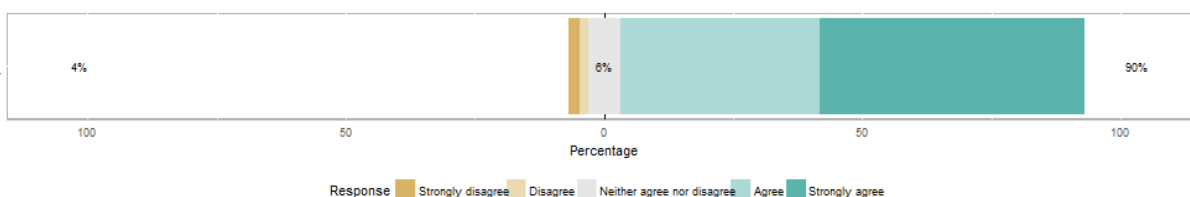

**Graph 16. Internal learning motivations of students**

Graph 17. Necessity of innovation in education

In addition, 90% of participants claim that has used or still useopen educational resources (OERs) at their teaching (Graph 18), while 60% has used or still use social network apps to enhance the learning process (Graph 19).
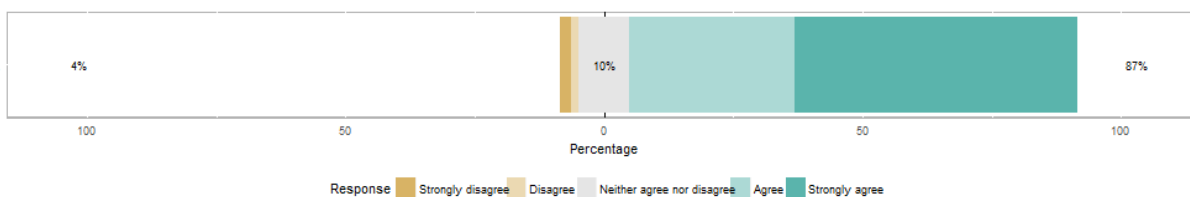

**Graph 18. Utilization of open learning resources**
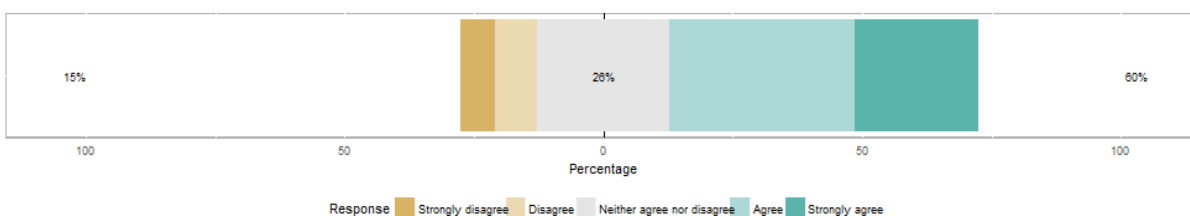
Graph 19. Utilization of social networks in the learning process

Based on those findings, it is not a surprise that 87% of participants state that the balance between the humanitarian and the technocratic approach has been met at their teaching (Graph 20).


Graph 20. Balance between humanitarian and technocratic approach

Meanwhile, a percentage of 44% of the participants claim that there are efforts at their educational institution in order to deal witheducational dropout / early school leaving (Graph 21). However, only 25% of participants state that various evaluation methods are used at their educational institutions (Graph 22).
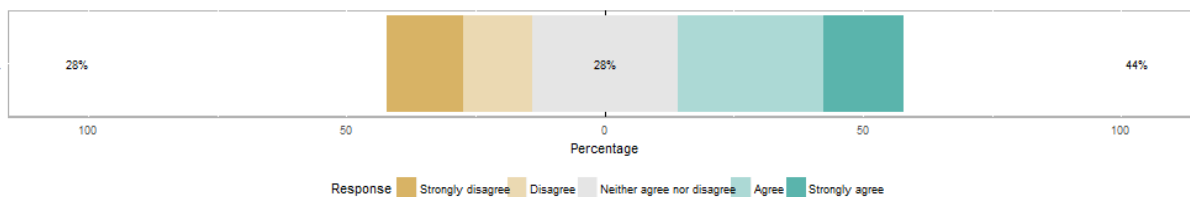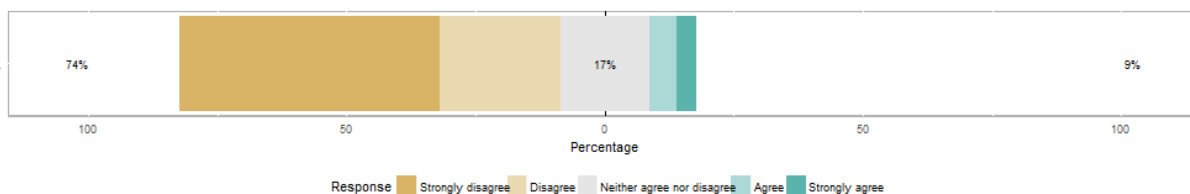
Graph 21. Dealing with dropout
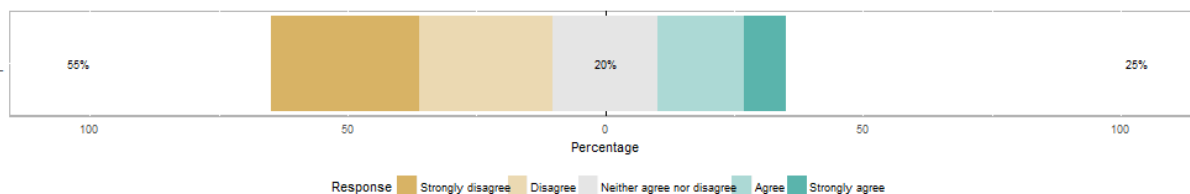
Graph 22. Variety of evaluation methods

Regarding the effective implementation of distance education practices at their educational institution, only 9% of the participants affirm that (Graph 23). Note that the results were collected before the covid-19 pandemic burst out.
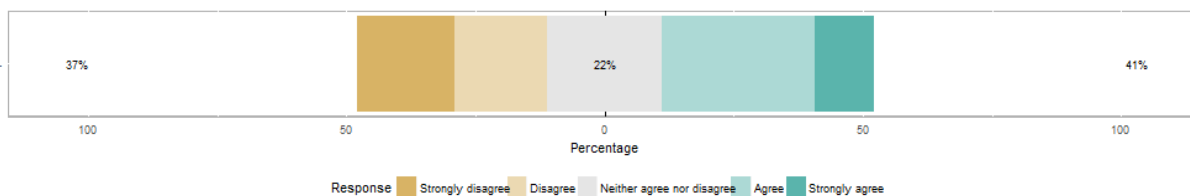

Graph 23. Distance education practices

Almost half of the participants (54%) have participated in European or/and international projects (Graph 24), while 41% could state that they feel enhanced at their professional development (Graph 25).
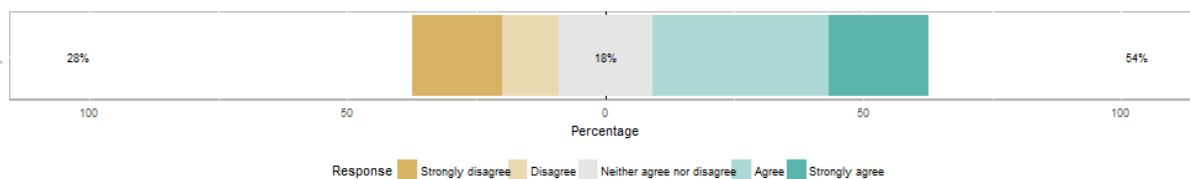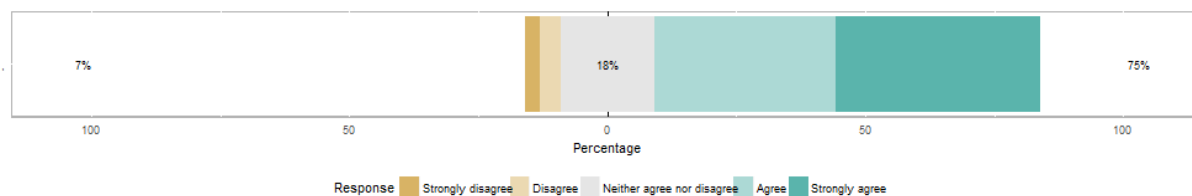

Graph 24. Collaborations & participation in European / international projects

Graph 25. Enhancing teachers' professional development

Ultimately, 75% of participants are in favor of the internationalization of education, the expansion of learning opportunities and the connection with the labor market, as it is shown at

the Graph 26.

Graph 26. Internationalization of education

Conclusions

The aforementioned research findings lead us to the following conclusions:

- For the majority of teachers the goal is the comprehensive development of theirstudents at all levels of knowledge, skills, and attitudes. However, there is still a big margin of improvement in the cultivation of metacognitive skills.

- The students are placed at the center of the educational and teachingprocess. Consequently, this leads to adaptation of teaching to the needs of the specific students, the utilization of a variety of teaching methods, the utilization of New Technologies and open educational resources, and the development of sensitivity to issues of social inclusion, diversity, interculturalism.

- There is a large number of synergies and participations at European and international projects.

- There is need for activities and opportunities that will support teachers' professional development.

- In addition, there is also need – according to the current situation due to pandemic – to effectively use distance learning techniques and methodology at all levels of education.

- Finally, what appears to be not only a desire but also a need, is the adaption of teaching and evaluation methods to the new era.

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