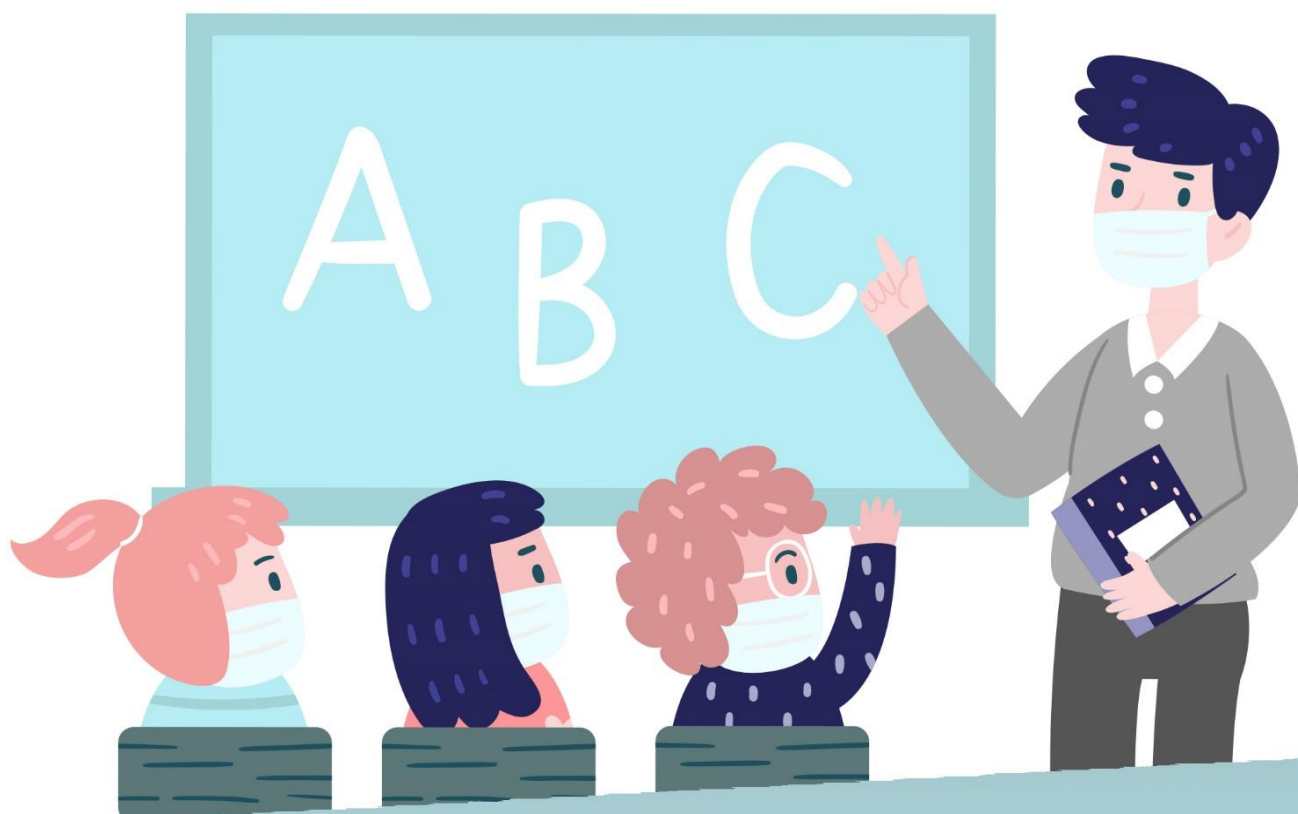


# Treating symptoms instead of the cause

A brief report on the research about teachers

2020–2021



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## **Research background, method of data collection**

The 21 Research Centre conducted an online survey with teachers at the turn of 2020–2021. We were curious about:

1. how effective teachers and people working in public education find the current restrictive measures of the pandemic
2. how they can realise these measures in their daily life, during their work
3. their opinions about-, and experience with digital distance learning
4. their physical and mental health

The questionnaire was developed by the analysts of the 21 Research Centre, while distribution was done by the Pedagógusok Szakszervezete (PSZ). The online survey took 15–20 minutes to fill out and it was shared on 4 platforms by PSZ: their official site, their social media page, the app of the organization and their internal mail channel. Data collection took place between December 18, 2020 and January 17, 2021. The sample of 1269 respondents is representative of Hungarian teachers based on age, region and type of institution. 52% of the participants are members of PSZ, and the other 48% are teachers reached by the organization. Distortion of the sample was corrected by weighting the dataset based on data of the Hungarian Central Statistical Office and the Hungarian Academy of Sciences from 2019.

The adjusted sample represents the opinion of teachers working in Hungary along three dimensions (age, region, type of institution). In this brief report we are going to provide a snapshot of the research.

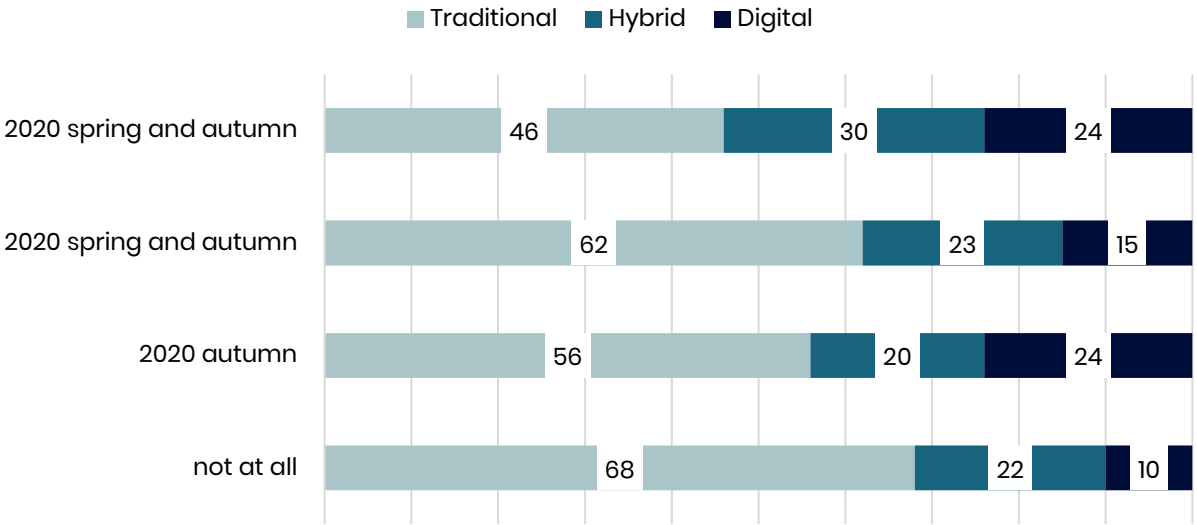
## Experiences with digital distance learning

Since the appearance of Covid-19 in Hungary, 89% of the respondents had been teaching on online platforms, and teachers working in any type of institution had experienced the challenges of online learning. Therefore, we asked them which platform they would choose for teaching in the second semester of 2020/2021, if they had the freedom to do so. In a nutshell, **teachers seems divided regarding the question, which platform would be ideal for teaching in the spring semester**. The majority (**56%**) would prefer to teach in the **traditional system**, **19%** would choose **completely digital**, while a **quarter of respondents** would work **in a hybrid system**, containing both online and offline elements.

However, it can be seen on the first figure that **those teachers who wish to return to personal teaching the least, are ones who have been teaching in a digital form for the past 2 semesters**. In other words, those teachers who currently teach online, are more inclined to continue teaching in a digital form in the winter and spring of 2021. Alternatively, to convert to a hybrid model. This suggests that **the more experience teachers have with digital distance learning, the more they get used to this increasingly familiar form of teaching, and the more they would choose to continue with it in the future**, as the pandemic fades.

Opposed to them, there are the teachers who have not been teaching online either in the spring of 2020 or the fall of 2021. They would rather choose the traditional, in-person teaching for the second, spring semester of 2020/2021. To put differently, **those who have been teaching personally in their institution, would like to continue this way and do not wish to convert to digital learning**. An interesting finding is that third of those who have never tried digital learning would like to switch to that, or at least try themselves in a hybrid or completely digital form of teaching.

Figure 1. Educational preferences of teachers for spring 2021, grouped according to the period of digital education used



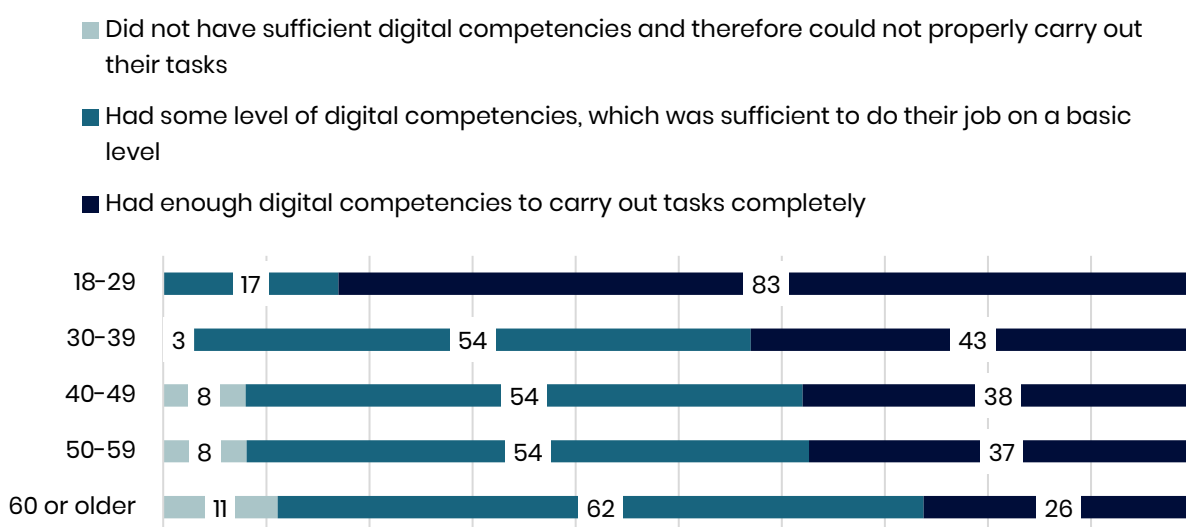
**Throughout the period of digital learning, 84% of teachers had their own digital devices** that they could use for their work. The tools themselves do not always seem enough to fully convey educational materials for students. According to the findings of the research, teachers probably had great difficulties with the sudden adaptation to digital teaching and being comfortable with it: the decisive majority (53%) of respondents rated their current digital competencies just enough to do their work. 7% of teachers said that they could not do their work in full because of their lack of digital competencies. Although 57% of teachers have participated in some kind of further training aimed to improve their digital competencies in the last four years, probably these courses and further trainings did not improve their digital competencies enough to teach in a digitalized form.

**Problems due to the lack of digital competencies are not universal, some teachers are effected more than others.** According to the data, **the older the teacher, the more difficulties they face to perform at their jobs properly because of their lack of digital competencies.** While 83% of young teachers (between 18-29

years old) are fully able to complete their tasks because of their digital skills, this ratio falls back to 26% among the older group of teachers (above 60).

**There is a huge gap between the youngest and all the other age groups regarding their digital competencies**, which might have caused problems during the times of digital distance learning in 2020.

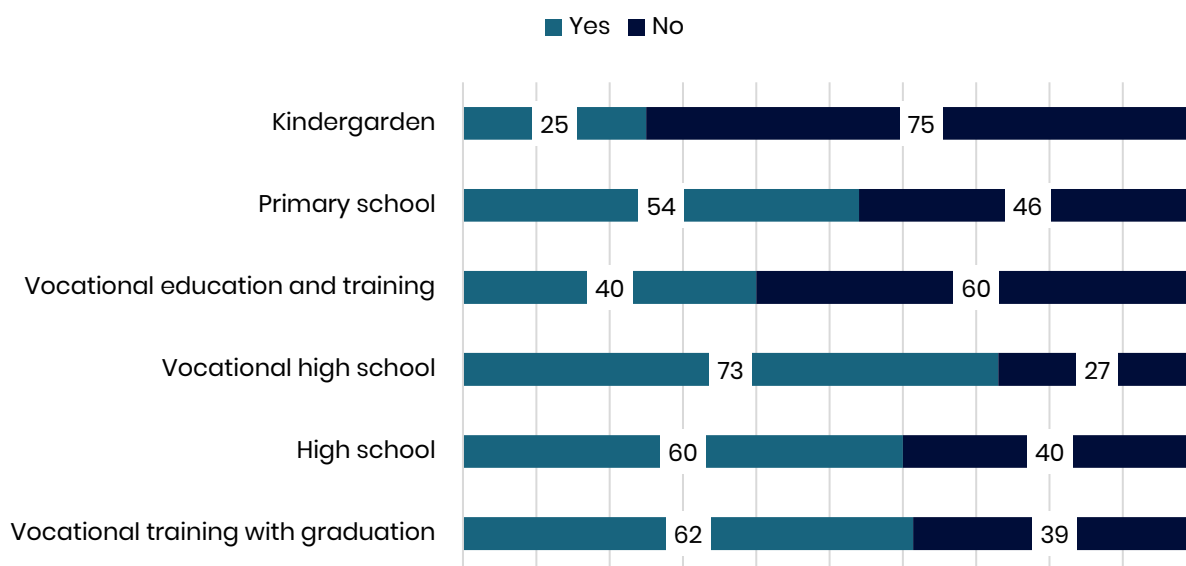
Figure 2. Digital competencies of teachers at the moment of conversion to digital education. Answers organised by age groups.



**55% of teachers had technological problems that they could not solve themselves.** While 19% of the youngest teachers faced problems that made their everyday work difficult, among those teachers that often have decades long experience, this ratio is 56-63%. The statement above holds true here as well, **the older the teacher, the more likely that they had faced problems on digital platforms that made their work difficult or impossible. As they could not solve such problems themselves, they** held them back from conveying educational materials or carrying out their educational tasks fully. Hence, the question emerges; **who could teachers turn to with their problems** in the period of digital distance learning?

It can be seen on the second chart, that teachers were left on their own by their employers in almost all types of institutions. All in all, slightly more than half (51%) of the teachers received any kind of help from their employers (e. g. further trainings). According to the results of the research, kindergarten teachers were the most neglected at the moment of converting to digital learning: 75% of them did not receive any help from their employers in spring 2020. **Kindergarten teachers** – with a few exceptions – **were completely left on their own in the new situation caused by the pandemic, from March 2020.**

Figure 3. 'Has your employer contributed with any help or further trainings, which has helped you to convert to digital education?'

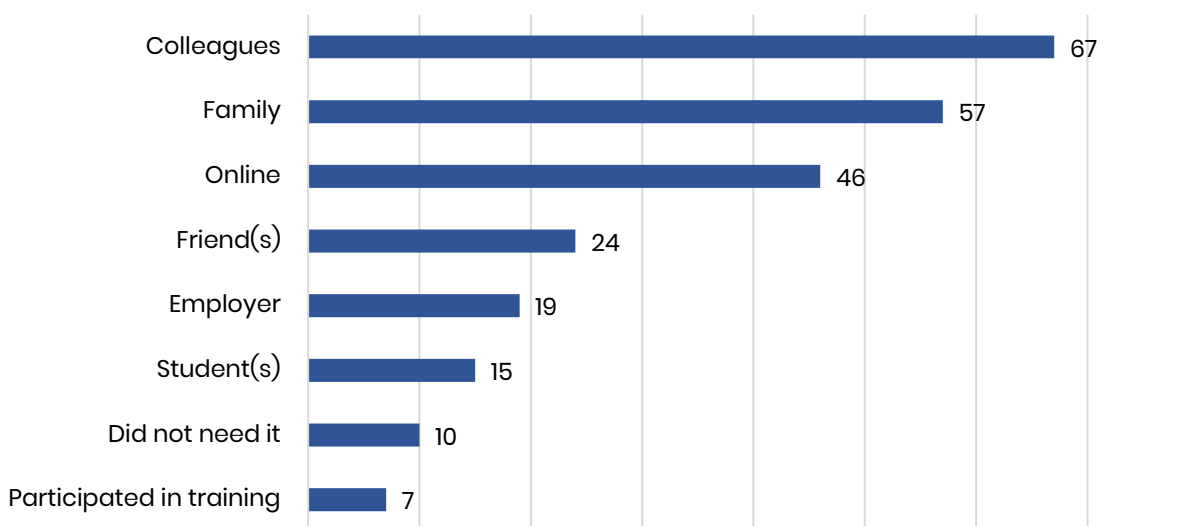


**The situation appeared as somewhat better for teachers working in secondary educational institutions.** 62 and 60% of teachers working in vocational high schools and high schools received help and almost three-quarter (73%) of vocational secondary school teachers received a response from their employers, if they had technological problems. Prospects are not that good in primary and vocational training schools. Most (54% and 60%) of the teachers working in these institutions

reported not receiving any help from their employers on how to convert to online teaching.

**So who did help the teachers with their information technology problems, when their employers did not do so?** Analysis found that teachers ask for help from their colleagues (67%), their personal environment (family 57%, friends 24%), and rather take an online crash-course (46%) (ex. reading forums, watching instructional videos) than turning to their employer with information technology issues.<sup>1[3]</sup>

Figure 4. Who helped with information technology problems?



**Source:** Research on Educators 2021–2021, n=1129, full sample=1269, percent, own calculation

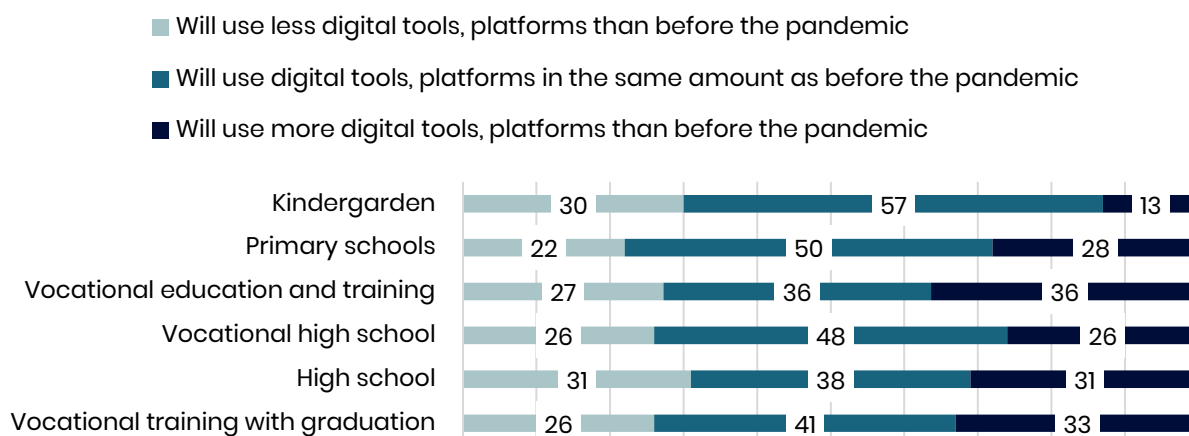
Research results highlight that **although 57% of the educators had participated in some kind of digital skills development training beforehand, those hadn't properly prepared them for the new challenges of digital education the pandemic imposed.** Essentially, only the youngest educators could handle the latter semesters with digital education. Presumably, digital education affected mostly the everyday work of the kindergarten teachers, who are also the most vulnerable group and the ones primarily relying on their self-dependence. **The good**

<sup>1</sup> [3] The respondents could choose multiple answers

**collegial relationships, their closest relations, their friends and family, as well as personal training could help teachers the most with their everyday challenges at work during this one-year period.**

**27% of the educators believe that they will use more digital tools and platforms in their work** after the pandemic, while **48%** say that they will use them **in the same amount** as before the pandemic. Surprisingly, **one quarter of the respondents would like to use less online platforms in their work.** In conclusion, the educators view digital education as “necessary evil” which somehow must be survived. However, there is willingness in every age group for a more frequent use of digital platforms in the future because of the resulting more prosperous educational possibilities. Mostly **the teachers aged between 40–59 would like to acquire these new skills and opportunities: 30% of this age group would like to widen their educational repertoire with the use of digital platforms.** As well as in the present, the youngest (18–29 years old) and the oldest (60 years old or older) age groups are the most reluctant to use these platforms in the future. Nonetheless, the younger generation of teachers are probably more likely to use these platforms and tools (and handle them better because of their age) than their oldest colleagues; the strongest rejection being in the 60+ years group.

Figure 5. The use of digital tools after the pandemic



**Source:** Research on Educators 2021–2021, n=1129, full sample=1269, percent, own calculation



**Digital education also affected the mental health of teachers**, especially of those who taught online both in the spring of 2020 and in the autumn of 2020. **These teachers reported to feel exhausted (49%), apathetic (22%) and anguished (22%).** 48% of those educators who taught online in both semesters reported to continue to feel fresh. The possible failures, the grown number of different tasks, the absence of the school environment and the challenges of digital education make teachers more exhausted, frustrated and more burned out in the end.

## **Students during digital education**

The success of digital education depends on multiple factors. Firstly, it is necessary from the educators' side to have the proper equipment, the technical skills to handle them, good internet connection. On top of that to have good presentation skills and be able to adapt to the situation that their students listen to them through webcams. In addition, it is also needed that students have good quality equipment, deep knowledge, interest, and willingness to absorb the alternative educational material. In this research we did not ask students about their experiences, but **in our survey, we also proposed a question about how the educators perceived their students' engagement in digital education.** Were there any difficulties from the students' side? Did they have the proper equipment at all to participate in the classes and do their homework?

From the answers to the question *"What do you think, how well your students were able to adapt to digital education all in all?"* we see that **most of the students (54%) could adapt to digital education only with minor problems.** According to **educators, about one third (30%) of the students could adapt to the new situation with difficulties,** and **the transition did not cause any problems only for 6% of students.**

By institutional type we can see that **it was most difficult to adapt to the new situation for students attending vocational high schools (50%) and vocational education and training (37%)**. High school students could adapt the most easily to digital education, according to educators, three quarters of them with smaller problems and only 13% of them with bigger ones.

In order to measure the success of digital education better, we also asked what the teachers thought about the available equipment of students' and their digital competences. In the opinion of educators, **most of the students have proper equipment at home, but some of them lack of good quality equipment (64%)**. It gives rise to serious concerns that **about one fourth of students only has very poor-quality equipment, and only 7% of the students has the equipment appropriate for education** according to their teachers. **One third of the primary school and vocational high school students, and about half of the vocational education and training students (46%) have very poor-quality equipment.**

All in all, **high school and vocational training with graduation students have less difficulties** resulting from the transition, because they are better equipped, having less information technology problems than students in vocational high schools and vocational education and training. Our results indicate: **the lack of equipment and the possibility of dropping out from digital education** – if we consider only the available equipment – **mostly affects students attending vocational education and training, vocational high school and primary school.**

The teachers also graded the digital skills of students. **54% of students got “good” or “excellent” gradings for their digital skills**, at the same time 27% got only “poor”, which means they could at least participate in digital education even with difficulties. **7% got “not satisfactory”**, so they could not participate at all in digital education, or only with serious difficulties. Vocational training with graduation and high school students' digital skills are on average level, there is little if any risk that they can't adapt to digital education because of their lack of skills. The situation is

not so bright regarding the vocational education and training and vocational high school students. Our results suggest that **students that have the poorest digital skills attend those schools where only poorer equipment or no equipment at all are available for students.** Lack of digital skills and equipment also exists among primary school students, but because of their age they could still acquire these skills later on. Students in vocational education and training, and students striving for a profession – as a result of their lack of skills and equipment – are more affected by the problems evoked by the transition to digital education than their peers who attend high school. Hence, the results of 21 Research Center suggest that **digital education introduced in response to the pandemic inherently entails inequalities of learning in public education.** Students studying professions are not only disadvantaged because of the lack of equipment, but also as a result of lack of digital skills. Consequently, they may not properly do their assignments, imposing a peril that the pandemic and the digital education will affect their studies the most.

## **Willingness to be vaccinated and infection rates among educators**

**83% of the respondents believed rapid testing to be rather necessary or absolutely necessary in the autumn of 2020.** The willingness to do so is lower, **72% of the educators were tested and 8% of them did not have the opportunity to be tested.** The respondents could indicate their sense of perceived safety in their workplace during the wave of Covid in autumn, the question was provided alongside a 1-5 scale. **The average result was 2.73. 9% of the respondents chose the highest level (“I feel completely safe”), one fourth of them did not feel safe at all.** On average, men have higher perceived safety (2.86) than women educators (2.71). **The satisfaction rate with the effective restrictive measures is 2.58 on average, so**

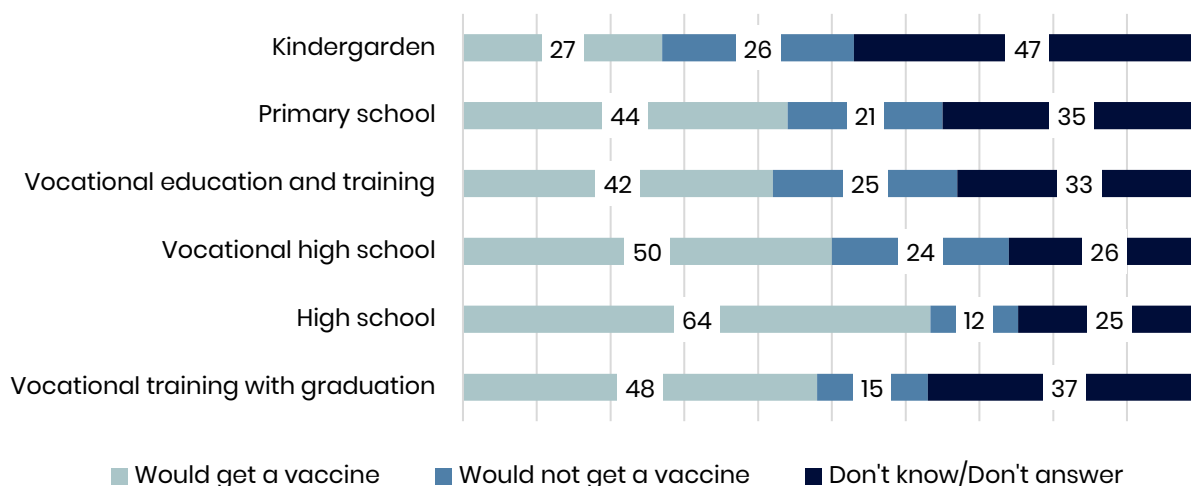
**the educators are rather not satisfied.** The most satisfied (2.96) educators work in the Northern Great Plain region where the infection rate per 100,000 inhabitants is the third lowest in the country, while the least satisfied (2.39) are the educators working in the capital where the pandemic rages more.

According to the data of the Hungarian Central Statistical Office from January of 2021, the willingness to be vaccinated is increasing among 15–74 years olds. 33% of those who belong to this age group is planning to be vaccinated, this ratio is more by ten percentage points than it was in December of 2021. The 21 Research Center also asked the educators whether they would get vaccinated if the vaccine became available.

43% of the teachers are willing to be vaccinated, 36% is unsure about the decision and 21% has no intention to be vaccinated. Consequently, the rate of willingness to be vaccinated is higher among teachers than the society as a whole.

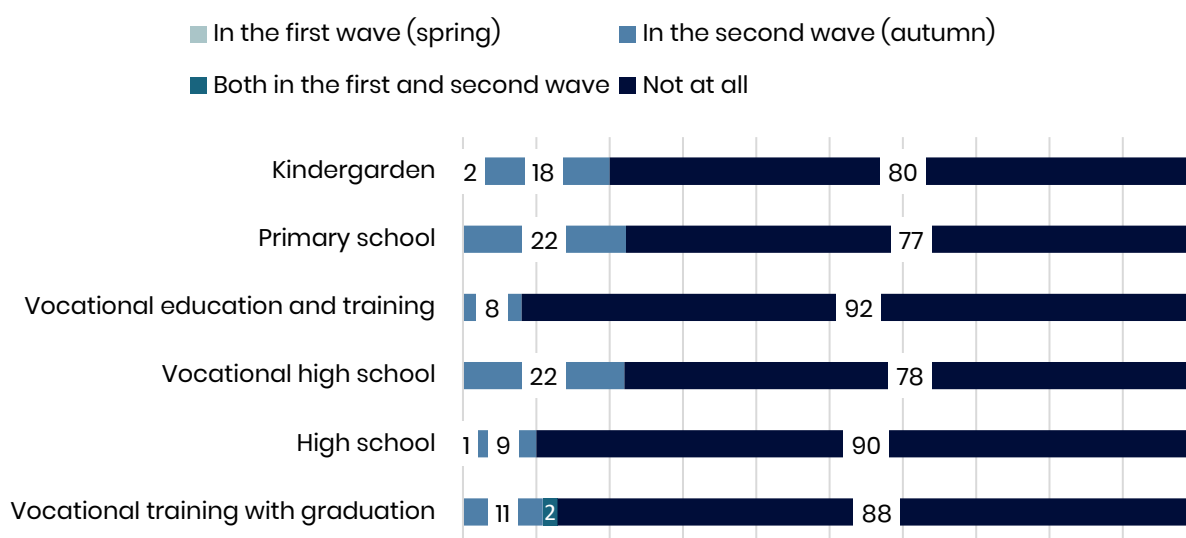
However, the willingness rate has a large standard deviation among teachers. Kindergarten teachers are the least likely to choose (they have the highest rate of those respondents that are unsure about the decision) to be vaccinated, while its probability is the highest among high school teachers .

Figure 6. 'Would you be vaccinated if the vaccine became available?' Distribution of answers grouped according to the teacher's workplace.



Age is positively correlated with the willingness to be vaccinated: while 31% of the 18–29 age group would be willing to receive vaccination, 64% of the oldest age bracket (60 and older) and 28% is unsure about the decision. The results suggest that there is no pattern of anti-vaccination among the teachers. It appears to be more likely that many have simply not come to a definite decision about the vaccination. A survey conducted by the Pedagógusok Szakszervezete (PSZ) in 2020 autumn shows that 26% of teachers felt safe at work in their educational institution during in-person teaching. We conducted another research at the turn of 2020 where we re-phrased the aforementioned question. We asked teachers to mark a value on a scale from 1 to 5<sup>2</sup> to express their sense of safety during the second wave in autumn. The average answer of the teachers' body was 2,73. The highest value ("I feel completely safe") was marked by 10% of the respondents and one-fifth (22%) did not feel safe at all. There is a significant relationship between teachers' sense of safety and their willingness to be vaccinated. The teachers that feel or felt less safe at work during the last year appear to be more ready to be vaccinated.

Figure 7. 'Have you been infected (confirmed by a positive test) with coronavirus?' The answers are grouped by type of institution.



2 1: I do not feel safe at all; 5: I feel completely safe

19% of the teachers have already been tested positive and it appears that remarkably more teachers were infected during the second wave than the first one. Those institutions had the highest infection rate that opted for traditional teaching in 2020 autumn. While relatively few teachers were infected in the spring of 2020 due to the early closure, the second wave had a more significant effect on them.

24% of the youngest age bracket (18-29), 19% of the 30-59 age group and 15% of the oldest bracket (60 and above) have already been infected with the virus. Based on their answers, 19% of the affected teachers<sup>3</sup> received 100% of their wage.

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<sup>3</sup> n=195

## Conclusion

The 21 Research Center conducted an online survey among teachers at the turn of 2020–2021 with the help of the Pedagógusok Szakszervezete. The sample (1263 respondents) is representative of Hungarian teacher population along the dimensions of age, region and type of educational institution.

Both the student and teacher community were caught by surprise regarding the sudden switch to online education in the spring of 2020. Even though 57% of the teachers have already participated in some kind of training focusing on digital education in the last 4 years, 60% admitted to have lacked the competencies necessary to fulfil their duties properly and confidently during the first and second waves. Only 51% of the teachers received any form of help from their employers during the process, least of all kindergarten teachers, primary school teachers and vocational training school teachers. High schools teachers received more support from their employers. In the light of this information, it comes as no surprise that the teachers that suffered from digital difficulties (55%) turned to their direct environment for help: 67% contacted their colleagues and 55% asked their family, while 47% conducted some research on the internet on their own to tackle their digital shortcomings.

The digital education did not encourage most of the teachers to involve more digital devices in their teaching methods following the pandemic. 56% of the teachers would prefer traditional education in the second semester, 26% would opt for a hybrid solution and 19% would like to continue teaching online. Those teachers that spent the last two semesters in online education are the least likely to long for in-person teaching. The more experience they gain at digital teaching, the more they get used to the not-so-new form of education and the more likely they are to opt for it even after the pandemic.

The research also focused on students through the lens of teachers. We asked teachers to assess students' access to technological devices, their digital competencies and their agility. According to them, the families of many students own adequate devices, but 64% lacked the necessary technological background. Regarding digital skills, 54% of the students participating in public education were rated good/excellent by their teachers, while 27% was rated only sufficient, which is only scarcely enough to keep up with the work at school and further 7% failed to meet the requirements. 54% of the students managed to adapt to digital education with only minor setbacks. Adaptation was challenging for 30% of the students, but eventually they also succeeded. Only 6% managed to convert without any difficulties.

Besides digital education, the paper also addressed teachers' health status. 19% have been tested positive (at least once) for Covid-19: most of them got infected in the second wave, the infection rate of the first one is nearly negligible. Most of them did not feel safe during in-person education. Furthermore, the willingness to vaccinate is higher among the population of teachers than in society as a whole.

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