# DIGITAL COMPETENCES OF TEACHERS IN MONTENEGRO

**Pilot of the Digital Needs Analysis Tool for Teachers (DNATT) 2020**

# ACKOWLEDGEMENTS

# CONTENTS

# List of tables

# List of figures

# INTRODUCTION

This national report is part of a project to develop and test a self-assessment process to identify and analyse the digital competences of teachers in five countries[1], to analyse relevant current CPD provision and to identify CPD needs. It builds upon the European Digital Competence Framework for Educators (DigCompEdu)[2] that defines 22 digital competences organised in 6 Areas[3]. The focus of the DigCompEdu framework is not on technologies, but rather on how educators can use digital technologies to enhance all parts of teaching and learning.

The first phase of this research, led by ERI SEE,[4] was concerned to describe, analyse and evaluate the processes for needs analysis with respect to in-service teacher training in South East Europe. The current phase of the research is concerned to develop a methodology – the Digital Needs Analysis Tool for Teachers (DNATT) - that makes it possible to assess the adequacy of the CPD offer in relation to teachers' digital competence needs and to help schools, countries and donors to improve quantity and quality of training for educators.

The survey questionnaire incorporates the EU's Joint Research Council's 'Check-In' self-assessment tool[5] to map the digital competences of a sample of teachers and to audit provision of digital competences for teachers. In addition, this survey includes other questions – with the intention of helping actors at school, national and regional levels to analyse and exploit the data collected.

This report sets out the findings and conclusions for Montenegro. As part of the pilot, two schools received detailed analysis that broke down the findings for their own staff. The other national reports and a comparative report explores the findings across the five countries together with a report that evaluates the methodology can all be found at https://openspace.etf.europa.eu/resources/pilot-needs-analysis-tool-digital-competences-2020.

**Background**

The following summary is reproduced from The Study on Teacher Education and Training (Continuing Professional Development) Needs Analysis Systems in South Eastern Europe by Beara and Petrovic published by ERI SEE in 2020[6]:

"According to the General Law in Education (Official Gazette, no. 64/2002, article 112)54 teachers in Montenegro have an obligation to undergo professional development in different fields through teacher education and training or continuing professional development programmes and other

---

[1] Albania, Montenegro, Moldova, North Macedonia and Serbia

[2] https://ec.europa.eu/jrc/en/digcompedu

[3] A new version of the DigCompEdu's self-reflection tool called SELFIE for teachers is under development as a key initiative of the new European Commission's Digital Education Action Plan 2021-27. The new version will preserve principles, aims and structure (3 axis, 6 areas, 22 competences), incorporating revised items based on the emerging pedagogical need and challenges for blended learning. The new version is being piloted (11/20 – 2/21) with its launch planned in September/October 2021.

[4] https://openspace.etf.europa.eu/wikis/network-school-based-cpd-coordinators

[5] https://ec.europa.eu/jrc/en/digcompedu/self-assessment

[6] The report can be found at https://www.erisee.org/publication-of-the-study-on-the-teacher-education-and-training-needs-analysis-systems-in-see/Study on teacher education and training (continuous professional development)  needs analysis systems in South Eastern Europe,

TET/CPD activities (like use of professional literature and other sources; realization of experimental and distinguished classes, participation in work of focus groups, round tables, panel discussions, poster presentations, debates, etc.;  conducting action research;  participation in the work of professional networks; participation in the national and international conferences and conferences Secondary regulation (Official Gazette, no. 063/16 article 2)55). In 2009, the system of TET/CPD was introduced in all educational institutions in Montenegro and it is specifically focused on the implementation of TET/CPD activities at the level of the particular educational institution. (Professional development at the school level includes activities such as mentoring, reflective practice, self-improvement, self-observation and self-evaluation, individual and group reflections on one's own experiences, etc. This model was refined in 2013 by introducing developmental stages in teachers' careers, on the basis of which the teachers were able to identify the professional career phase they are currently in, and to decide on further advancement and ways of advancement (Bureau for Education Services, 2017). In Montenegro teachers are offered the opportunity to advance to one of the following four ranks: teacher mentor, teacher adviser, teacher senior adviser and teacher researcher. According to the Rulebook on detailed conditions, manner and procedure of issuing and renewing of work license of teachers, directors and deputy directors in education institution (Official Gazette, no. 23/2014)56 the teacher is issued a license after passing the professional exam for work in educational institutions. In order to retain the license each five years, 16 hours of in-service training in priority areas (which are prescribed by the Ministry of Education based on the proposal from the Bureau for Education Services (BES) and the Centre for Vocational Education (CVE)) and 8 hours in other in-service teacher training programs need to be completed in the period of 5 years. Teachers who did not have a pedagogical-psychological group of subjects during their initial studies are required additional professional training of 16 hours in these areas in order to renew their license. Licensing and CPD of teachers in pre-school education, primary education, general secondary education, as well as teachers who teach general education subjects in vocational education is the responsibility of the Bureau for Education Services, while the Centre for Vocational Education is in charge of licensing and CPD of teachers of vocational subjects from secondary vocational education (Official Gazette, No. 64/2002).

Teachers' needs for TET/CPD identification  and analysis in Montenegro Teachers' professional development system in Montenegro envisages that teachers' needs for TET/CPD are identified on the basis of the national education policy, school self-evaluation, external evaluation, self-evaluation of professional development at the school level (conducted biannually by the school commission for the TET/CPD self-evaluation), teacher performance evaluation system (conducted by the principal as a part of teachers career advancement) and educational research practices (Bureau of Education Services, 2017, p.2)57. It remains to be seen how these tools for the need assessment are functional in practice. The individual needs and priorities for TET/CPD are identified by the teacher on the basis of self-evaluation of their own work using the Questionnaire for teachers' self-evaluation(Bureau for Education Services, 2017), external evaluation results, result of teacher performance evaluation conducted by the principal and student surveys. After the needs are identified, the teacher creates an individual professional development plan (IPDP) though which they set goals, identify activities through which the set goals will be obtained and the identified needs will be met. An individual professional development plan should be based on an analysis of the needs of the students/children the teacher works with, an analysis of their own professional needs and the needs of the educational institution as an organization in which the teacher works. IPDP is written for a period of one year and is usually produced during the month of October. Developing this plan involves, among other things, identifying those segments of work in needs analysis systems in South Eastern Europe which the teacher is doing well, as well as those roles and aspects of work that he/she would like to improve. The teacher discusses his/her professional development plan with the professional development coordinator (PDC) or one of the members of the professional development team (set up at every school, in accordance with the Law). At school level, the identification and assessment of needs for TET/CPD is based on the results of the institution's self-evaluation and the external evaluations performed by the Bureau for Education Services and VET Centre for VET schools. Based on the needs assessment, the PDC, in collaboration with the TET/CPD team, prepares a school professional development plan (SPDP) for a period of two years. SPDP is a part of both the school's annual and development plan and is solely related to the professional development of teachers. It is important that the SPDP monitors and reflects the needs and priorities of the institution as a whole, students and

teachers. The assessment of the institutions' TET/CPD needs, as well as the needs of every individual who is a part of, is taken as the starting point for planning the TET/CPD activities at school level. In Montenegro, TET/CPD needs analysis at the state level is the result of the ministry's prioritization, external evaluation and self-evaluation of schools. In some cases, teachers' needs for TET/CPD are identified by national and/or international research."

# METHODOLOGY

## Questionnaire

The questionnaire provided in the survey is built upon the European Digital Competence Framework for Educators (Dig Comp Edu)[7]. It incorporates the Check-In self-assessment tool[8] - a tried and test instrument used by tens of thousands of teachers. The Check-In tool enables teachers to self-assess their competences and to give teachers on how to develop their competences.

The survey tool invites teacher to self-assess across six Areas, comprising 22 competences in total.  In addition to these 22 questions there are 15 more referring to use of digital technologies and continuous professional development of teachers in the time of COVID-19 lockdown.

The tool used for this analysis is given in Annex 1. The English version of the Questionnaire was shared with stakeholders during a process of consultation. Representatives from the Ministry of Education, the Bureau for Education Services and the Centre for Vocational Education and Training gave positive feedback regarding the questionnaire, especially because of the feedback that the teachers receive during this process of self-assessment.

## Sample

In Montenegro there are 46 secondary schools offering general and vocational education. Beside the vocational and general schools there are 11 mixed schools which were not used in the sample, but kept in reserve in case one of the general schools will not respond. Total number of teachers in the mixed schools is 479.

---

[7] https://ec.europa.eu/jrc/en/digcompedu
[8] https://ec.europa.eu/jrc/en/digcompedu/self-assessment

There are 23 vocational schools and 12 general, of which one is private general school. The total number of teachers in the 23 vocational schools is 1437 and 12 general schools with the total number of 565 teachers employed. One private gymnasium did not take part and was replaced with a mixed school ''Beco Basic'' from Plav.

Selection of schools was done randomly and included 24 schools: half vocational and half general. The structure of the sample is in the Table 1, below this text. We selected 12 schools from the list of 23 vocational schools. There were exactly 12 general schools so no selection was necessary. All of the teachers in the sampled schools were invited to complete the survey.

In order to ensure that schools of different sizes were included in the sample it was decided to sample large and small schools. In Montenegro, it was convenient to use the number of teachers employed as an indicator of size. In communication with the ETF team and national partners we made an agreement that the 'small' schools are ones under 62 teachers and 'large' schools the schools which employ more than 62 teachers.

The sample and the details related to the schools selected were shared with the representatives of relevant  partners, Ministry of Education, Bureau for Education Services and Centre for Vocational Education and Training.

Table 1. Schools distribution in Montenegrin sample.

| | | Number of schools | Total number of teachers |
|---|---|---|---|
| VET schools | Small | 13 | 617 |
| | Large | 10 | 820 |
| General Secondary schools | Small | 9 | 309 |
| | Large | 3 | 256 |
| **TOTAL** | | **24** | **2002** |

## Survey

The questionnaire was translated from English to Montenegrin language with a minor adaptations. The only issue was the EU's Survey Tool is not programmed to recognise the Montenegrin language code but this problem was worked around.

The survey was provided on-line through the EU Survey Platform. The questionnaire was tested by three teachers from Montenegro and they found it easy to manage and useful because of the feedback given at the end of each area.

The survey was delivered within the timeframe of three weeks. Starting date was 09th November and closing deadline 23rd of November 2020.

Centre for Vocational Education and Training took a very active role in support to the implementation of a National Survey as the filling in rate was not so high as usual due to many reasons. Ministry of Education and Bureau for Education Services were also actively involved in the process. Total response rate was 475 answers, 159 teachers from general schools and 316 from vocational schools.

## Challenges

In Montenegro there were 4 major challenges: 1. Level of the digital skills; 2. COVID 19 changed the beginning of the school year/semester; 3.The survey took place during a hectic period in student assessment; 4. Covid changed the social atmosphere in schools and disrupted their management. It is possible that the achieved sample is not fully representative because teachers with very low levels of digital competence were perhaps less likely to submit responses.

We had very unusual situation for Montenegro that the response rate was not at all good in the first two weeks. This changed after 21st of November when the teachers closed regular obligations such as assessment of the students work and additional administrative duties. In the following two days we had a very high response until 23rd of November when the official Survey was closed.

# FINDINGS

## Composition of Sample

The total number of  teachers who filled in the survey is 475: 159 from the general schools and 316 from the vocational schools.

The results in the Table 2 below show the distribution based on age, teaching experiences and type of subjects taught.

The majority of the answers was provided by the teachers in age range from 30 to 49 years old. Just 3 answers were provided by  teachers under 25 years old. The majority of respondents also had more than 20 years of the professional experience in the teaching field, which reflects the composition of the actual teacher population.

The majority of the teachers who took part in the survey teaches general subjects rather than vocational.  This is because also general teachers working in vocational schools responded. There was a significant number of teachers included in the survey who teach computer science, information technology or programming, exactly 74 out of 475.

# 2. RESULTS

## 2.3 Montenegro

### 2.3.1 Sample

Table 2. Characterization of the sample.

| Country | Montenegro |
|---|---|
| **Number of teachers** | |
| General | 159 |
| Vocational | 316 |
| **Age range (years)** | |
| Under 25 | 3 |
| 25-29 | 34 |
| 30-39 | 156 |
| 40-49 | 151 |
| 50-59 | 98 |
| 60 or more | 28 |
| Prefer not to say | 5 |
| **Teaching experience** | |
| 1-3 | 57 |
| 4-5 | 32 |
| 6-9 | 76 |
| 10-14 | 97 |
| 15-19 | 60 |
| 20 or more | 143 |
| Prefer not to say | 10 |
| **Type of subject mainly taught** | |
| General academic | 268 |
| Vocational or professional | 160 |
| Other | 47 |
| **Teacher of computer science, information technology or programming** | 74 |

*Table 2. Schools response rates in Montenegrin sample.*

| | Vocational Schools | General Schools | Combined or mixed schools | Total |
|---|---|---|---|---|
| **Number of schools in country** | 23 | 12 | 11 | 46 |
| **Number of schools in sample** | 12 | 11 | 1 | 24 |
| **Number of teachers in sampled schools** | 805 | 547 | 50 | 1402 |
| **Responses:**<br>**Teachers of general subjects** | 134 | 125 | 9 | 268 |
| **Responses:**<br>**Teachers of professional subjects** | 152 | 6 | 2 | 160 |
| **Responses:**<br>**Teachers of other subjects** | 30 | 16 | 1 | 47 |
| **Response rates for sample** | **39.25%** | **26.87%** | **24%** | **33.88%** |
| **Response rate in relation to workforce** | **12.73%** | **5.92%** | **0.48%** | **19.14%** |

Table 3. Illustrates the response rate, by showing the percentage of  received responses  in relation to the total number of teachers. The average of all responses rates is 33.88% of total number of the teachers in sampled schools. When considering number of teachers in total on a national level, the response rate was 19.14% which makes the sample sufficiently significant . The survey Considering this rate of participation of the teachers from general and vocational schools, the survey can be  considered relevant.

ETF Working together Learning for life
European Training Foundation

# Proficiency Score

## 2.3.2 Proficiency scores and levels

In the Survey there were six areas to provide self-assessment of the teachers. Each response was scored by assigning a value to each answer. Teachers received individual feedback related to the answers they have provided in the survey. There are six proficiency levels as following:  A1 - Newcomers, A2 - Explorers, B1 - Integrators, B2 - Experts, C1 – Leaders, C2 - Pioneers.
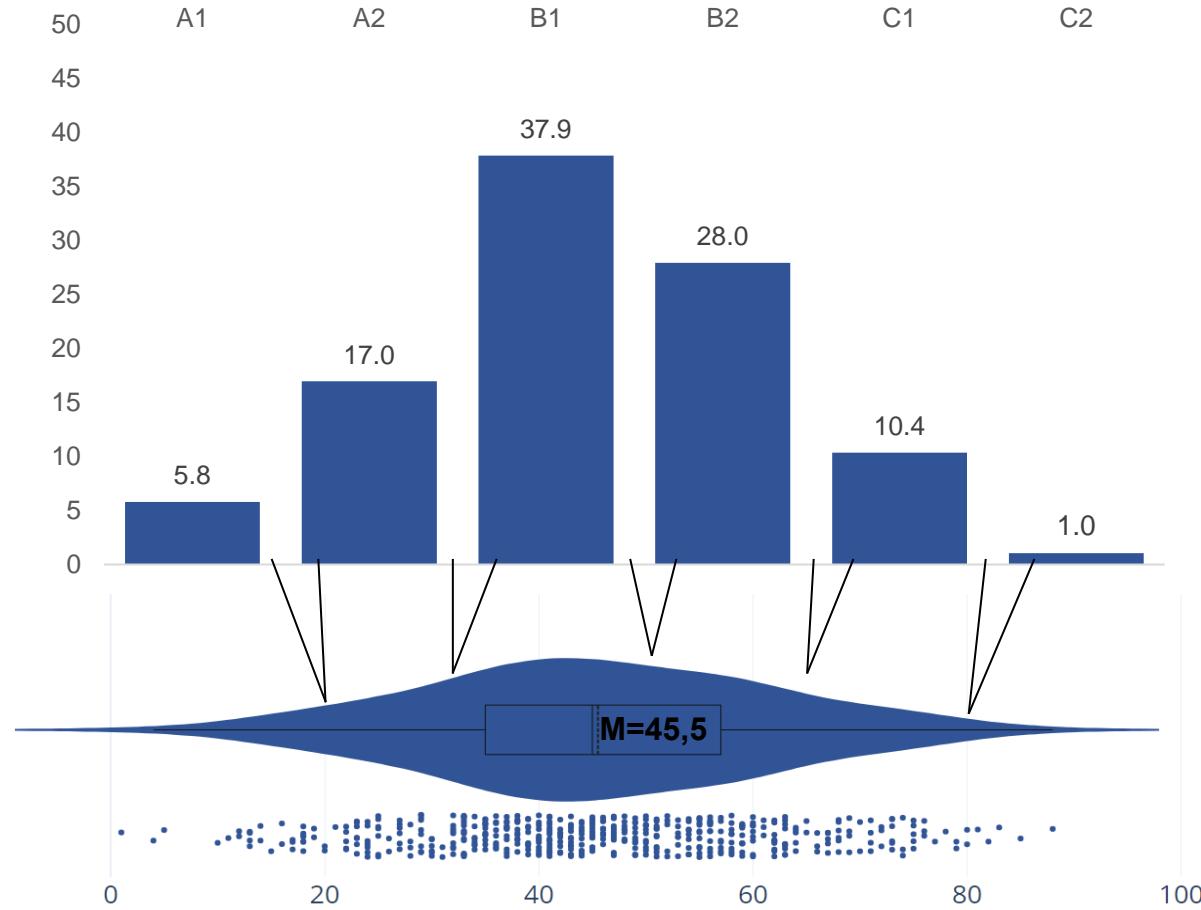
**Figure 1.** Top graph: Percentage of Montenegrin teachers in each proficiency level; Bottom graph: Violin plot with distribution and mean of scores.

The graph on Figure 1 shows that more than one third of Montenegrin teachers (37.9%) assessed their skills in the B1 proficiency level, which is considered as a medium result. Less proficient levels such as A1, A2, B1 in total 60.6% and most proficient levels B2, C1, C2 is 39.4% are in favour of less proficient levels. Two thirds of Montenegrin teachers assessed themselves as at B level which is similar to other countries in the region.

However, the average score of Montenegrin teachers, 45.5, was somewhat below the regional average, 49.8[9].**This result shows the need to further develop digital competences and it also raises issues about the use of self-assessment in order to target and improve professional development in Montenegro.**

## Proficiency Levels

### 2.3.3 Proficiency levels by competence area

There are not very large differences between the competences of Montenegrin teachers by area of competence.  However, Figure 2 shows that Montenegrin teachers are more likely to have strong digital competences in Area 1: Professional Engagement and Area 3: Teaching and Learning. By contrast Area 2: Digital Resources, Area 5: Empowering Learners, Area 6 – Facilitating Learners' Digital Competences and Area 2 are Areas of relative weakness..  In these areas around 20% of teachers remain at the lowest level. Digital competences in Area 6 – Assessment are intermediate. This is understandable given that  it is more difficult to develop the competence to help others to work digitally than to develop one's own skills.

**Area 1: Professional Engagement**

The focus of area 1 is the ability of teachers to use digital technologies not only to enhance teaching, but also for their professional interactions with colleagues, students, parents and other interested parties, for their individual professional development and for the collective good and continuous innovation in the organisation and the teaching profession.

**Area 2: Digital Resources**

One of the key competences any teacher needs to develop is to identify good educational resources, and to modify, create and share digital resources that fit their learning objectives, student group and teaching style. At the same time, they need to be aware of how to responsibly use and manage digital content, respecting copyright rules and protecting personal data.

**Area 3: Teaching and Learning**

---

[9] Regional mean of all scores for all 5 countries (Albania, Montenegro, Moldova, North Macedonia and Serbia) is 49.81.

The most fundamental competence of the whole DigCompEdu framework is to design, plan and implement the use of digital technologies in the different stages of the teaching and learning process. However, when doing this, the aim must be to shift the focus of the lesson from teacher-led to student-centred processes.

**Area 4: Assessment**

Digital technologies can enhance existing assessment strategies and give rise to new and better assessment methods. Additionally, by analysing the wealth of (digital) data available on individual student's (inter-)actions, teachers can offer more targeted feedback and support

**Area 5: Empowering learners**

One of the key strengths of digital technologies in education is their potential for boosting the active involvement of students in the learning process and their ownership of it. Digital technologies can furthermore be used to offer learning activities adapted to each individual student's level of competence, their interests and learning needs. At the same time, however, care must be taken not to exacerbate existing inequalities (e.g. in access to digital technologies) and to ensure accessibility for all students, including those with special learning needs.

**Area 6: Facilitating Learners' Digital Competence**

The ability to facilitate students' digital competence is an integral part of teachers' digital competence and at the heart.

| | Area 1: Professional Engagement | Area 2: Digital Resources | Area 3: Teaching and Learning | Area 4: Assessment | Area 5: Empowering learners | Area 6: Facilitating Learners' Digital Competence |
|---|---|---|---|---|---|---|
| C2 | 1.0% | 1.7% | 1.2% | 2.1% | 2.3% | 1.2% |
| C1 | 5.4% | 8.1% | 5.2% | 7.2% | 11.2% | 6.2% |
| B2 | 21.1% | 21.9% | 20.9% | 21.3% | 18.2% | 21.5% |
| B1 | 37.9% | 26.3% | 33.3% | 28.8% | 26.7% | 33.1% |
| A2 | 25.1% | 22.2% | 26.9% | 24.6% | 22.4% | 18.0% |
| A1 | 9.5% | 19.9% | 12.4% | 15.9% | 19.3% | 19.9% |
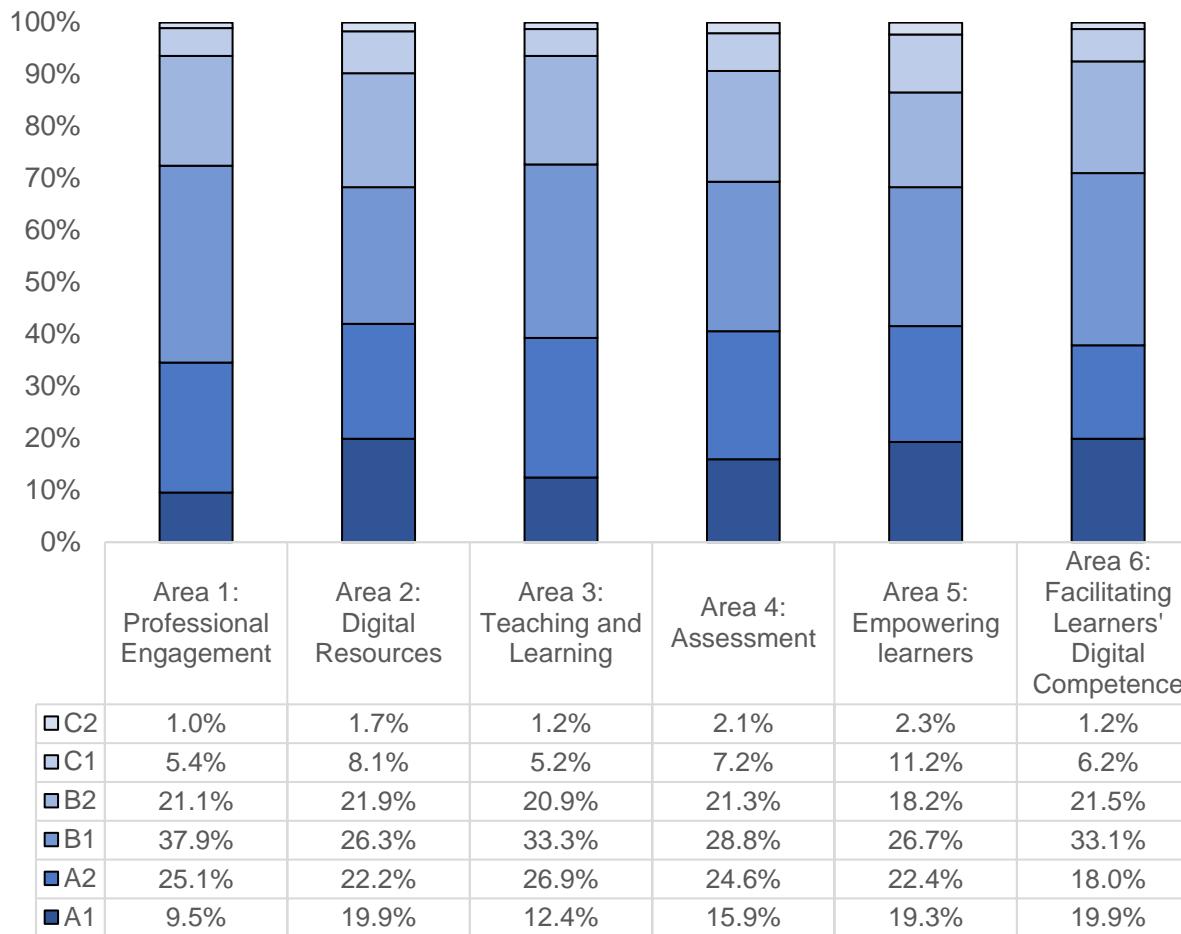
Figure 2. Percentage of Montenegrin teachers by proficiency level and competence area.

## 2.3.4 Proficiency levels by educational sector
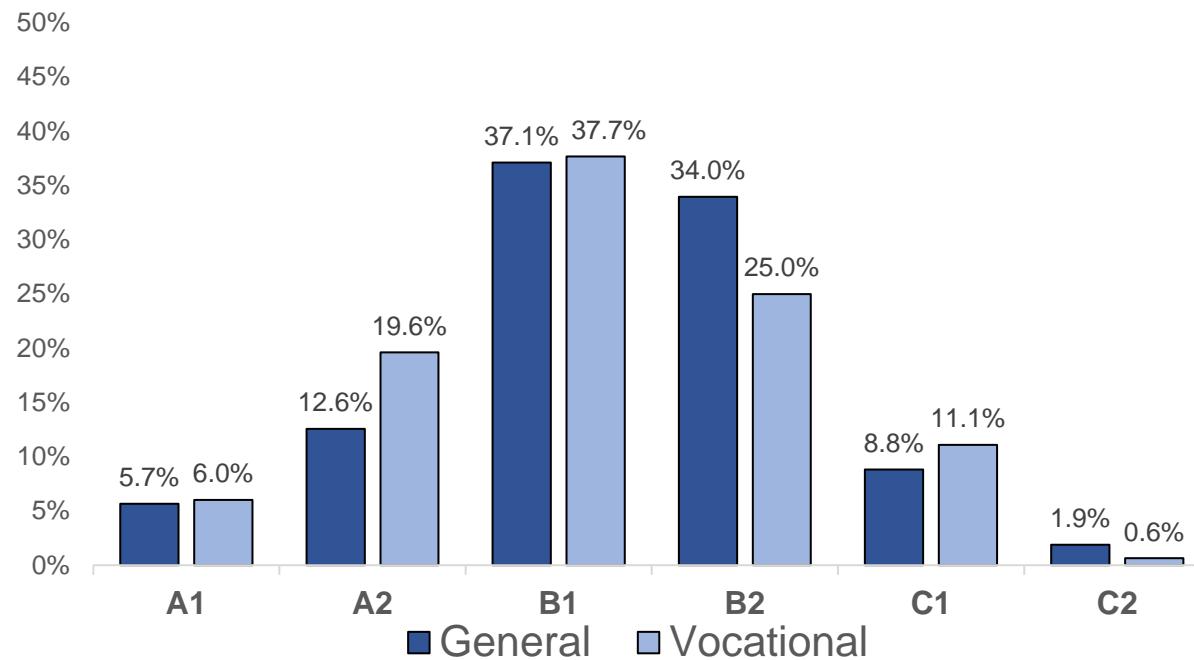


**Figure 3.** Percentage of Montenegrin teachers in each proficiency level by educational sector.

Figure 3 compares the proficiency levels of teachers working in different kinds of secondary school. In Montenegro there are two areas or sectors, General and Vocational. There appear to be differences at levels A2 and B2 but it is difficult to explain why there might be general differences between the sectors. It seems more likely that there are differences between particular schools and that these may explain the differences between sectors.

A separate analysis of the results of two schools, one a gymnasium and the other a vocational school, revealed differences in the digital competences of their teachers. Some 78% of the teachers in the gymnasium self-assessed their competence at level B1 or B2, while about 85% of the teachers in the vocational schools self-assessed themselves as being at B1 or A2.

## 2.3.5 Proficiency levels by school size
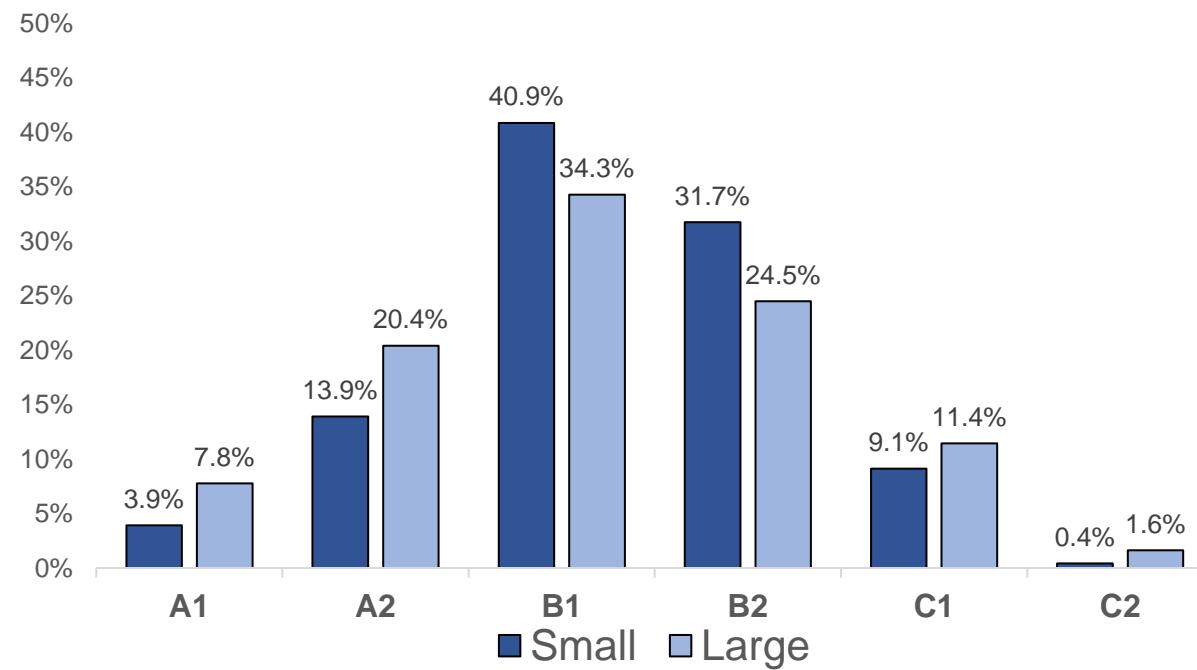


**Figure 4.** Percentage of teachers in each proficiency level by school size.

Figure 4 illustrates the self-assessment of the teachers in each proficiency level by the size of the school.

The data suggest that teachers in small schools report slightly higher digital competence than those in large schools. Furthermore, teachers in small schools are more likely than those in large schools to self-assess the competence as Level B1 or B2 (Integrators or Experts) rather than at the more extreme A or C Levels.

It is difficult to understand why this might be, particularly as larger schools are more likely to have a dedicated IT coordinator and a CPD coordinator and this might have been expected to raise competence.

# Use of different digital tools/activities during the COVID 19 lockdown

## 2.3.6 Use of different digital tools/activities during the COVID19 lockdown

| | Virtual | Synch | Shdoc | Shscr | Brain | Plan | Video | CreVid | Txt |
|---|---|---|---|---|---|---|---|---|---|
| every day | 79.2% | 35.2% | 29.7% | 32.2% | 8.0% | 25.9% | 19.2% | 12.0% | 41.1% |
| three times a week | 6.7% | 15.4% | 14.3% | 18.1% | 17.1% | 16.4% | 20.0% | 16.0% | 17.3% |
| once a week | 10.7% | 32.8% | 29.5% | 28.4% | 50.5% | 36.6% | 42.7% | 36.8% | 27.8% |
| never | 3.4% | 16.6% | 26.5% | 21.3% | 24.4% | 21.1% | 18.1% | 35.2% | 13.9% |
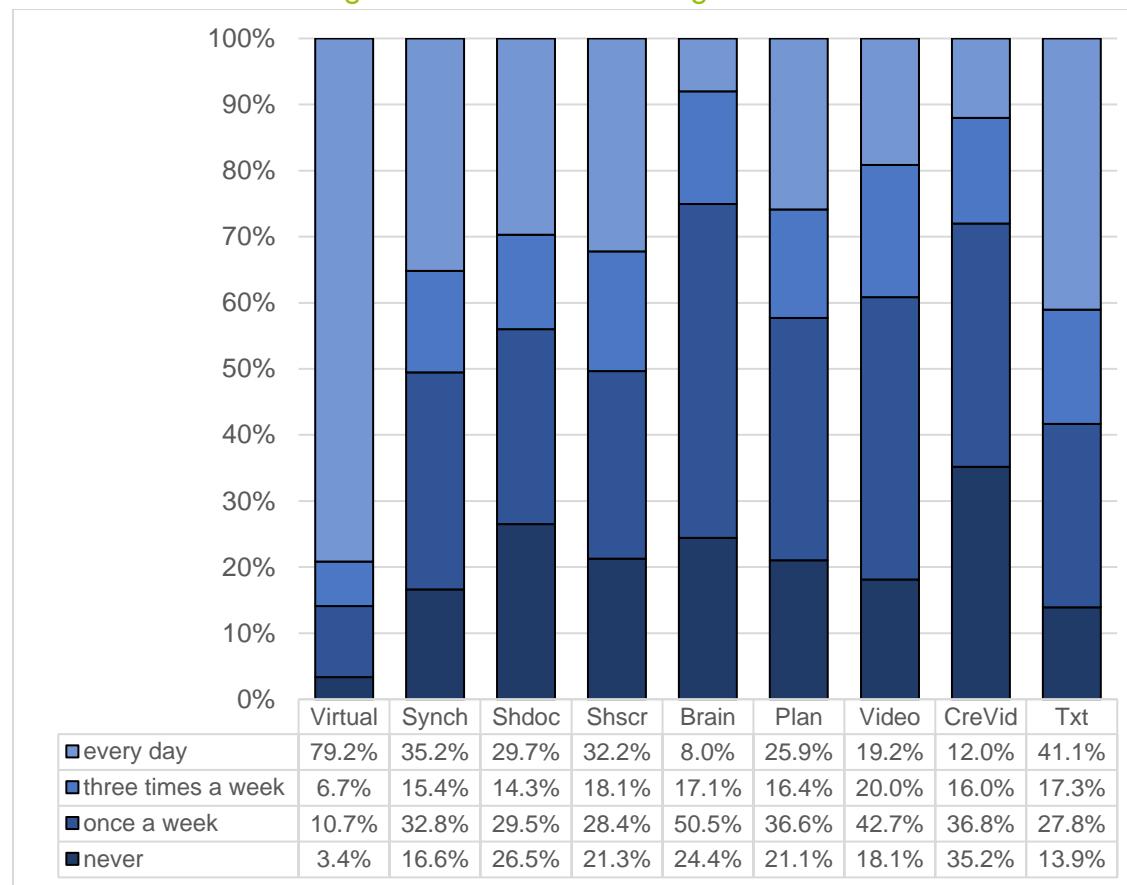
**Figure 5.** Frequency of use of different digital tools/activities during the COVID19 lockdown by the total Montenegrin sample.

| | Codes Key |
|---|---|
| **Virtual** | Virtual classroom software (e.g. Ms Teams, Google Classroom, Moodle) |

| | |
|---|---|
| **Synch** | Synchronous video-communication tools (e.g. Zoom, Skype, WhatsApp, Facebook live) |
| **Shdoc** | Sharing and exchanging of documents ("cloud services" e.g. Basecamp Dropbox, Google Drive, online editors for collaborative artefacts) |
| **Shscr** | Sharing your (the teacher's) screen (screen casting), for example, to make presentations or set tasks |
| **Brain** | Brainstorming, quizzes or polls (e.g. mind-map, multiple-choice questionnaires for (self-assessment) |
| **Plan** | Planning and organisational tools (e.g. Mail and Calendar, education management systems to communicate with schools, pupils and parents) |
| **Video** | Watching instructional videos and/or audios (e.g. online library) |
| **CreVid** | Creating and broadcasting videos and/or audios (e.g. YouTube) |
| **Txt** | Sharing and exchanging of documents and text messages, for example, by email or websites or social media (e.g. Facebook, Whatsapp) |

Figure 5 illustrates the extent to which different digital technologies or tools were used by Montenegrin teachers during the COVID19 lockdown. It provides an impression of how teachers responded to the challenge of distance teaching and it is also an indication of their competence and the resources they could draw on. Almost 80% of teachers report that they used *virtual classroom* software on a daily basis. During the first lock down in spring 2020, teachers in Montenegro were advised to make use of Microsoft Teams as a virtual classroom; the data suggests that this happened. Some 35% of teachers used *synchronous video-communication*, such as Zoom or TEAMS on a daily basis and some 32% were sharing their screens on a daily basis. 41% of teachers were communicating with students by text or by email on a daily basis.

By contrast, *creating and broadcasting video and/or audio materials* as well as *brainstorming, pools and quizze*s were least used during the time of the COVID 19 lockdown. That said, 75% of Montenegrin teachers were using these technologies to support their teaching at least once a week. This suggests that teachers do have the skills required but perhaps they lack access to materials or perhaps they cannot see how to use these approaches more regularly.
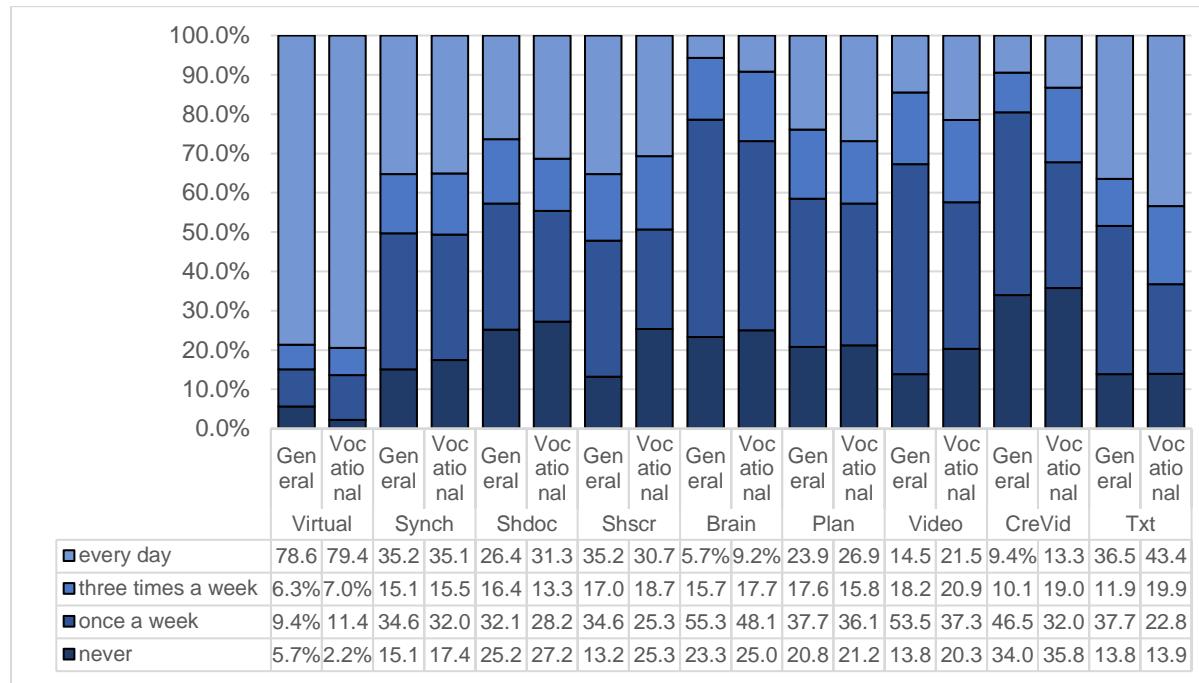
Figure 6. Frequency of use of different digital tools/activities during the COVID19 lockdown by educational sector in Montenegro

| | Virtual | | Synch | | Shdoc | | Shscr | | Brain | | Plan | | Video | | CreVid | | Txt | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational |
| every day | 78.6 | 79.4 | 35.2 | 35.1 | 26.4 | 31.3 | 35.2 | 30.7 | 5.7% | 9.2% | 23.9 | 26.9 | 14.5 | 21.5 | 9.4% | 13.3 | 36.5 | 43.4 |
| three times a week | 6.3% | 7.0% | 15.1 | 15.5 | 16.4 | 13.3 | 17.0 | 18.7 | 15.7 | 17.7 | 17.6 | 15.8 | 18.2 | 20.9 | 10.1 | 19.0 | 11.9 | 19.9 |
| once a week | 9.4% | 11.4 | 34.6 | 32.0 | 32.1 | 28.2 | 34.6 | 25.3 | 55.3 | 48.1 | 37.7 | 36.1 | 53.5 | 37.3 | 46.5 | 32.0 | 37.7 | 22.8 |
| never | 5.7% | 2.2% | 15.1 | 17.4 | 25.2 | 27.2 | 13.2 | 25.3 | 23.3 | 25.0 | 20.8 | 21.2 | 13.8 | 20.3 | 34.0 | 35.8 | 13.8 | 13.9 |

Figure 6 above illustrates that there was little difference between general and vocational schools in the extent or type of technologies or approaches used during the lock down. Both sectors used *synchronous video-communication* tools such as Zoom, Skype, WhatsApp, Facebook live to a very high degree.

Teachers from vocational schools were slight more likely to use *document sharing and SMS texting*. Teachers in general schools were slightly more likely to use *screen sharing.*

*Online brainstorming, quizzes or polls (e.g. mind-map, multiple-choice questionnaires for self-assessment* is not greatly used in either sector – so there may be opportunities to encourage use.

The analysis of particular schools revealed that 94% of teachers in the gymnasium used virtual classroom software daily against 82% in the vocational school.

| | Virtual | | | Synch | | | Shdoc | | | Shscr | | | Brain | | | Plan | | | Video | | | CreVid | | | Txt | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other |
| every day | 78.0% | 86.9% | 59.6% | 32.5% | 40.0% | 34.0% | 28.4% | 35.6% | 17.0% | 35.1% | 33.8% | 10.6% | 7.1% | 10.0% | 6.4% | 24.6% | 32.5% | 10.6% | 19.8% | 20.0% | 12.8% | 9.7% | 15.0% | 14.9% | 39.6% | 46.3% | 31.9% |
| three times a week | 6.7% | 5.0% | 12.8% | 14.6% | 15.6% | 19.1% | 10.4% | 16.9% | 27.7% | 15.3% | 21.3% | 23.4% | 16.8% | 17.5% | 17.0% | 17.2% | 15.6% | 14.9% | 20.1% | 18.8% | 23.4% | 17.2% | 13.8% | 17.0% | 16.4% | 17.5% | 21.3% |
| once a week | 10.8% | 6.3% | 25.5% | 36.6% | 26.9% | 31.9% | 33.6% | 24.4% | 23.4% | 30.6% | 22.5% | 36.2% | 54.9% | 46.3% | 40.4% | 36.9% | 30.0% | 57.4% | 45.5% | 38.8% | 40.4% | 38.8% | 31.9% | 42.6% | 30.6% | 21.9% | 31.9% |
| never | 4.5% | 1.9% | 2.1% | 16.4% | 17.5% | 14.9% | 27.6% | 23.1% | 31.9% | 19.0% | 22.5% | 29.8% | 21.3% | 26.3% | 36.2% | 21.3% | 21.9% | 17.0% | 14.6% | 22.5% | 23.4% | 34.3% | 39.4% | 25.5% | 13.4% | 14.4% | 14.9% |

Figure 7. Frequency of use of different digital tools/activities during the COVID19 lockdown by type of subject in Montenegro

The following analysis examines the responses of teachers according to their teaching subject rather than according to the kind of school they work in. Figure 7 shows different digital tools used by the teachers of the general, vocational and other subjects, for example, music or sport. Teachers teaching vocational subject are more likely to use all of digital tools and approaches except sharing teacher's screen, for example, to make presentations or set tasks. We can summarise by saying that an additional 5-10% of vocational teachers use these digital technologies in comparison to general teachers.

This difference is unlikely to be related to differences in schools but it may be to do with the curriculum, pedagogical practice or professional development. The Vocation Education System in Montenegro has been supported by many projects related to capacity building of the teachers. So this may be the reason why teachers of vocational subject use digital tools more than the others.

General recommendation is that some of the interactive and innovative tools such as *Brainstorming, quizzes or polls, Planning and organisational tools* (e.g. Mail and Calendar, education management systems to communicate with schools, pupils and parents), *Watching instructional videos*

ETF Working together Learning for life
European Training Foundation

*and/or audios (e.g. online library), Creating and broadcasting videos and/or audios (e.g. YouTube)* could be included into CPD plans.  Further some 10-20% of teachers do use these tools and approaches on a daily basis – greater recognition and encouragement of peer support might enable better sharing of these skills.

# Provision of CPD over last 12 months

## 2.3.7 Provision of CPD in the last 12 months

| | OLCPD | Assist |
|---|---|---|
| ▢ many times | 10.9% | 24.4% |
| ▢ on a few occasions | 26.3% | 36.0% |
| ▢ on one occasion | 40.8% | 24.4% |
| ▢ never | 21.9% | 15.2% |
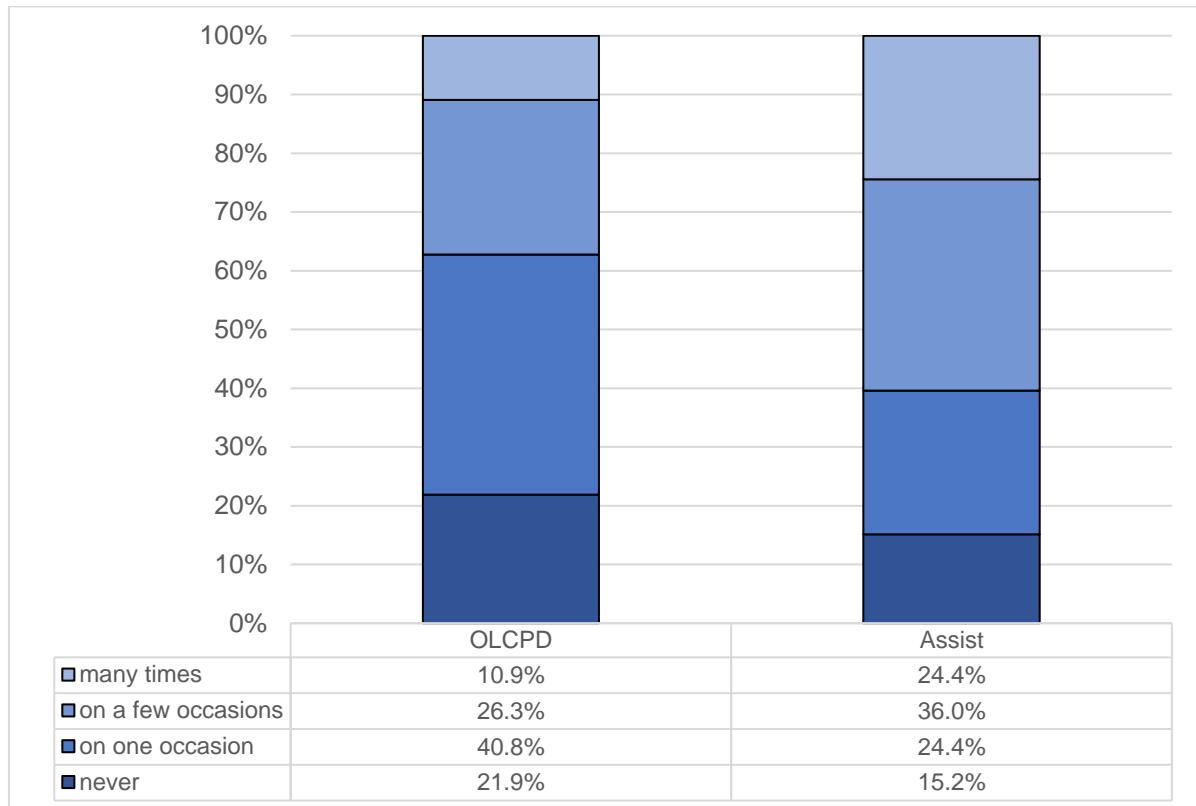
Figure 8. Participation in online CPD (OLCPD) and assistance by other teachers/advisors (Assist) in the past 12 months by the total Montenegrin sample.

| | Codes Key |
|---|---|
| **OLCPD** | Over the last 12 months, I have participated in online CPD to develop my digital competences. |
| **Assist** | Over the last 12 months, I have been assisted by other teachers or advisors in my school to develop my digital competences. |

Figure 8 shows that 37.2% of teachers participated in on-line CPD addressing digital competences more than once over the last 12 months.  Around 78% had some on-line CPD addressing digital competences and 22% had none. Teachers were more likely to receive support from their colleagues in relation to their digital competences: more than 60% of teachers received such support on more than one occasion.  This demonstrates the importance of peer support – which is particularly relevant and accessible when teachers need to learn things quickly and on-the-job.  It is striking that peer support was so important, even during lockdown.

| | General | Vocational | General | Vocational |
|---|---|---|---|---|
| | OLCPD | | Assist | |
| □ many times | 8.2% | 12.3% | 26.4% | 23.4% |
| □ on a few occasions | 27.7% | 25.6% | 32.1% | 38.0% |
| □ on one occasion | 44.7% | 38.9% | 28.3% | 22.5% |
| ■ never | 19.5% | 23.1% | 13.2% | 16.1% |
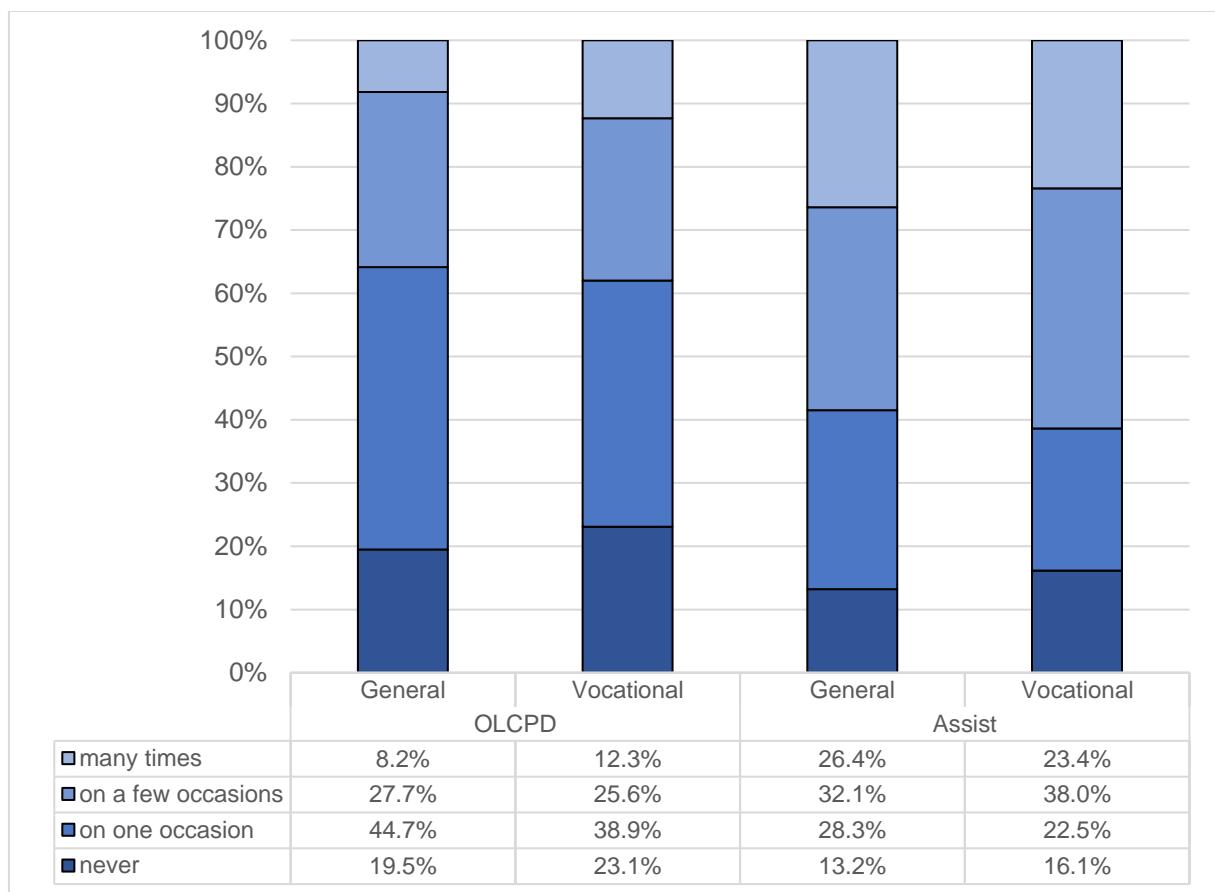
Figure 9. Participation in online CPD (OLCPD) and assistance by other teachers/advisors (Assist) in the past 12 months by educational sector in Montenegro.

Figure 9 explores the difference between the vocational and general sectors. There are no large differences although teachers in vocational schools were slightly more likely to access on-line CPD relating to digital competences than general teachers and very slightly more likely to be supported by their peers.

| | Small | Large | Small | Large |
|---|---|---|---|---|
| | OLCPD | | Assist | |
| ☐ many times | 8.7% | 13.1% | 25.7% | 23.3% |
| ☐ on a few occasions | 27.8% | 24.9% | 34.8% | 37.1% |
| ☐ on one occasion | 43.0% | 38.8% | 24.8% | 24.1% |
| ☐ never | 20.4% | 23.3% | 14.8% | 15.5% |
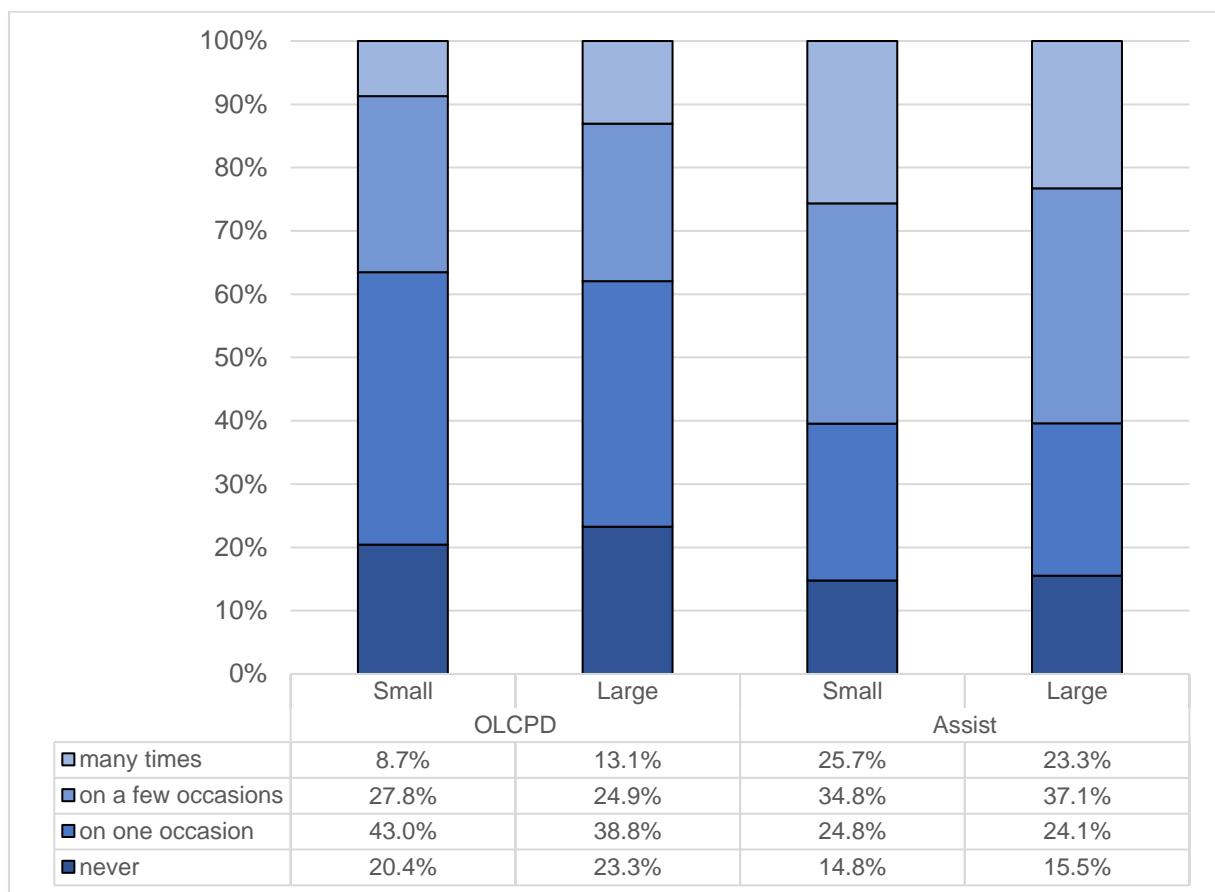
Figure 10. Participation in online CPD (OLCPD) and assistance by other teachers/advisors (Assist) in the past 12 months by school size in Montenegro.

The chart above, Figure 10 shows that there was little difference in CPD and peer support for teachers in large as opposed to small schools. Teachers in large schools were slightly more likely to participate many times in CPD and teachers in small schools were slightly more likely to receive peer support.

| | Enc | Sel |
|---|---|---|
| ☐ Strongly agree | 21.3% | 22.5% |
| ☐ Agree | 47.2% | 49.1% |
| ☐ Neither agree nor disagree | 23.8% | 21.9% |
| ☐ Disagree | 5.9% | 5.7% |
| ☐ Strongly disagree | 1.9% | 0.8% |
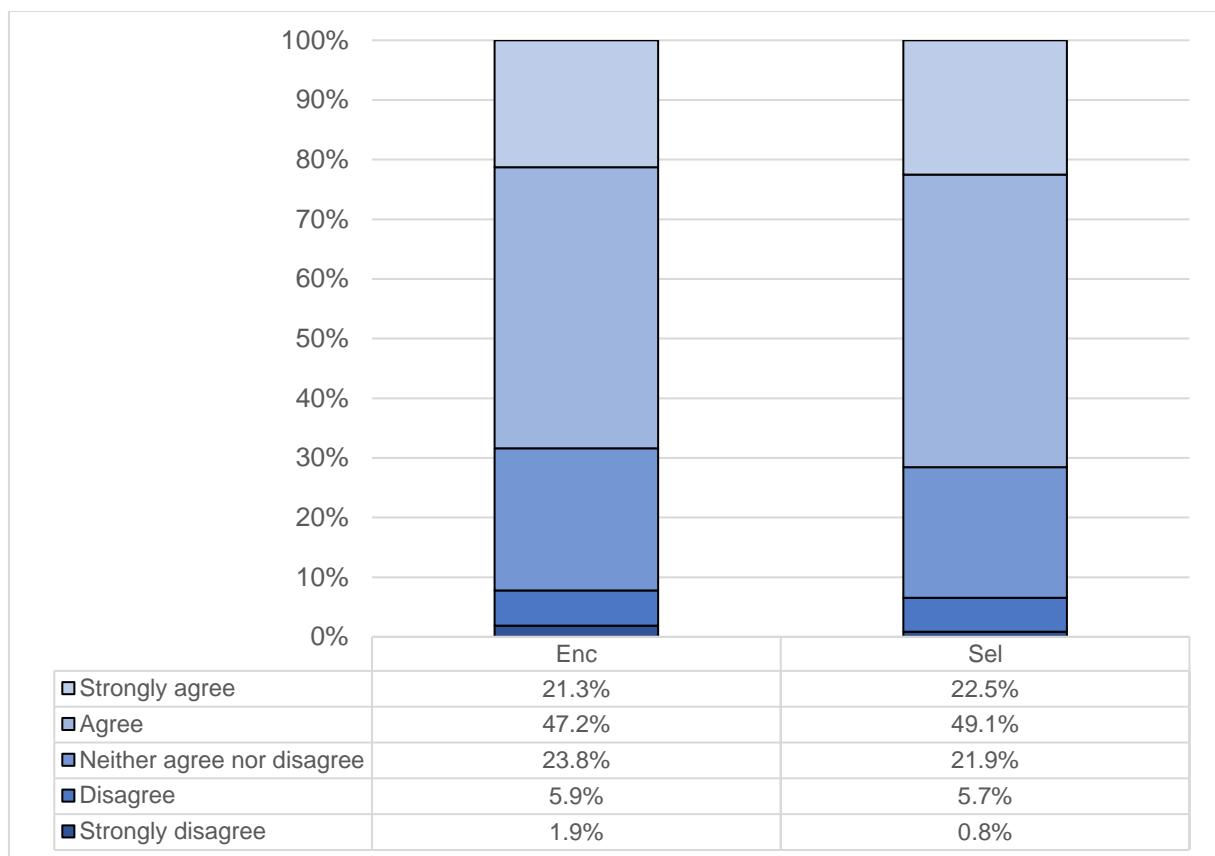
Figure 11. Perception on the experience of the CPD encouraged by the school (Enc) and selected based on personal needs (Sel) undertaken in the past 12 months by the total sample.

| | Codes Key |
|---|---|
| **ENC** | I was encouraged by my school to participate in CPD |
| **SEL** | I selected the CPD based on my personal development needs |

Figure 11 illustrates that the 68,5% of teachers say that they were encouraged by the schools to take part in the CPD activities. Also, high percentage of the teachers (71.6%) report that they were selected to take part into CPD that addressed their personal needs.

Only 7.8% of teachers think that they were not supported by their schools and 6.5% that their needs were not taken into account. However, a relatively large share, about 20%, were not sure whether they were supported or their needs were taken into account. On the whole, then, we can say that some 75% teachers believe that they were supported to get relevant CPD to develop their digital competences in 2020.

ETF Working together Learning for life
European Training Foundation

| | General | Vocational | General | Vocational |
|---|---|---|---|---|
| | Enc | | Sel | |
| □ Strongly agree | 23.3% | 20.3% | 22.0% | 22.8% |
| ■ Agree | 49.7% | 45.9% | 50.9% | 48.1% |
| ■ Neither agree nor disagree | 17.0% | 27.2% | 18.2% | 23.7% |
| ■ Disagree | 6.9% | 5.4% | 8.2% | 4.4% |
| ■ Strongly disagree | 3.1% | 1.3% | 0.6% | 0.9% |
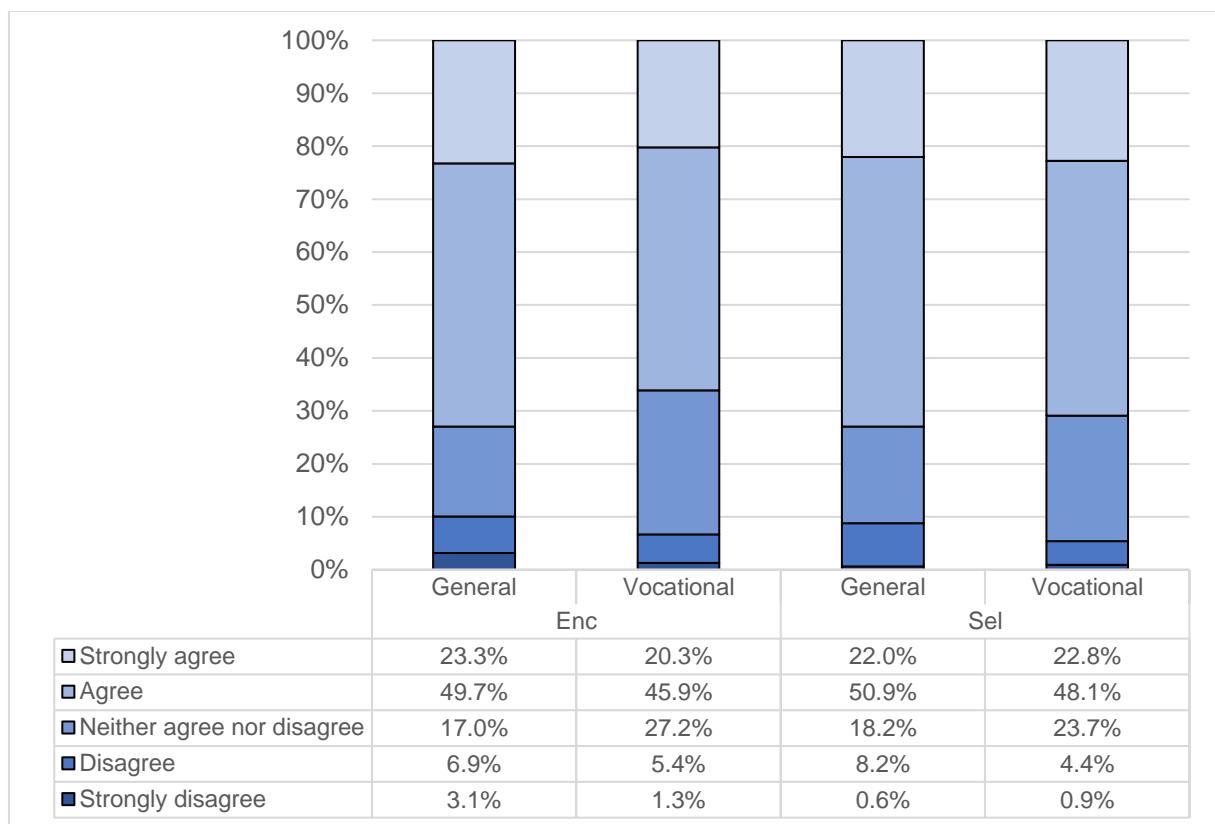
Figure 12. Perception that participation in CPD related to digital competences was encouraged by the school (Enc) and was relevant to their personal needs (Sel) undertaken in the past 12 months by educational sector in Montenegro.

Figure 12 shows that teachers from vocational schools were less likely to believe that they were encouraged to participate in CPD by their schools or that their CPD was relevant to their personal training needs. Teachers from vocational schools were also more likely to avoid either a positive or negative response to this question. Even though the difference is not great, it may be that vocational schools are somehow giving less support or are less able to find relevant CPD. It may be that there was an absence of CPD addressing digital competences that is directly relevant to their curriculum.

# Training Needs

## 2.3.8 Needs of CPD

| | N1 | N2 | N3 | N4 | N5 | N6 | N7 | N8 | N9 | N10 | N11 | N12 | N13 | N14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| very high need | 10.7% | 9.5% | 14.9% | 15.8% | 13.9% | 16.2% | 14.1% | 12.8% | 14.1% | 12.0% | 15.2% | 16.2% | 17.3% | 25.1% |
| high need | 47.2% | 45.9% | 51.4% | 44.2% | 55.8% | 54.1% | 50.1% | 52.8% | 56.2% | 56.4% | 54.1% | 54.5% | 54.5% | 49.5% |
| low need | 31.2% | 32.0% | 25.9% | 29.9% | 24.8% | 23.4% | 28.0% | 26.7% | 22.3% | 24.2% | 25.5% | 21.9% | 20.6% | 19.2% |
| no need | 10.9% | 12.6% | 7.8% | 10.1% | 5.5% | 6.3% | 7.8% | 7.6% | 7.4% | 7.4% | 5.3% | 7.4% | 7.6% | 6.3% |
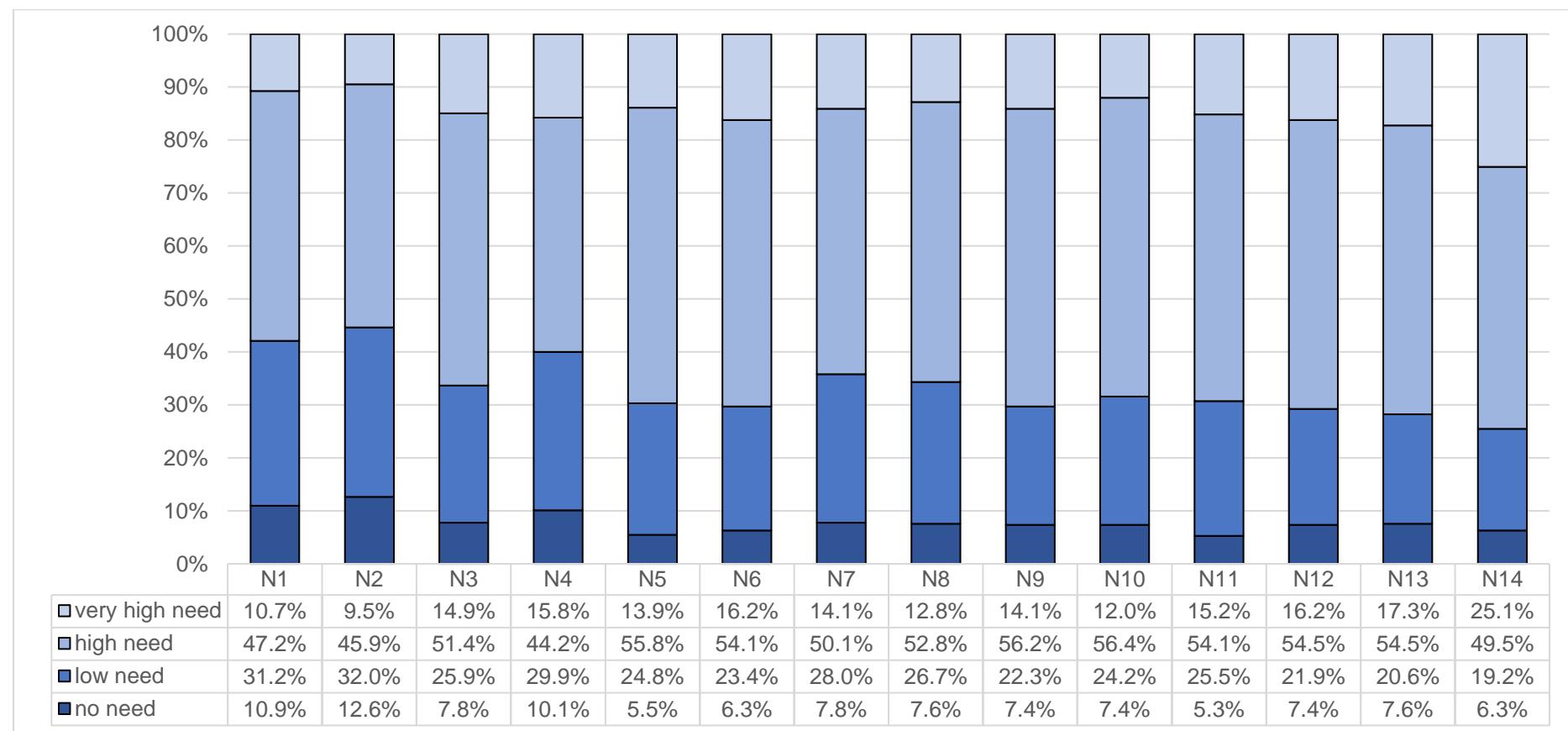
Figure 13. Perception of needs for CPD that addresses digital competences by the total Montenegrin sample.

| | Codes Key |
|---|---|
| N1 | Communicating digitally with students and parents |
| N2 | Collaborating digitally with colleagues |
| N3 | Finding, adapting and creating digital resources that serve different learning tasks and different learners |
| N4 | Managing and protecting sensitive data and content |
| N5 | Making greater and more effective use of different digital technologies |
| N6 | Enabling students to use digital technologies for group work |
| N7 | Making use of digital technologies to assess student work and to provide them with feedback |
| N8 | Making use of digital technologies to monitor and analyse students' digital activity |
| N9 | Making use digital technologies to engage students actively in learning |
| N10 | Making use of digital technologies to address individual learning needs |
| N11 | Planning digital learning that will overcome potential digital problems, e.g. lack of access to devices or data |
| N12 | Teaching students how to work and learn digitally |
| N13 | Teaching students to make responsible and critical use of digital technologies |
| N14 | Teaching and assessing at a distance during a COVID19 lockdown |

Figure 13 reveals that, 60-70% of teachers report a high or very high training need in relation to all kinds of digital competence. The biggest need is expressed in the core area relating directly to distance teaching: *N14 - Teaching and assessing at a distance during a COVID19 lockdown.*

Training needs are significant but less acute with respect to, *N1- 'Communicating digitally with students and parents'* and N2 - *Collaborating digitally with colleagues:* only some 60% of teachers report these training needs.
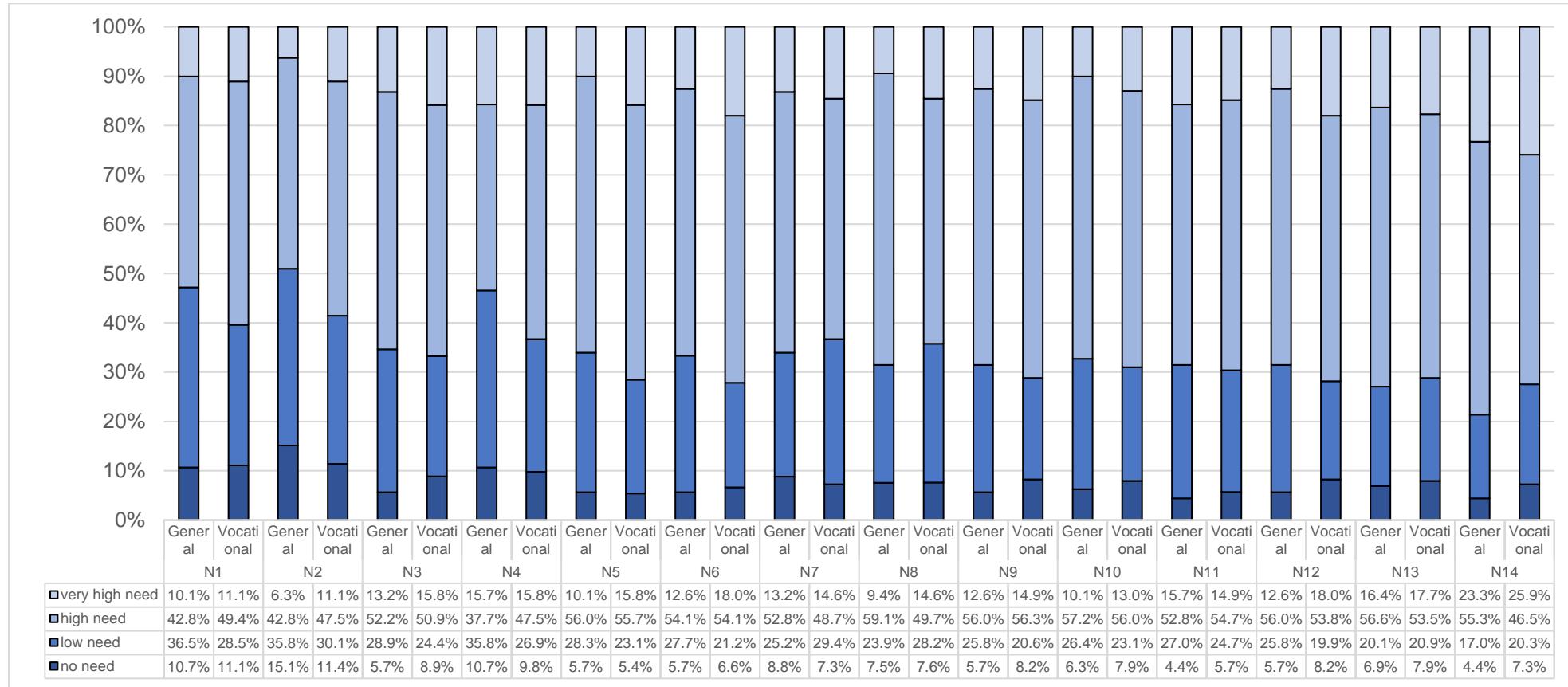
Figure 14. Perception of needs for CPD that addresses digital competences by educational sector in Montenegro.

| | General N1 | Vocational N1 | General N2 | Vocational N2 | General N3 | Vocational N3 | General N4 | Vocational N4 | General N5 | Vocational N5 | General N6 | Vocational N6 | General N7 | Vocational N7 | General N8 | Vocational N8 | General N9 | Vocational N9 | General N10 | Vocational N10 | General N11 | Vocational N11 | General N12 | Vocational N12 | General N13 | Vocational N13 | General N14 | Vocational N14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| very high need | 10.1% | 11.1% | 6.3% | 11.1% | 13.2% | 15.8% | 15.7% | 15.8% | 10.1% | 15.8% | 12.6% | 18.0% | 13.2% | 14.6% | 9.4% | 14.6% | 12.6% | 14.9% | 10.1% | 13.0% | 15.7% | 14.9% | 12.6% | 18.0% | 16.4% | 17.7% | 23.3% | 25.9% |
| high need | 42.8% | 49.4% | 42.8% | 47.5% | 52.2% | 50.9% | 37.7% | 47.5% | 56.0% | 55.7% | 54.1% | 54.1% | 52.8% | 48.7% | 59.1% | 49.7% | 56.0% | 56.3% | 57.2% | 56.0% | 52.8% | 54.7% | 56.0% | 53.8% | 56.6% | 53.5% | 55.3% | 46.5% |
| low need | 36.5% | 28.5% | 35.8% | 30.1% | 28.9% | 24.4% | 35.8% | 26.9% | 28.3% | 23.1% | 27.7% | 21.2% | 25.2% | 29.4% | 23.9% | 28.2% | 25.8% | 20.6% | 26.4% | 23.1% | 27.0% | 24.7% | 25.8% | 19.9% | 20.1% | 20.9% | 17.0% | 20.3% |
| no need | 10.7% | 11.1% | 15.1% | 11.4% | 5.7% | 8.9% | 10.7% | 9.8% | 5.7% | 5.4% | 5.7% | 6.6% | 8.8% | 7.3% | 7.5% | 7.6% | 5.7% | 8.2% | 6.3% | 7.9% | 4.4% | 5.7% | 5.7% | 8.2% | 6.9% | 7.9% | 4.4% | 7.3% |

Figure 14 shows that the teachers from the vocational schools (66%) are slightly more likely to report high or very high training needs than teachers from the general schools (64%).

Analysis at school reveals differences in CPD priorities: 95% of teachers in the gymnasium need training addressing 'Teaching students to critically use digital technologies' while the priority in the vocational school was 'Greater and more efficient use of digital tools'. This relationship is reversed for N2 - Collaborating digitally with colleagues: teachers in vocational schools were more likely to have this training need than those in general schools.



| | N1 | | | N2 | | | N3 | | | N4 | | | N5 | | | N6 | | | N7 | | | N8 | | | N9 | | | N10 | | | N11 | | | N12 | | | N13 | | | N14 | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other | General | Vocational | Other |
| very high need | 10. | 11. | 10. | 7.1 | 12. | 12. | 14. | 16. | 12. | 17. | 13. | 14. | 13. | 15. | 10. | 15. | 17. | 17. | 14. | 13. | 10. | 12. | 13. | 10. | 14. | 14. | 12. | 11. | 13. | 10. | 14. | 15. | 17. | 15. | 16. | 17. | 17. | 16. | 17. | 26. | 25. | 19. |
| high need | 49. | 43. | 46. | 46. | 45. | 46. | 54. | 45. | 55. | 40. | 51. | 40. | 57. | 52. | 59. | 55. | 51. | 55. | 50. | 48. | 57. | 53. | 50. | 59. | 56. | 54. | 61. | 57. | 55. | 55. | 55. | 52. | 51. | 53. | 56. | 53. | 53. | 54. | 59. | 50. | 45. | 59. |
| low need | 31. | 30. | 34. | 34. | 28. | 31. | 23. | 28. | 27. | 30. | 26. | 38. | 23. | 26. | 29. | 24. | 21. | 23. | 27. | 30. | 23. | 26. | 28. | 23. | 21. | 25. | 17. | 23. | 24. | 25. | 23. | 27. | 29. | 23. | 18. | 25. | 22. | 18. | 19. | 17. | 23. | 14. |
| no need | 9.0 | 15. | 8.5 | 12. | 13. | 8.5 | 7.8 | 8.8 | 4.3 | 11. | 8.1 | 6.4 | 6.3 | 5.6 | 0.0 | 5.2 | 8.8 | 4.3 | 7.8 | 7.5 | 8.5 | 8.2 | 6.9 | 6.4 | 7.8 | 6.3 | 8.5 | 7.5 | 6.9 | 8.5 | 6.3 | 4.4 | 2.1 | 7.5 | 8.1 | 4.3 | 6.7 | 10. | 4.3 | 6.3 | 6.3 | 6.4 |

Figure 15. Perception of needs for CPD that addresses digital competences by type of subject in Montenegro.

As can be seen in Figure 15 there is no overall difference between the training needs of vocational as opposed to general subject teachers.  However, there are a few differences.  For example, vocational teachers are somewhat less likely to express strong needs for general training for *Teaching and assessing at a distance during a COVID19 lockdown* (N14) and for *communicating digitally with students and parents* (N1).

## 2.3.9 Impact of CPD



| | I1 | I2 | I3 | I4 | I5 | I6 | I7 | I8 | I9 | I10 | I11 | I12 | I13 | I14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| strongly agree | 9.1% | 8.2% | 7.4% | 6.3% | 7.2% | 6.3% | 5.7% | 5.9% | 7.4% | 6.1% | 5.3% | 5.1% | 5.5% | 8.2% |
| agree | 49.7% | 50.7% | 51.2% | 33.5% | 47.8% | 40.2% | 40.2% | 45.7% | 45.5% | 46.7% | 37.9% | 43.8% | 42.3% | 48.2% |
| neither agree nor disagree | 33.7% | 31.4% | 31.4% | 41.3% | 34.1% | 37.3% | 37.5% | 33.7% | 34.5% | 33.9% | 35.6% | 36.2% | 35.8% | 31.4% |
| disagree | 4.6% | 6.7% | 6.3% | 13.9% | 7.2% | 11.8% | 12.0% | 11.4% | 8.8% | 9.9% | 16.8% | 11.2% | 12.6% | 9.9% |
| strongly disagree | 2.9% | 2.9% | 3.8% | 5.1% | 3.8% | 4.4% | 4.6% | 3.4% | 3.8% | 3.4% | 4.4% | 3.8% | 3.8% | 2.3% |
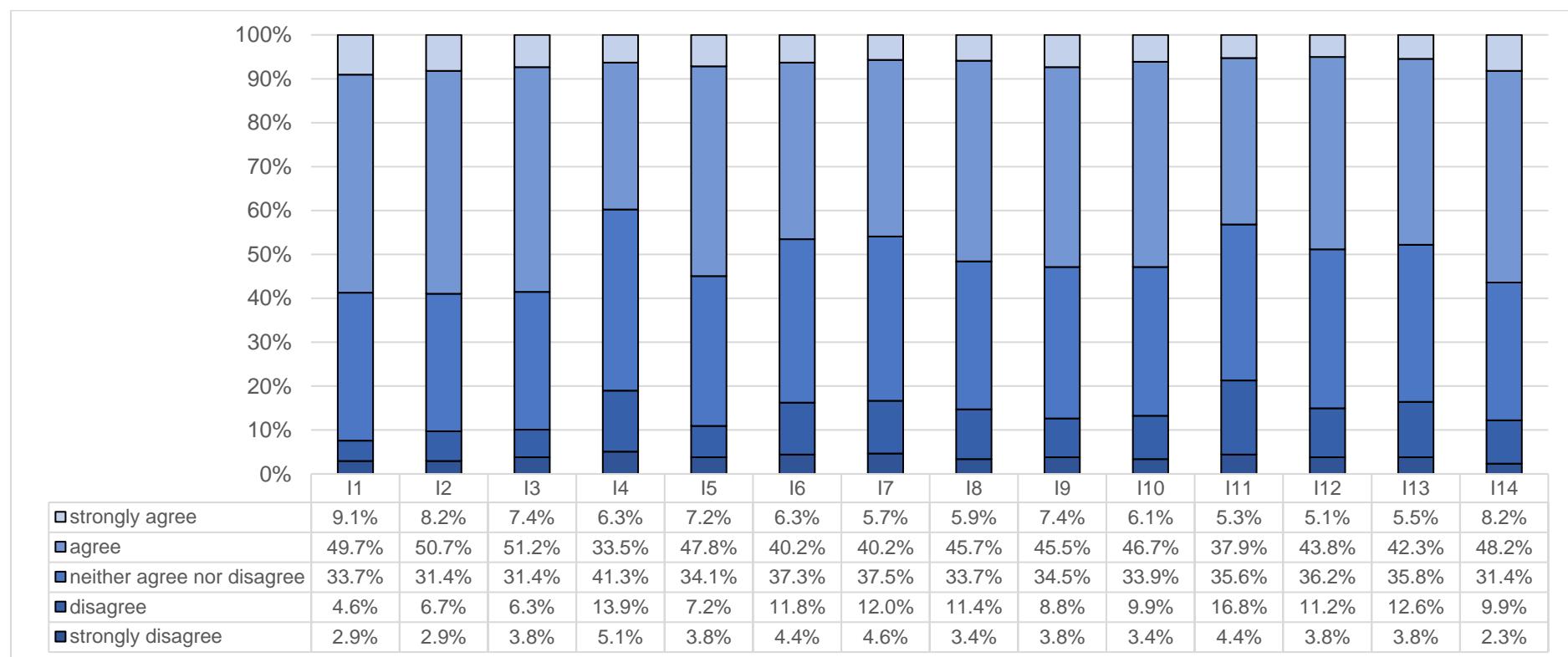
Figure 16. Perception of the impact of CPD by the total Montenegrin sample.

|     | Codes Key |
| --- | --- |
| I1 | The CPD has helped me to communicate digitally with students and parents |
| I2 | The CPD has helped me to collaborate digitally with colleagues |
| I3 | The CPD has helped me to find, adapt and create digital resources that serve different learning tasks and different learners |
| I4 | The CPD has helped me to manage and protect sensitive data and content |
| I5 | The CPD helped me to make greater and more effective use of different digital technologies |
| I6 | The CPD has helped me to enable students to use digital technologies for group work |
| I7 | The CPD has helped me to make use of digital technologies to assess student work and to provide them with feedback |
| I8 | The CPD has helped me to make use of digital technologies to monitor and analyse students' digital activity |
| I9 | The CPD has helped me to use digital technologies to engage students actively in learning |
| I10 | The CPD has helped me to use digital technologies to address individual learning needs |
| I11 | The CPD has helped me to plan digital learning that will overcome potential digital problems, e.g. lack of access to devices or data |
| I12 | The CPD has helped me to teach students how to work and learn digitally |
| I13 | The CPD has helped me to teach students to make responsible and critical use of digital technologies |
| I14 | The CPD has helped me to teach and assess remotely during the COVID19 lockdown |

Teachers are most likely to report positive impact on the following digital competences: *I1 - communicate digitally with students and parents, I2 - collaborate digitally with colleagues, I3 – to find, adapt and create digital resources that serve different learning tasks and different learners* (see Figure 16). Similarly high impact was reported relatively frequently on general competence for distance learning: I 14 *The CPD has helped me to teach and assess remotely during the COVID19 lockdown*. This is most likely explained by the fact that these competences were focused on during recent CPD.

Teachers were most likely to report no or little positive impact on the following digital competences:  I4 - *The CPD has helped me to manage and protect sensitive data and content (19%)*, I11 - *The CPD has helped me to plan digital learning that will overcome potential digital problems, e.g. lack of access to devices or data (20%)* and *I4 - the CPD has helped me to manage and protect sensitive data and content (18%)*. It may be that these competences received relatively little attention during CPD.

| | I1 | | I2 | | I3 | | I4 | | I5 | | I6 | | I7 | | I8 | | I9 | | I10 | | I11 | | I12 | | I13 | | I14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational | General | Vocational |
| strongly agree | 8.2% | 9.5% | 5.7% | 9.5% | 5.0% | 8.5% | 5.0% | 7.0% | 6.3% | 7.6% | 5.0% | 7.0% | 3.8% | 6.6% | 4.4% | 6.6% | 4.4% | 8.9% | 2.5% | 7.9% | 3.8% | 6.0% | 5.0% | 5.1% | 3.8% | 6.3% | 6.9% | 8.9% |
| agree | 56.0% | 46.5% | 57.2% | 47.5% | 57.2% | 48.1% | 37.1% | 31.6% | 55.3% | 44.0% | 40.9% | 39.9% | 40.9% | 39.9% | 47.2% | 44.9% | 48.4% | 44.0% | 53.5% | 43.4% | 39.6% | 37.0% | 44.7% | 43.4% | 44.7% | 41.1% | 50.3% | 47.2% |
| neither agree nor disagree | 24.5% | 38.3% | 23.3% | 35.4% | 23.3% | 35.4% | 32.7% | 45.6% | 24.5% | 38.9% | 34.0% | 38.9% | 35.2% | 38.6% | 31.4% | 34.8% | 30.2% | 36.7% | 27.0% | 37.3% | 27.0% | 39.9% | 30.2% | 39.2% | 30.8% | 38.3% | 27.0% | 33.5% |
| disagree | 7.5% | 3.2% | 10.7% | 4.7% | 9.4% | 4.7% | 18.2% | 11.7% | 8.8% | 6.3% | 14.5% | 10.4% | 15.7% | 10.1% | 13.8% | 10.1% | 12.6% | 7.0% | 11.9% | 8.9% | 24.5% | 13.0% | 15.1% | 9.2% | 15.1% | 11.4% | 13.2% | 8.2% |
| strongly disagree | 3.8% | 2.5% | 3.1% | 2.8% | 5.0% | 3.2% | 6.9% | 4.1% | 5.0% | 3.2% | 5.7% | 3.8% | 4.4% | 4.7% | 3.1% | 3.5% | 4.4% | 3.5% | 5.0% | 2.5% | 5.0% | 4.1% | 5.0% | 3.2% | 5.7% | 2.8% | 2.5% | 2.2% |

Legend: strongly disagree, disagree, neither agree nor disagree, agree, strongly agree

Figure 17. Perception of the impact of CPD by educational sector in Montenegro.

It appears that teachers working in general schools are, generally, slightly more likely to be positive about the impact of CPD addressing digital competences. It may be that on-line CPD was, in some way, targeted more at the needs of general teachers.

## 2.3.10 Preferred modes of CPD



| | PrefFace | PrefOnLIne | Prefteach | Prefblend |
|---|---|---|---|---|
| ☐ strongly agree | 16.4% | 17.1% | 12.0% | 18.1% |
| ☐ agree | 51.4% | 54.3% | 46.9% | 52.6% |
| ☐ neither agree nor disagree | 22.3% | 18.5% | 27.2% | 21.3% |
| ☐ disagree | 6.9% | 7.6% | 10.3% | 5.9% |
| ☐ strongly disagree | 2.9% | 2.5% | 3.6% | 2.1% |
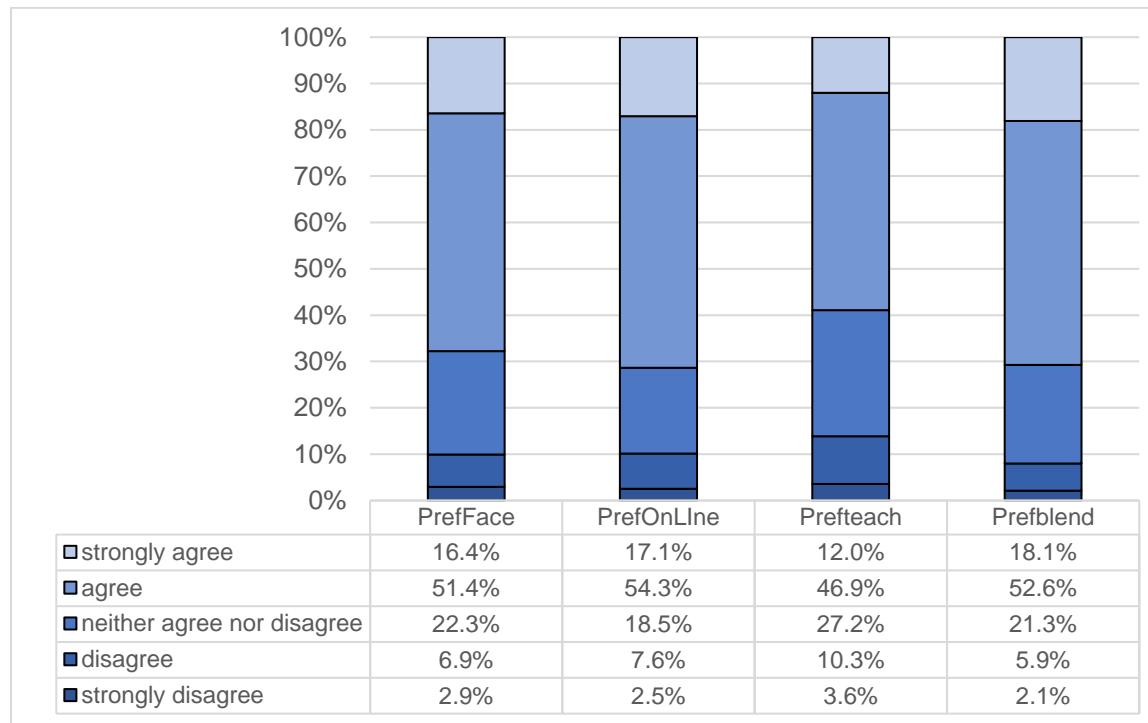
Figure 18. Preferred modes of CPD by the total sample: face to face workshops (PrefFace), Online (PrefOnLine); other teachers or advisors (Prefteach); blended methods (Prefblend).

| | Codes Key |
|---|---|
| **PrefFace** | I would like to participate in CPD face to face workshops led by trainers to develop my digital competences |

| PrefOnline | I would like to participate in online CPD to develop my digital competences |
|---|---|
| PrefTeach | I would like to be helped by other teachers or advisors in my school to develop my digital competences |
| PrefBlend | I would like to participate in CPD that blends together face-to-face and on-line methods |

Teachers were also asked what modality of CPD for digital competences they preferred: face to face, on-line workshops, training from their colleagues or advisers or a blended approach (a mixture of on-line and face to face). All modes of training were favoured by some 60 – 70% teachers. On-line training and blended training were attractive to somewhat more teachers – which reflects their recognition of the challenges of delivering face to face training during COVID19. It is remarkable, nonetheless, that the majority of teachers do accept blended and on-line CPD because in the past this was not thought to be very popular. Receiving school-based training from colleagues or advisers was marginally the least popular modality but nevertheless 59% of teachers favoured this kind of CPD, revealing that it has great potential. Montenegro currently has a strategy to support the work of school-based CPD coordinators to help them plan and coordinate relevant CPD in their schools.

| | General | Vocational | General | Vocational | General | Vocational | General | Vocational |
|---|---|---|---|---|---|---|---|---|
| | PrefFace | | PrefOnLIne | | Prefteach | | Prefblend | |
| strongly agree | 16.4% | 16.5% | 18.2% | 16.5% | 13.2% | 11.4% | 22.6% | 15.8% |
| agree | 54.7% | 49.7% | 56.6% | 53.2% | 42.8% | 49.1% | 51.6% | 53.2% |
| neither agree nor disagree | 18.2% | 24.4% | 15.1% | 20.3% | 26.4% | 27.5% | 17.6% | 23.1% |
| disagree | 8.2% | 6.3% | 8.8% | 7.0% | 14.5% | 8.2% | 6.9% | 5.4% |
| strongly disagree | 2.5% | 3.2% | 1.3% | 3.2% | 3.1% | 3.8% | 1.3% | 2.5% |
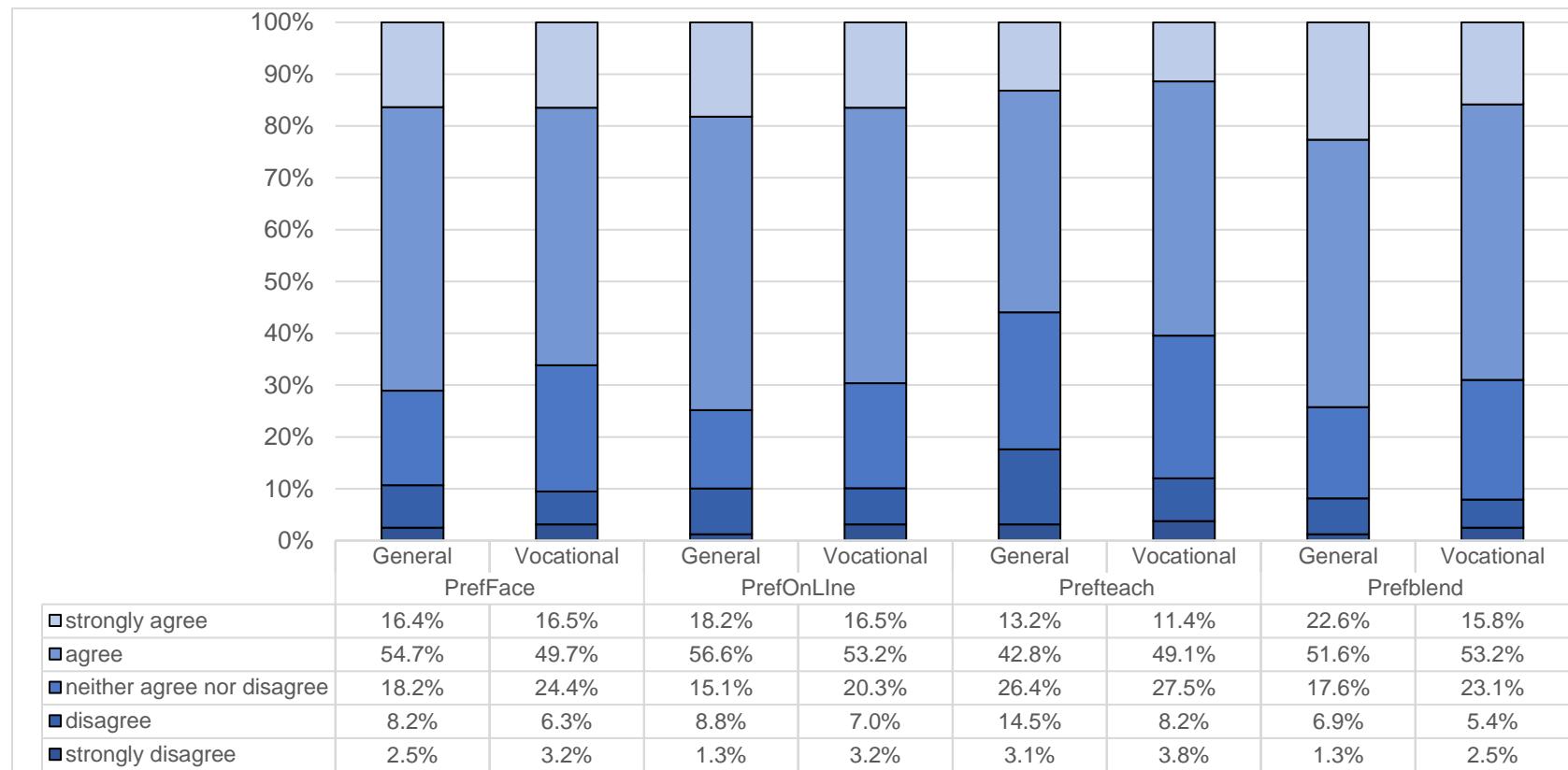
Figure 19. Preferred modes of CPD by educational sector: face to face workshops (PrefFace), Online (PrefOnLine); other teachers or advisors (Prefteach); blended methods (Prefblend).

Figure 19 shows that teachers from general schools showed a stronger preference for all modes of CPD than teachers from vocational schools, but the difference is not great.

# CONCLUSIONS

## Learning

Two thirds of Montenegrin teachers in the survey assessed themselves at the medium level of competency of the DigiCompEdu Framework – that is as 'integrators' or 'experts' which is similar to other countries in the region.  However, the average digital competence score of Montenegrin teachers, 45.5, was somewhat below the regional average, 49.8.

Montenegrin teachers are more likely to have strong digital competences in Area 1: Professional Engagement and Area 3: Teaching and Learning.  By contrast Area 2: Digital Resources, Area 5: Empowering Learners, Area 6 – Facilitating Learners' Digital Competences and Area 2 are Areas of relative weakness.

There are some general differences between vocational and general and between large and small schools but these differences are small.  Analysis at school level shows that there are differences between schools – that is schools do not share the same level or distribution of competences.

Most teachers in Montenegro had competence in TEAMs virtual classroom software during the lockdown: almost 80% of teachers report that they used *virtual classroom* software on a daily basis. Competence in other digital technologies and tools was not put into practice so extensively: only 35% of teachers used *synchronous video-communication*, such as Zoom or TEAMS. It seems that some educational technologies are under-used, for example, *creating and broadcasting video and/or audio materials* as well as *brainstorming, pools and quizze*s. Teachers of vocational subjects are slightly more likely to use most educational technologies than general teachers.

Around 78% had some on-line CPD addressing digital competences over the last 12 months. Teachers were more likely to receive support from their colleagues than to receive formal CPD: only 37% received CPD on more than one occasion.  By and large, teachers believed that they were encouraged by their schools and that they received CPD relevant to their needs.  60-70% of teachers report a high or very high training need in relation to all kinds of digital competence. The biggest need is expressed in the core area relating directly to distance teaching: *N14 - Teaching and assessing at a distance during a COVID19 lockdown.*

More than 11% of teachers have advanced or Level C competence. It is likely that these teachers are already supporting their colleagues: we know that some 60% of teachers received support from their colleagues on a few or many occasions. 68% of teachers favoured receiving support in schools from peers or advisers although training through on-line and blended approaches were slightly more popular.  60 - 40% of teachers agreed or strongly that CPD had a positive impact upon their digital practice in teaching.

## Recommendations

✓ The following recommendations relation to training needs and CPD:Teachers should have more opportunities to practice this kind of self-assessment to inform the planning and provision of CPD

✓ The competence areas of *Professional Engagement, Teaching and Learning and Facilitating Learners' Digital Competences* are weakest and need to be strengthen through the capacity building of the teachers

✓ Additional CPD should be provided to meet the main needs reported.

✓ The use of additional digital technologies and approaches should be supported, for example, Brainstorming, *quizzes or polls, Planning and organisational tools, Watching instructional videos and/or audios, Creating and broadcasting videos and/or audio*,

- ✓ CPD should be targeted to meet the different levels of need and the different areas of competence.

- ✓ Improved CPD should be developed to address the competence of digital security: to manage protect sensitive data and content.

- ✓ CPD can be provided on-line and in blended modes.

- ✓ The support that teachers give to one another to develop digital competences should be recognised and encouraged.

## How the Needs Analysis might be used

The data can be used at three different levels: the level of the education secondary sector, the individual school level and the personal level.

At national level the findings from the survey will help national authorities to understand the effectiveness of past CPD and to understand where there are gaps and unmet needs.  This information can help to identify priorities.

Schools could be supported to use this survey (or an adapted version) to research the needs of their teachers in order to plan their CPD.  They may be able to organise training events within the school perhaps making use of teachers with high competences to support their colleagues or bringing in outside trainers.

Teachers can use the self-assessment to identify their own training needs and to form their own individual plans for training.  Teachers can also benefit from the feedback that comes with the self-assessment – which provides recognition of what they have already learnt and advises them of how they may develop.

## Possible additional analysis

Additional analysis should be done in order to define the priority of needed training topics for each school or for teachers grouped by subjects they teach. Identified CPD needs showed small differences between educational sector or school size. However, from more detailed analysis of two schools it is obvious that each school has own specifics and it is recommended to tailor future CPD activities based on the analysis of CPD needs for each specific school.  Further research should be done in order to find if there is a correlation between the competence level of a teacher and their expressed CPD needs.

A significant minority of teachers, around 40%, were unable to evaluate whether CPD had a positive impact or not.  It would be valuable to understand why they felt unable to comment.

![ETF Working together Learning for life - European Training Foundation]

# Analiza potreba DigCompEdua

Polja označena zvjezdicom (*) obvezna su.

## Uvod

Nastavnicima su sve češće potrebne dodatne digitalne kompetencije da bi radili svoj posao - da bi se razvile škole i nacionalne agencije koje su zasnovane na pravom profesionalnom razvoju, neophodno je znati koja vrsta usavršavaja je potrebna.

Namjena ovog istraživanja je da Vam pomogne da procijenite vlastite digitalne kompetencije i da pomogne školama i nacionalnim agencijama da planiraju profesionalni razvoj u skladu sa Vašim potrebama za obukom.

Vaši lični podaci i Vaši odgovori neće biti objavljeni. Podaci će se koristiti u svrhe istraživanja i planiranja.

Nakon popunjavanja ankete, dobit ćete detaljne povratne informacije s korisnim savjetima za poboljšanje digitalnih kompetencija. Ako želite, možete odabrati opciju da primate izvještaj o ishodima istraživanja u narednom periodu.
Unaprijed se zahvaljujemo na Vašem vremenu i interesovanju. Vaš odgovor pomoći će poboljšanju obima i kvaliteta profesionalnog razvoja za vas i druge nastavnike. Očekivano uloženo vrijeme za popunjavanje ankete je oko 30 minuta.

Ako imate pitanja ili imate problema, obratite se: Aleksandri Radoman-Kovačević

Upitnik ima tri dijela: Digitalne kompetencije, lični detalji, profesionalni razvoj.

*1 **Odaberite školu u kojoj podučavate.**

  ○ Gimnazija ,,Slobodan Škerović", Podgorica

  ○ Gimnazija ,,Petar I Petrović Njegoš", Danilovgrad

  ○ Gimnazija Cetinje

  ○ Gimnazija ,,Tanasije Pejatović", Pljevlja

  ○ Gimnazija ,,Niko Rolović", Bar

- ○ Gimnazija ,,Stojan Cerović'', Nikšić
- ○ Gimazija ,,30. septembar'', Rožaje
- ○ Gimnazija ,,Panto Mališić'', Berane
- ○ Gimnazija ,,Miloje Dobrašinović'', Bijelo Polje
- ○ Srednja mješovita škola „Bećo Bašić", Plav
- ● Gimnazija Kotor
- ○ Gimnazija ,,25. maj'', Tuzi
- ○ Srednja stručna škola, Berane
- ○ Srednja ekonomsko-ugostiteljska škola, Bar
- ○ Srednja stručna škola, Cetinje
- ○ Muzička škola Kotor
- ○ Srednja stručna škola, Pljevlja
- ○ Srednja građevinsko geodetska škola „inž. Marko Radević", Podgorica
- ○ Srednja medicinska škola „dr Branko Zogović", Berane
- ○ Srednja stručna škola, Rožaje
- ○ Prva srednja stručna škola, Nikšić
- ○ Srednja elektrotehnička škola ,,Vaso Aligrudić'', Podgorica
- ○ Srednja ekonomska škola „Mirko Vešović", Podgorica
- ○ Stručna medicinska škola, Podgorica
- ○ Srednja mješovita škola "Ivan Goran Kovačić"
- ○ Srednja mješovita škola, Andrijevica
- ○ Srednja stručna škola, Bar
- ○ Srednja stručna škola "Vukadin Vukadinović", Berane
- ○ Srednja elektro-ekonomska škola, Bijelo Polje
- ○ Srednja stručna škola, Bijelo Polje
- ○ Srednja mješovita škola "Danilo Kiš", Budva
- ○ Srednja likovna škola "Petar Lubarda", Cetinje
- ○ Srednja stručna škola
- ○ Srednja mješovita škola "Braća Selić", Kolašin
- ○ Srednja pomorska škola, Kotor
- ○ Srednja mješovita škola "Vuksan Đukić", Mojkovac
- ○ Škola za osnovno i srednje muzičko obrazovanje "Dara Čokorilo", Nikšić
- ○ Srednja ekonomsko-ugostiteljska škola, Nikšić
- ○ Srednja mješovita škola, Petnjica

- Obrazovni centar, Plužine
- Srednja mješovita škola, Golubovci
- Srednja stručna škola "Ivan Uskoković", Podgorica
- Srednja stručna škola "Sergije Stanić", Podgorica
- Umjetnička škola osnovnog, srednjeg muzičkog i baletskog obrazovanja "Vasa Pavić", Podgorica
- Obrazovni centar, Šavnik
- Srednja mješovita škola "Mladost", Tivat
- Srednja mješovita škola "Bratstvo jedinstvo", Ulcinj
- Srednja mješovita škola "17. septembar", Žabljak
- Umjetnička škola osnovnog i srednjeg muzičkog obrazovanja za talente "Andre Navara", Podgorica

## Koje su moje digitalne kompetencije?

U ovom ćete dijelu ocijenite svoje digitalne kompetencije kao nastavnik. Molimo Vas da razmotrite 6 različitih područja svojeg rada.

## Područje 1: Profesionalni angažman



Digitalna kompetencija nastavnika izražava se sposobnošću upotrebe digitalnih tehnologija ne samo za poboljšanje podučavanja, već i za profesionalnu interakciju s kolegama, učenicima, roditeljima i drugim zainteresiranim stranama, za njihov individualni profesionalni razvoj kao i za kolektivno dobro i trajnu inovaciju u organizaciji i nastavničkoj struci. To je u središtu područja 1.

Rješenja su organizovana povećanjem nivoa uključenosti u digitalne tehnologije. Odaberite opciju koja najbolje odražava vašu trenutnu praksu.

*1 **Sistemski upotrebljavam različite digitalne kanale za poboljšanje komunikacije s učenicima, roditeljima i kolegama, npr. e-poštom, blogovima,**

internetskim stranicama škole, aplikacijama

- ○ Rijetko se **koristim** digitalnim komunikacijskim kanalima
- ○ Koristim **osnovne** digitalne komunikacijske kanale, npr. e-poštu
- ○ Kombinujem **različite** komunikacijske kanale, npr. e-poštu i blog razreda ili internet stranice škole
- ○ Sistemski **biram,** prilagođavam i kombinujem različita digitalna rješenja kako **bih efektivno komunicira o**
- ● Razmišljam **o svojim strategijama digitalne komunikacije, raspravljam o njima i proaktivno ih** raz vijam

*2 **Upotrebljavam digitalne tehnologije za saradnju s kolegama unutar svoje obrazovne organizacije i izvan nje (npr. e-pošta, Moodle, Facebook,...)**

- ○ **Rijetko** imam priliku da digitalno **sarađujem** s drugim nastavnicima
- ○ **Ponekad** razmjenjujem materijale s kolegama, npr. e-poštom
- ○ **Među kolegama** surađujemo u **suradničkim okruženjima** ili koristimo zajedničke pogone, npr. Moodle, timove država članica
- ○ Na Facebooku razmjenjujem ideje i materijale, među ostalim s nastavnicima izvan **svoje organizacije, npr.** putem internet mreže nastavnika
- ● Zajedno s drugim nastavnicima izrađujem **materijale** u okviru **internet mreže**

*3 **Aktivno razvijam svoje digitalne vještine podučavanja**

- ○ Rijetko imam **vremena** raditi na svojim digitalnim nastavnim vještinama
- ○ Svojim **razmišljanjem** i **eksperimentiranjem** poboljšavam svoje vještine
- ○ Koristim se **nizom resursa** za razvoj digitalnih nastavnih vještina
- ○ Razgovaram **s kolegama** o tome kako upotrebljavati digitalne tehnologije za inovacije i poboljšanje obrazovne prakse.
- ● **Pomažem kolegama** u razvoju njihovih strategija digitalnog podučavanja.

*4 **Učestvujem u mogućnostima osposobljavanja na internetu,**npr. internet kursevima, MOOC-ovima, webinarima...

- ○ To je **novo** područje koje još nisam razmatrao
- ○ Još nisam, ali sam sigurno zainteresovan

- Učestvovao sam u osposobljavanju putem interneta **jednom ili dvaput**
- Isprobao **sam razne** mogućnosti osposobljavanja na internetu
- ⊙ **Često** učestvujem u **svim vrstama** osposobljavanja na internetu

## Područje 2.: Digitalni resursi



Jedna od ključnih kompetencija koju nastavnik treba razviti jeste utvrđivanje dobrih obrazovnih resursa te izmjena, stvaranje i dijeljenje digitalnih resursa koji odgovaraju njihovim ciljevima učenja, učeničkim grupama i stilu podučavanja. Istovremeno moraju biti svjesni kako odgovorno upotrebljavati digitalni sadržaj i upravljati njime, poštujući propise o autorskim pravima i štiteći lične podatke. Ta su pitanja u središtu područja 2.

Opcije za odgovore su organizovane tako što se povećava nivo uključenosti digitalnih resursa. Odaberite opciju koja najbolje odražava Vašu trenutnu praksu.

* 1 **Koristim se različitim internet stranicama i pretražujem strategije koje mi pomažu da pronađem i odaberem niz različitih digitalnih resursa**

- Samo se **rijetko** koristim internetom kako bih pronašao izvore
- Koristim se **mašine za pretragu** i **obrazovne platforme** kako bih pronašao relevantne resurse
- Ocjenjujem **i** odabirem resurse na temelju njihove **prikladnosti** za svoju skupinu učenika
- **Uspoređujem resurse** koristeći **niz relevantnih kriterijuma, npr. pouzdanost,** kvalitet, prikladnost, dizajn, interaktivnost, privlačnost
- ⊙ **Savjetujem kolege** o odgovarajućim resursima i strategijama pretraživanja

*

5

**2 Stvaram vlastita digitalna sredstva i mijenjam postojeće kako bi ih prilagodio svojim potrebama, npr. dijapozitivi, videozapisi, radni listovi**

- ○ **Ne stvaram** vlastita digitalna sredstva
- ○ Kreiram radne listove s računarom, ali ih **zatim odštampam**
- ● Kreiram digitalne **prezentacije,** ali ne mnogo više od toga
- ○ Stvaram i mijenjam **različite vrste** resursa
- ○ Uspostavljam i prilagođavam **složene interaktivne** resurse

**\* 3 Efektivno štitim osjetljive sadržaje, npr. ispite, razred učenika, lične podatke**

- ○ **To ne moram** činiti jer se škola brine za to
- ○ **Izbjegavam** elektronsko čuvanje ličnih podataka
- ○ Štitim **neke** lične podatke
- ● Lozinkama **štitim fajlove** s ličnim podacima
- ○ Sveobuhvatno **štitim** lične podatke, npr. kombinujem lozinke koje je teško zamijeniti s šifrom i čestim ažuriranjem softvera.

## Područje 3.: Podučavanje i učenje
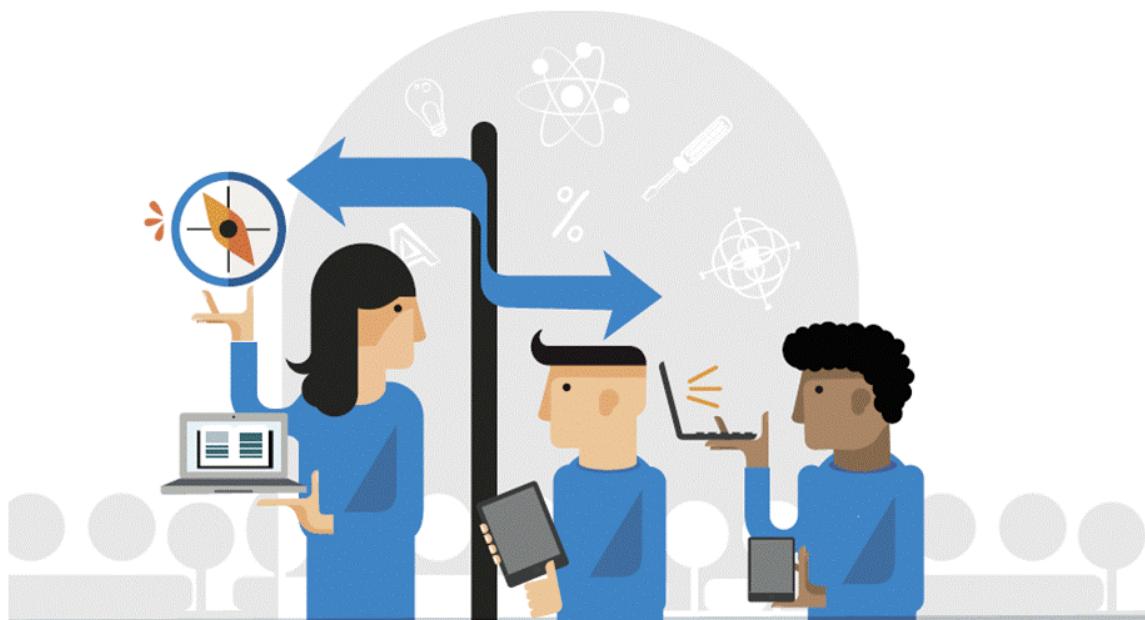


Temeljna kompetencija cijelog okvira DigCompEdu jeste osmišljavanje, planiranje i primjena i upotreba digitalnih tehnologija u različitim fazama procesa podučavanja i učenja. Međutim, pritom se mora nastojati preusmjeriti lekciju s procesa koje vodi predavač na procese usmjerene na učenike. To je stvarna snaga digitalnih tehnologija i fokus 3. oblasti.

Rješenja su organizovana tako da se povećava nivo uključenosti u digitalne tehnologije u podučavanju i učenju. Odaberite opciju koja najbolje odražava Vašu trenutnu praksu.

*1 **Pažljivo razmatram kako, kada i zašto upotrebljavati digitalne tehnologije u razredu kako bih osigurao da se one upotrebljavaju s dodanom vrijednošću**

- ○ Ne upotrebljavam ili **rijetko upotrebljavam** tehnologiju u razredu
- ○ **Osnovno** se koristim dostupnom opremom, npr. digitalnim bijelim pločama ili projektorima
- ○ U podučavanju koristim **niz** digitalnih strategija
- ○ Upotrebljavam digitalne alate za **sistematično unaprjeđivanje** podučavanja
- ● Koristim digitalne alate za primjenu **inovativnih pedagoških** strategija

*2 **Pratim aktivnosti i interakcije učenika u saradničkim internet okruženjima kojima se koristimo, npr. Moodle, Google Classroom, MS Teams**

- ○ **Ne koristim** digitalna okruženja sa svojim učenicima
- ● **Ne pratim** aktivnosti učenika u internetskim okruženjima kojima se koristimo
- ○ **Povremeno** provjeravam njih i njihove diskusije
- ○ Redovno **pratim** i **analiziram** aktivnosti svojih učenika na internetu
- ○ Redovno **učestvujem u** motivisanju ili ispravljanju komentara

*3 **Kada učenici rade u grupama ili timovima, upotrebljavaju digitalne tehnologije za pribavljanje i dokumentovanje dokaza**

- ○ Moji učenici **ne rade u grupama**
- ○ Ne **mogu** integrisati digitalne tehnologije u grupni rad
- ● **Podstičem** učenike koji rade u grupama da traže informacije na internetu ili da svoje rezultate predstave u digitalnom formatu.
- ○ Od **učenika** koji rade u timovima tražim da se koriste internetom kako bi pronašli informacije i predstavili svoje rezultate u digitalnom formatu.
- ○ Moji učenici razmjenjuju dokaze i zajednički stvaraju znanje u **saradničkom internet prostoru**

*4 **Upotrebljavam digitalne tehnologije kako bih učenicima omogućio da sami planiraju, dokumentuju i prate svoje učenje**

Npr. kvizovi za samoprocjenu, ePortfolios za dokumentaciju i prezentaciju, internet dnevnici/blogovi za razmišljanje...

- ○ **Nije izvodljivo** u mom radnom okruženju
- ○ Moji učenici razmišljaju o svom učenju, ali ne **i digitalnim tehnologijama**
- ● **Ponekad** upotrebljavam, primjera radi, kvizove za samoprocjenu
- ○ Koristim se **različitim** digitalnim alatima kako bih učenicima omogućio planiranje, dokumentovanje ili razmišljanje o svom učenju
- ○

Sistematski **ću** integrisati različite digitalne alate kako bi učenici mogli planirati, pratiti i promišljati o svom napretku

## Područje 4.: Ocjena

Digitalne tehnologije mogu poboljšati postojeće strategije ocjenjivanja i dovesti do novih i boljih metoda procjene. Osim toga, analizom mnoštva (digitalnih) podataka dostupnih o pojedinačnim učeničkim (inter) akcijama nastavnici mogu ponuditi usmjerenije povratne informacije i podršku. Područje 4. bavi se ovom promjenom u strategijama ocjenjivanja.

Odgovori su organizovani povećanjem nivoa uključenosti u digitalnu procjenu. Odaberite opciju koja najbolje odražava vašu trenutnu praksu.

\* 1 **Upotrebljavam digitalne formate za procjenu kako bih pratio napredak učenika**

- ○ **Ne pratim** napredak učenika
- ○ Redovno **pratim** napredak učenika, ali **ne digitalnim sredstvima**
- ○ **Ponekad** koristim digitalni alat, npr. kviz, kako bih provjerio napredak učenika
- ○ Koristim se **različitim** digitalnim alatima za praćenje napretka učenika, npr. dijeljenje datoteka, anketiranje, kvizovi, razgovor
- ◉ **Sistemski** upotrebljavam niz digitalnih alata za praćenje napretka učenika

\* 2 **Analiziram sve digitalne podatke koji su mi dostupni kako bih pravovremeno identifikovao učenike kojima je potrebna dodatna podrška**

„Podaci" uključuju: angažovanje učenika, uspješnost, razredi, pohađanje; aktivnosti i društvene interakcije u (internet) okruženju;

„Učenici kojima je potrebna dodatna podrška" su: učenici kojima prijeti rizik od napuštanja školovanja ili slabih rezultata; učenici koji imaju poteškoće u učenju ili posebne obrazovne , učenici koji nemaju transverzalne vještine, npr. društvene, verbalne ili vještine za učenje.

- ○ Ti podaci nisu dostupni i/ili nije moja **odgovornost da ih** analiziram
- ○ Analiziram **samo akademske podatke,** npr. uspješnost i nivoe
- ○ **Takođe** uzimam u obzir podatke o **aktivnostima i ponašanju učenika** kako bih identifikovao učenike kojima je potrebna dodatna podrška.
- ○ Redovito **provjeravam sve dostupne dokaze kako bih** identifikovao učenike kojima je potrebna dodatna podrška
- ◉ **Sistemski** analiziram podatke **i pravovremeno** intervenišem

\* 3 **Koristim digitalne tehnologije za pružanje korisnih povratnih informacija učenicima**

- ○ Povratne informacije **nisu potrebne** u mom radnom okruženju
- ◉ Pružam povratne informacije učenicima, ali ne **u digitalnom obliku**
- ○ **Ponekad** upotrebljavam **digitalne** načine pružanja povratnih informacija, npr. automatske rezultate u kvizovima na internetu, komentare ili „slične komentare" u internet okruženjima.
- ○ Često upotrebljavam **različite** digitalne načine pružanja povratnih informacija
- ○ **Sistemski** upotrebljavam digitalne pristupe za pružanje povratnih informacija

## Područje 5.: Osnaživanje onih koji uče
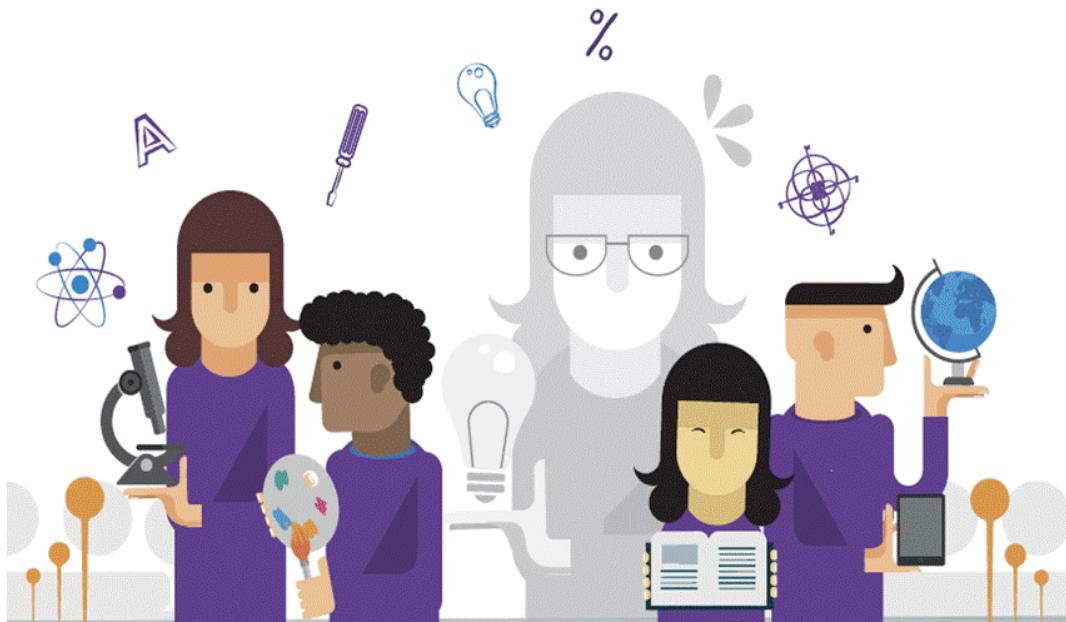


Jedna od ključnih prednosti digitalnih tehnologija u obrazovanju ima potencijal za podsticanje aktivnog učestvovanja učenika u procesu učenja i njihovog ,vlasništva' nad procesom učenja. Digitalne tehnologije mogu se dalje koristiti za obezbjeđivanje učenja prilagođenog nivou kompetencija svakog učenika, njegovim interesovanjima i potrebama za učenjem. Međutim, istovremeno treba paziti da se ne povećaju

postojeće nejednakosti (npr. u pristupu digitalnim tehnologijama) i da se svim učenicima, uključujući one s posebnim obrazovnim potrebama, osigura pristupačnost. Područje 5. bavi se tim pitanjima.

Rješenja su organizovana stavljanjem većeg naglaska na individualne potrebe učenika za učenjem. Odaberite opciju koja najbolje odražava Vašu trenutnu praksu.

\* 1 **Kada stvaram digitalne zadatke za učenike, razmatram i rješavam potencijalne digitalne probleme**

Npr. jednak pristup digitalnim uređajima i resursima; problemi povezivanja (interoperabilnosti) i konverzije; nedostatak digitalnih vještina

- ⚪ **Ne pravim digitalne** zadatke
- ⚪ Moji učenici **nemaju** problema s upotrebom digitalne tehnologije
- 🔵 Prilagodim **zadatak kako bi se** poteškoće svele na najmanju moguću mjeru
- ⚪ S učenicima raspravljam **o** mogućim preprekama i **izlažem rješenja**
- ⚪ Dopuštam **raznolikost,** npr. prilagodim zadatak, raspravljam o rješenjima i pružam alternativne načine za dovršetak zadatka.

\* 2 **Koristim digitalne tehnologije kako bih učenicima ponudio personalizirane mogućnosti učenja,**npr. različitim učenicima dajem

različite digitalne zadaće kako bi se odgovorilo na pojedinačne potrebe, sklonosti i interese učenja.

- ⚪ U radnom okruženju **svi** učenici moraju **obavljati iste** aktivnosti, nezavisno od njihovog nivoa.
- 🔵 Dajem učenicima **preporuke** za dodatna sredstva
- ⚪ Obezbjeđujem **fakultativne digitalne aktivnosti** za one koji su napredni ili zaostaje
- ⚪ **Kad god je to moguće,** koristim digitalne tehnologije kako bih ponudio **različite mogućnosti** učenja
- ⚪ **Sistemski prilagođavam** svoju nastavu kako bi se povezala s individualnim potrebama, sklonostima i interesovanjima učenika tokom učenja

\* 3 **Koristim digitalne tehnologije kako bi učenici aktivno učestvovali u nastavu**

- ⚪ Na poslu **nije moguće** aktivno uključiti učenike u nastavu
- ⚪ Aktivno uključujem učenike, **ali ne i** digitalne **tehnologije**
- 🔵 **Pri podučavanju koristim motivaciona sredstva**, npr. videozapise, animacije, crteže
- ⚪ Moji učenici **komuniciraju s digitalnim medijima** u svojim odjeljenjima, npr. elektronskim radnim listovima, igrama, kvizovima
- ⚪ Učenici **sistemski** upotrebljavaju digitalne tehnologije za **istraživanje, diskusiju** i **stvaranje** znanja

## Područje 6: Olakšavanje digitalne kompetencije za one koji uče
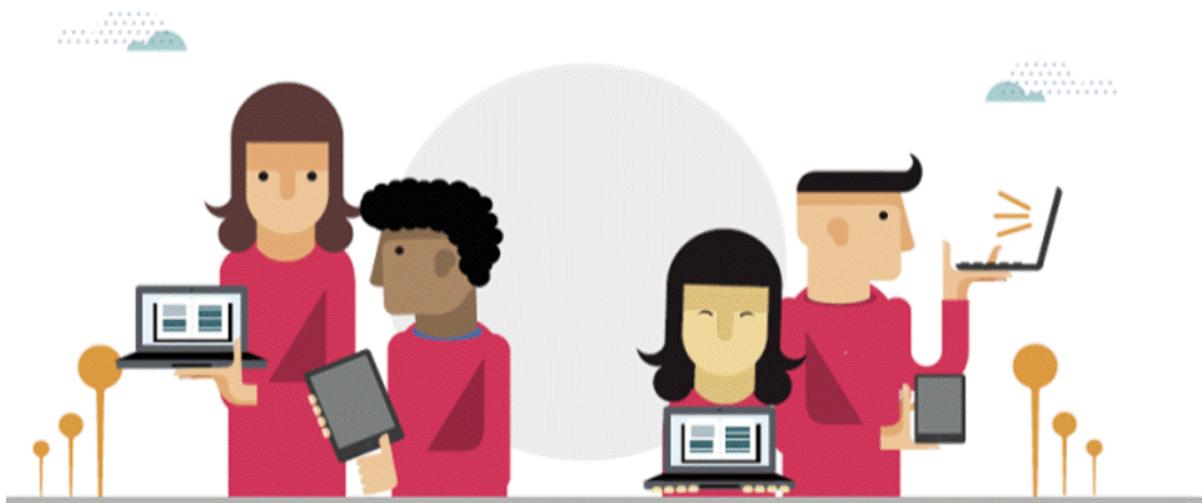
Sposobnost da fasilitiramo digitalne kompetencije učenika sastavni je dio digitalne kompetencije nastavnika, i u središtu je područja 6.

Rješenja su organizirana povećanjem nivoa uključenosti u podsticanje digitalnih kompetencija učenika. Odaberite opciju koja najbolje odražava Vašu trenutačnu praksu.

**\* 1 Podučavam učenike kako procijeniti pouzdanost informacija i utvrditi netačne informacije i pristrasnost**

- ○ To **nije moguće** u mom predmetu ili na radnom mjestu
- ○ Povremeno ih **podsjećam** da sve informacije na internetu nisu pouzdane
- ○ Podučavam ih kako **prepoznati** pouzdane i nepouzdane **izvore**
- ● S učenicima **diskutujem o tome kako provjeriti** tačnost informacija
- ○ Sveobuhvatno **diskutujemo** o tome kako se informacije stvaraju i mogu iskriviti

**\* 2 Postavio sam zadatke kojima se od učenika zahtijeva da se koriste digitalnim sredstvima za komunikaciju i saradnju s drugima ili s publikom van učionice**

- ○ To **nije moguće** u predmetu ili radnom okruženju
- ● Učenici moraju komunicirati ili sarađivati samo u **rijetkim** prilikama.
- ○ Moji učenici **uglavnom se koriste digitalnom komunikacijom i saradnjom.**
- ○ Učenici upotrebljavaju digitalne načine komuniciranja i saradnje s drugima **i s publikom izvan učionice**
- ○ Sistemski **postavljam zadatke** koji učenicima omogućuju da polako prošire svoje vještine

**\* 3 Postavio sam zadatke kojima se od učenika zahtijeva da naprave digitalni sadržaj,**

npr. videozapise, zvučne zapise, fotografije, digitalne prezentacije, blogove, wikis...

11

○ To **nije moguće** u okviru mog predmeta ili radnog okruženja

○ To je **teško** sprovesti s mojim učenicima

◉ **Ponekad,** kao zabavna aktivnost

○ Moji učenici kreiraju digitalni sadržaj kao **sastavni dio svog učenja**

○ To je sastavni dio njihovog učenja i **sistematično povećavam nivo** izazova u daljnjem razvoju njihovih vještina.

## *4 **Podučavam učenike o sigurnom i odgovornom ponašanju na internetu**

○ To **nije moguće** u okviru mog predmeta ili radnom okruženju

○ **Obavještavam** ih da moraju biti oprezni pri prenosu ličnih podataka na internetu

○ Objašnjavam **osnovna** pravila za sigurno i odgovorno djelovanje u internet okruženju

◉ **Raspravljamo o** pravilima ponašanja i usuglašavamo se o njima

○ **Sistemski razvijam** način na koji učenici upotrebljavaju društvena pravila u različitim digitalnim okruženjima kojima se koristimo

## *5 **Podstičem učenike da se kreativno koriste digitalnim tehnologijama za rješavanje konkretnih problema,**npr.

za prevladavanje prepreka ili izazova koji nastaju u procesu učenja.

○ To **nije moguće** kod mojih učenika u radnom okruženju

◉ **Rijetko** imam priliku da podstičem digitalno rješavanje problema učenika

○ **Povremeno,** kad god se pojavi mogućnost

○ **Često** eksperimentišemo s tehnološkim rješenjima problema

○ **Sistematično integrišem** mogućnosti za kreativno digitalno rješavanje problema

## Lični podaci

Ovaj će nam dio pomoći da razumijemo Vaše iskustvo kao nastavnika. Vaši lični podaci neće biti objavljivani.

Za sva pitanja ili nesigurnosti pogledajte politiku zaštite privatnosti aplikacije EUSurvey.

**\* 1 Koliko imate godina?**
- ○ mlađi od 25
- ○ 25 – 29
- ○ 30 – 39
- ◉ 40 – 49
- ○ 50 – 59
- ○ 60 ili više
- ○ ne želim navesti

**\* 2 Uključujući ovu školsku godinu, koliko godina podučavate?**
- ○ 1 – 3
- ○ 4 – 5
- ◉ 6 – 9
- ○ 10 – 14
- ○ 15 – 19
- ○ 20 ili više
- ○ Ne želim navesti

**\* 3 Koju od sljedećih vrsta predmeta uglavnom podučavate?**

○ Opšte akademske teme, npr. matematika, jezici

◉ Stručni predmeti, npr. inženjerstvo, poslovno upravljanje

○ Ostalo

\* 5 **Podučavate li računare ili informativnu tehnologiju ili programiranje?**

◉ Da

○ Ne

6 **Koliko ste se često koristili sljedećim digitalnim alatima/aktivnostima tokom ograničavanja kretanja zbog bolesti COVID-19?**

| | Nekoliko puta | Jedanput nedeljno | Tri puta nedeljno ili više |
|---|---|---|---|
| \* Virtuelni softver za učionice (npr. Teams, Google Classroom, Moodle) | ◉ | ○ | ○ |
| \* Sinhronizovani videokomunikacijski alati (npr. Zoom, Skype, WhatsApp, Facebook live) | ◉ | ○ | ○ |
| \* Dijeljenje i razmjena dokumenata („usluge u oblaku", npr. Basecamp Dropbox, Google Drive, online urednici za kolaborativne artefakte) | ◉ | ○ | ○ |
| \* Dijeljenje ekrana (nastavnika) (snimanje ekrana), primjera radi održavanja prezentacija ili postavljanja zadataka | ◉ | ○ | ○ |
| \* Razmjena ideja, kvizovi ili ankete (npr. mape uma, upitnici s višestrukim izborom odgovora za (samoprocjenu) | ◉ | ○ | ○ |
| \* Alati za planiranje i organizaciju (npr. pošta i kalendar, obrazovni sistem za komunikaciju sa školama, učenicima i roditeljima) | ◉ | ○ | ○ |
| \* Gledanje snimljenih instrukcionih videozapisa i/ili audiozapisa (npr. iz internet knjižnice) | ◉ | ○ | ○ |
| \* Izrada i emitiranje videozapisa i/ili audiozapisa (npr. YouTube) | ◉ | ○ | ○ |
| \* Dijeljenje i razmjena dokumenata i tekstualnih poruka, primjera radi e-poštom ili internet stranicama ili društvenim medijima (npr. Facebook, Whatsapp) | ◉ | ○ | ○ |

## Kontinuirani profesionalni razvoj (KPR)

U okviru COVID-a 19 učitelji su morali preći na podučavanje na daljinu i na internetu i tako iskoristiti različite digitalne tehnologije. U ovom se dijelu istražuje kakav ste profesionalni razvoj imali u posljednjih 12 mjeseci koji je uticao na razvoj Vaše digitalne kompetencije i kako to utiče na vaš rad.

Odaberite opciju koja najbolje opisuje koliko se usaglašavate s izjavom.

\* 1 **Tokom posljednjih 12 mjeseci učestvovao sam u internet KPR-u kako bih razvio svoje digitalne kompetencije.**

- ⊙ Nikada
- ⦿ Jednom
- ⊙ Dva do tri puta
- ⊙ Mnogo puta

\* 2 **Tokom posljednjih 12 mjeseci pomagali su mi drugi nastavnici ili savjetnici u školi u razvoju svojih digitalnih kompetencija.**

- ⊙ Nikada
- ⦿ Jednom
- ⊙ Dva do tri puta
- ⊙ Mnogo puta

3 **Ako ste dobili drugu podršku ili uput za poboljšanje digitalnih kompetencija u posljednjih 12 mjeseci, opišite u nastavku:**

[                                              ]

4 **Kako biste opisali svoje iskustvo u pogledu trajnog stručnog usavršavanja koje se odnosilo na vaše digitalne kompetencije u posljednjih 12 mjeseci?**

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| \* Moja me škola podstakla da učestvujem u trajnom stručnom usavršavanju | ⦿ | ⊙ | ⊙ | ⊙ | ⊙ |
| \* Odabrao sam trajno stručno usavršavanje na temelju mojih osobnih razvojnih potreba | ⦿ | ⊙ | ⊙ | ⊙ | ⊙ |

5 **Uzimajući u obzir Vaše kompetencije i osposobljavanje, kao i iskustva posljednjih 6 mjeseci, ocijenite svoju potrebu za kontinuiranim stručnim usavršavanjem koje se odnosi na sljedeće vrste digitalnih kompetencija.**

| | Nema potrebe | Niska potreba | Velika potreba | Vrlo velika potreba |
|---|---|---|---|---|
| | | | | |

15

| | | | | |
|---|---|---|---|---|
| * Digitalna komunikacija s učenicima i roditeljima | ◉ | ○ | ○ | ○ |
| Digitalna saradnja s kolegama | ◉ | ○ | ○ | ○ |
| * Pronalaženje, prilagođavanje i stvaranje digitalnih resursa koji služe različitim zadacima učenja i različitim učenicima | ◉ | ○ | ○ | ○ |
| * Upravljanje osjetljivim podacima i sadržajem i njihova zaštita | ◉ | ○ | ○ | ○ |
| * Veća i učinkovitija upotreba različitih digitalnih tehnologija | ◉ | ○ | ○ | ○ |
| * Omogućivanje učenicima da se koriste digitalnim tehnologijama za grupni rad | ◉ | ○ | ○ | ○ |
| * Upotreba digitalnih tehnologija za ocjenjivanje rada učenika i pružanje povratnih informacija | ◉ | ○ | ○ | ○ |
| * Upotreba digitalnih tehnologija za praćenje i analizu digitalne aktivnosti učenika | ◉ | ○ | ○ | ○ |
| * Upotreba digitalnih tehnologija za aktivno uključivanje učenika u učenje | ◉ | ○ | ○ | ○ |
| * Upotreba digitalnih tehnologija kako bi se zadovoljile pojedinačne potrebe za učenjem | ◉ | ○ | ○ | ○ |
| * Planiranje digitalnog učenja kojim će se prevladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ◉ | ○ | ○ | ○ |
| * Podučavanje učenika o tome kako raditi i naučiti digitalno | ◉ | ○ | ○ | ○ |
| * Podučavanje učenika o odgovornom i kritičnom korištenju digitalnih tehnologija | ◉ | ○ | ○ | ○ |
| * Podučavanje i ocjenjivanje na daljinu tokom razdoblja ograničenja kretanja zbog bolesti COVID-19 | ◉ | ○ | ○ | ○ |

## 6 Kako biste opisali učinak KPR-a na digitalne kompetencije u kojima ste učestvovali?

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| * KPR mi je pomogao u digitalnoj komunikaciji s učenicima i roditeljima | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno sarađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno surađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| * | | | | | |

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| KPR mi je pomogao u upravljanju osjetljivim podacima i sadržajima kao i njihovoj zaštiti | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u većoj i učinkovitijoj upotrebi različitih digitalnih tehnologija | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da omogućim učenicima da se koriste digitalnim tehnologijama za grupni rad | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za procjenu studentskog rada i da im pružim povratne informacije | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za praćenje i analizu digitalne aktivnosti učenika | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih učenike aktivno uključio u učenje | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih odgovorio na pojedinačne potrebe za učenjem | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u planiranju digitalnog učenja kojim će se savladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o tome kako da rade i uče digitalno | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o odgovornom i kritičkom korišćenju digitalnih tehnologija | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju i procjenjivanju na daljinu tokom ograničavanja kretanja uzrokovanog COVID-om 19 | ○ | ● | ○ | ○ | ○ |

7 **Kako biste opisali učinak KPR-a na digitalne kompetencije u kojima ste učestvovali?**

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| * KPR mi je pomogao u digitalnoj komunikaciji s učenicima i roditeljima | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno sarađujem s kolegama | ○ | ● | ○ | ○ | ○ |

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| * KPR mi je pomogao da digitalno surađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| KPR mi je pomogao u upravljanju osjetljivim podacima i sadržajima kao i njihovoj zaštiti | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u većoj i učinkovitijoj upotrebi različitih digitalnih tehnologija | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da omogućim učenicima da se koriste digitalnim tehnologijama za grupni rad | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za procjenu studentskog rada i da im pružim povratne informacije | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za praćenje i analizu digitalne aktivnosti učenika | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih učenike aktivno uključio u učenje | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih odgovorio na pojedinačne potrebe za učenjem | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u planiranju digitalnog učenja kojim će se savladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o tome kako da rade i uče digitalno | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o odgovornom i kritičkom korišćenju digitalnih tehnologija | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju i procjenjivanju na daljinu tokom ograničavanja kretanja uzrokovanog COVID-om 19 | ○ | ◉ | ○ | ○ | ○ |

8 **Kako biste opisali učinak KPR-a na digitalne kompetencije u kojima ste učestvovali?**

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| * KPR mi je pomogao u digitalnoj komunikaciji s učenicima i roditeljima | ○ | ◉ | ○ | ○ | ○ |

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| * KPR mi je pomogao da digitalno sarađujem s kolegama | ○ | ● | ○ | ○ | ○ |
| KPR mi je pomogao da digitalno surađujem s kolegama | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u upravljanju osjetljivim podacima i sadržajima kao i njihovoj zaštiti | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u većoj i učinkovitijoj upotrebi različitih digitalnih tehnologija | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da omogućim učenicima da se koriste digitalnim tehnologijama za grupni rad | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za procjenu studentskog rada i da im pružim povratne informacije | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za praćenje i analizu digitalne aktivnosti učenika | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih učenike aktivno uključio u učenje | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih odgovorio na pojedinačne potrebe za učenjem | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u planiranju digitalnog učenja kojim će se savladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o tome kako da rade i uče digitalno | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o odgovornom i kritičkom korišćenju digitalnih tehnologija | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju i procjenjivanju na daljinu tokom ograničavanja kretanja uzrokovanog COVID-om 19 | ○ | ● | ○ | ○ | ○ |

9 **Kako biste opisali učinak KPR-a na digitalne kompetencije u kojima ste učestvovali?**

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| | | | | | |

| | | | | | |
|---|:--:|:--:|:--:|:--:|:--:|
| * KPR mi je pomogao u digitalnoj komunikaciji s učenicima i roditeljima | ○ | ◉ | ○ | ○ | ○ |
| KPR mi je pomogao da digitalno sarađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno surađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u upravljanju osjetljivim podacima i sadržajima kao i njihovoj zaštiti | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u većoj i učinkovitijoj upotrebi različitih digitalnih tehnologija | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da omogućim učenicima da se koriste digitalnim tehnologijama za grupni rad | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za procjenu studentskog rada i da im pružim povratne informacije | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za praćenje i analizu digitalne aktivnosti učenika | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih učenike aktivno uključio u učenje | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih odgovorio na pojedinačne potrebe za učenjem | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u planiranju digitalnog učenja kojim će se savladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o tome kako da rade i uče digitalno | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o odgovornom i kritičkom korišćenju digitalnih tehnologija | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju i procjenjivanju na daljinu tokom ograničavanja kretanja uzrokovanog COVID-om 19 | ○ | ◉ | ○ | ○ | ○ |

10 **Kako biste opisali učinak KPR-a na digitalne kompetencije u kojima ste učestvovali?**

| | | | Niti se slažem | | |
|---|---|---|---|---|---|

| | uopšte se ne slažem | ne slažem se | niti ne slažem | slažem se | potpuno se slažem |
|---|---|---|---|---|---|
| * KPR mi je pomogao u digitalnoj komunikaciji s učenicima i roditeljima | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno sarađujem s kolegama | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno surađujem s kolegama | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u upravljanju osjetljivim podacima i sadržajima kao i njihovoj zaštiti | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u većoj i učinkovitijoj upotrebi različitih digitalnih tehnologija | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da omogućim učenicima da se koriste digitalnim tehnologijama za grupni rad | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za procjenu studentskog rada i da im pružim povratne informacije | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za praćenje i analizu digitalne aktivnosti učenika | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih učenike aktivno uključio u učenje | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih odgovorio na pojedinačne potrebe za učenjem | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u planiranju digitalnog učenja kojim će se savladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o tome kako da rade i uče digitalno | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o odgovornom i kritičkom korišćenju digitalnih tehnologija | ○ | ● | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju i procjenjivanju na daljinu tokom ograničavanja kretanja uzrokovanog COVID-om 19 | ○ | ● | ○ | ○ | ○ |

## 11 Kako biste opisali učinak KPR-a na digitalne kompetencije u kojima ste učestvovali?

| | uopšte se ne slažem | ne slažem se | Niti se slažem niti ne slažem | slažem se | potpuno se slažem |
|---|:---:|:---:|:---:|:---:|:---:|
| * KPR mi je pomogao u digitalnoj komunikaciji s učenicima i roditeljima | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno sarađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da digitalno surađujem s kolegama | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u upravljanju osjetljivim podacima i sadržajima kao i njihovoj zaštiti | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u većoj i učinkovitijoj upotrebi različitih digitalnih tehnologija | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da omogućim učenicima da se koriste digitalnim tehnologijama za grupni rad | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za procjenu studentskog rada i da im pružim povratne informacije | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da iskoristim digitalne tehnologije za praćenje i analizu digitalne aktivnosti učenika | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih učenike aktivno uključio u učenje | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao da se koristim digitalnim tehnologijama kako bih odgovorio na pojedinačne potrebe za učenjem | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u planiranju digitalnog učenja kojim će se savladati mogući digitalni problemi, npr. nedostatak pristupa uređajima ili podacima | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o tome kako da rade i uče digitalno | ○ | ◉ | ○ | ○ | ○ |
| * KPR mi je pomogao u podučavanju učenika o odgovornom i kritičkom korišćenju digitalnih tehnologija | ○ | ◉ | ○ | ○ | ○ |
| * | | | | | |

| | Uopšte se ne slažem | Ne slažem se | Niti se slažem niti ne slažem | Slažem se | Potpuno se slažem |
|---|---|---|---|---|---|
| KPR mi je pomogao u podučavanju i procjenjivanju na daljinu tokom ograničavanja kretanja uzrokovanog COVID-om 19 | ○ | ◉ | ○ | ○ | ○ |

## 12 Koji način kontinuiranog stručnog usavršavanja za digitalne kompetencije preferirate?

Molimo navedite slažete li se sa sljedećim izjavama.

| | Uopšte se ne slažem | Ne slažem se | Niti se slažem niti ne slažem | Slažem se | Potpuno se slažem |
|---|---|---|---|---|---|
| * Želio bih učestvovati u radionicama licem u lice koje vode treneri kako bih razvio svoje digitalne kompetencije | ○ | ◉ | ○ | ○ | ○ |
| * Želim učestvovati u internet trajnom stručnom usavršavanju kako bih razvio svoje digitalne kompetencije | ○ | ◉ | ○ | ○ | ○ |
| * Želio bih da mi drugi nastavnici ili savjetnici u svojoj školi pomognu u razvoju svojih digitalnih kompetencija | ○ | ◉ | ○ | ○ | ○ |
| * Želio bih učestvovati u trajnom stručnom usavršavanju u kojem se kombinuju metode licem u lice i one na internetu | ○ | ◉ | ○ | ○ | ○ |

## 13 Koji način kontinuiranog stručnog usavršavanja za digitalne kompetencije preferirate?

Molimo navedite slažete li se sa sljedećim izjavama.

| | Uopšte se ne slažem | Ne slažem se | Niti se slažem niti ne slažem | Slažem se | Potpuno se slažem |
|---|---|---|---|---|---|
| * Želio bih učestvovati u radionicama licem u lice koje vode treneri kako bih razvio svoje digitalne kompetencije | ○ | ◉ | ○ | ○ | ○ |
| * Želim učestvovati u internet trajnom stručnom usavršavanju kako bih razvio svoje digitalne kompetencije | ○ | ◉ | ○ | ○ | ○ |
| * Želio bih da mi drugi nastavnici ili savjetnici u svojoj školi pomognu u razvoju svojih digitalnih kompetencija | ○ | ◉ | ○ | ○ | ○ |
| * Želio bih učestvovati u trajnom stručnom usavršavanju u kojem se | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| kombinuju metode licem u lice i one na internetu | ○ | ● | ○ | ○ | ○ |

**14 Dodajte sve druge komentare koji se odnose na KPR za digitalne kompetencije.**

**15 Ako želite primati novosti o digitalnom i internet učenju, navedite svoju adresu e-pošte u okvir u nastavku.**

**Contact**

[Contact Form](Contact Form)