Annex B. Summary of insights from the OECD stakeholder consultation survey

As part of the European Commission-Hungary-OECD "Supporting the Digital Transformation of Hungarian Higher Education" project, the OECD conducted a stakeholder consultation survey between 15 February and 15 March 2021. This annex provides a summary of key findings from the survey.

Presentation of the OECD stakeholder consultation survey

Purpose

The OECD stakeholder consultation survey was developed to collect views from Hungarian higher education stakeholders on the current state of digitalisation in Hungarian higher education and on potential policy approaches that could support progress in this area. The Ministry for Innovation and Technology (MIT), the European Commission's Directorate-General for Structural Reform Support (DG REFORM) and the OECD considered different options to consult stakeholders broadly and agreed on the organisation of a stakeholder consultation survey in order to:

- 1. reach a variety of higher education stakeholders, especially students and staff, that would complement insights obtained through interviews and roundtable discussions (see Annex A)
- 2. allow for a comparison of digital practices and experiences between students and staff
- 3. allow for efficient data collection and analysis, given the project's limited timelines.

Design and implementation

In agreement with the MIT and the European Commission, the OECD designed the survey as a webbased, fixed-response, nonprobability survey to be completed in English. It was designed to involve different groups of stakeholders, including students, teachers and individuals in leadership roles at higher education institutions (HEIs); policy makers; and staff from non-governmental organisations (NGOs) and private companies working in the field of education and/or digitalisation.

The OECD designed the survey based on the review of key international surveys, including the European Commission consultation survey for the Digital Education Action Plan 2021-2027, the European University Association (EUA) DIGI-HE questionnaire and the Irish National Digital Experience (INDEx) survey. The MIT and the European Commission provided input on draft survey questions.

The survey covered three themes, namely digital infrastructure and data systems; digitally enhanced teaching and learning, research and engagement; and public policy and institutional framework. The number and content of the questions were tailored to different groups of stakeholders: 19 questions for students and teachers; 7 for leaders; 5 for policy makers; and 4 for staff from NGOs and private companies working in the field of education and/or digitalisation.

The survey was first circulated by the MIT within their network, and was further distributed through different channels, including NEPTUN, a Hungarian student information management system used in public HEIs

by students, teachers and other higher education staff. The survey was voluntary, and no incentives to take part in the survey were provided to respondents.

Respondent characteristics

In total, 3 326 responses were submitted on line between 15 February and 15 March 2021. Among the submitted responses, 31% were complete (1 039 complete responses in total from 629 students, 354 teachers, 38 leaders, 3 policy makers, 5 staff from NGOs and private companies, and 10 others). With the aim of comparing the responses across the set of questions, this summary document focuses on the complete answers of the three stakeholder groups with the largest number of responses, namely higher education students, teachers and leaders. While the sample is not representative, it provides good coverage of respondents with different profiles and institutional settings, as described below.

Student respondents (N=629)

The majority of student respondents were enrolled full-time (79%) and were 25 years old or younger (68%). Undergraduate students represented one-third of respondents, with two-thirds studying at the postgraduate level. Students across different fields of study participated in the survey, with the top three fields being business, administration and law (24%); arts and humanities (13%); and engineering, manufacturing and construction (10%). The majority of student respondents were enrolled in state-owned universities. Respondents studied in institutions of various sizes, from fewer than 2 000 to more than 25 000, with a relatively even distribution of respondents across institutions of different sizes. Half of the student respondents were based in Southern Great Plain and Budapest. The shares of international students and students who reported receiving government financial support to complete their studies were modest (13% and 16%, respectively). The shares of students who reported recognising themselves as a minority population in higher education and having a disability were small (1% and 2%, respectively). Nearly 80% of the respondents reported having more than 50% of their classes on line in the academic year 2020/21, which was expected due to the ongoing coronavirus (COVID-19) pandemic.

Teacher respondents (N=354)

While the majority of teacher respondents had a teaching responsibility (80%), researchers and professional staff responsible for teaching and learning and digital technologies also contributed to the survey. Most of the respondents had at least five years of work experience, with less than 20% being relatively new to the profession (less than five years of work experience). Teachers across different fields of study completed the survey, with the top three fields being health and welfare (17%); natural sciences, mathematics and statistics (14%); and engineering, manufacturing and construction (13%). The majority of the teacher respondents were affiliated with state-owned universities. They worked in institutions of various sizes, with the number of students ranging from fewer than 2 000 to more than 25 000. Approximately 40% of the teacher respondents were based in Budapest, and another 40% were from Southern Great Plain or Southern Transdanubia. Nearly 60% of the respondents reported having more than 50% of their classes on line in the academic year 2020/21.

Leader respondents (N=38)

While the majority of leader respondents worked for universities (79%), those from universities of applied sciences and colleges also contributed to the survey. Around three-quarters of respondents were from state-owned institutions, and another quarter was from private, church-owned or other institutions. The leader respondents worked for institutions of different sizes, with the number of students ranging from fewer than 2 000 to over 25 000. Nearly half of the respondents were based in Budapest.

The sections that follow provide key findings in each of the three themes covered in the survey, namely:

- 1. digital infrastructure and data systems
- 2. digitally enhanced teaching and learning, research and engagement

3. public policy and institutional framework.

Selected questions include individuals' access to digital tools and online services, their experience with online teaching and learning, their preferences regarding online and in-person education, and suggestions for public policy priorities.

Digital infrastructure and data systems

The first part of the student and teacher questionnaires asked about their level of access to digital infrastructure and data systems that were used in teaching, learning and research activities. It also asked students and teachers about support to access digital tools, their experience of using digital tools, and about the collection, use and protection of personal data at their institution.

Overall, students and teachers in the Hungarian higher education system reported having good access to digital infrastructure and data systems. They used these digital tools regularly in the academic year 2020/21 and reported that available digital tools met their needs. However, government and institutional supports appeared to have played a limited role in ensuring access to digital infrastructure. In addition, students and teachers were often unaware of how personal data are collected, used and protected at their institution.

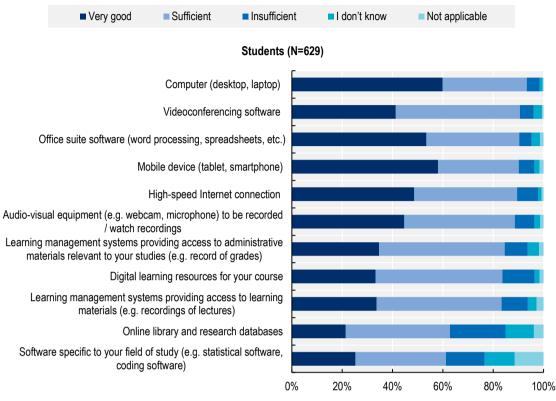
Students and teachers had good access to digital teaching, learning and research tools

Students responding to the survey, in general, reported reasonable access to digital tools to perform their study tasks. Around 90% of student respondents indicated they had very good or sufficient access to hardware, namely computers, mobile devices and audio-visual equipment, and a high-speed Internet connection (Figure B.1). Their accessibility to software varied, from around 90% for videoconferencing and office suite software; over 80% for learning management systems (LMS) and virtual learning environments (VLE), and digital learning resources for courses; to around 60% for online library and research databases, and software specific to fields of study (e.g. statistical software, coding software). Over 20% of student respondents, however, reported that their access to online library and research databases was insufficient, while around 10% noted that they had inadequate access to software specific to their fields of study, to an LMS or VLE, and to digital learning resources for courses.

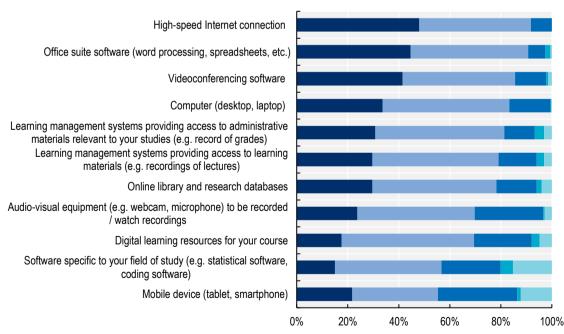
Teachers' responses were slightly more mixed but showed generally sufficient access to digital tools to perform their teaching and research work. Similar to student respondents, the majority of teacher respondents had sufficient access to high-speed Internet connections (92%), computers (83%), office suite and videoconferencing software (91% and 86% respectively) as well as LMS and VLE (around 80%) (Figure B.1). However, one-third of teacher respondents reported their access to mobile devices was insufficient, and around one-quarter stated they had unsatisfactory access to audio-visual equipment, software specific to fields of study, and digital learning resources for courses. More than 10% reported inadequate access to computers, online library and research databases, LMS and VLE, and videoconferencing software.

Figure B.1. Students' and teachers' access to digital tools to perform study tasks and work

"Please rate your access to digital tools."



Teachers (N=354)



Note: Items are listed in descending order of the share of the respondents who selected "very good" or "sufficient".

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While teachers' access to digital infrastructure was often supported by institutions, students tended to be responsible for their own access to digital equipment

A modest share of student respondents reported they benefited from governmental or institutional support to access digital tools, suggesting that a large share of students had or accessed tools on their own. In May 2020, as a response to the pandemic, the Hungarian government issued an interest-free Student Loan Plus of up to HUF 500 000 (around EUR 1 400), which could be used for purchasing electronic devices. Among the students who participated in this survey, 5% of them reported having used the Student Loan Plus, for an amount of HUF 235 000 (around EUR 650) on average. In addition, approximately 5% of student respondents reported that their institution lent them computer hardware and devices to enable a mobile wireless connection or provided financial support to purchase such equipment, while nearly 60% were granted free access to the software needed for their learning.

Teacher respondents were more likely to report having institutional support to access digital tools. Nearly 50% of the respondents reported that their institution lent computer hardware, and over 60% had free access to the software needed. However, only around 6% of them reported that their institution provided financial support to purchase digital equipment, such as computers and mobile devices.

Students and teachers regularly used digital tools and were generally satisfied with available tools

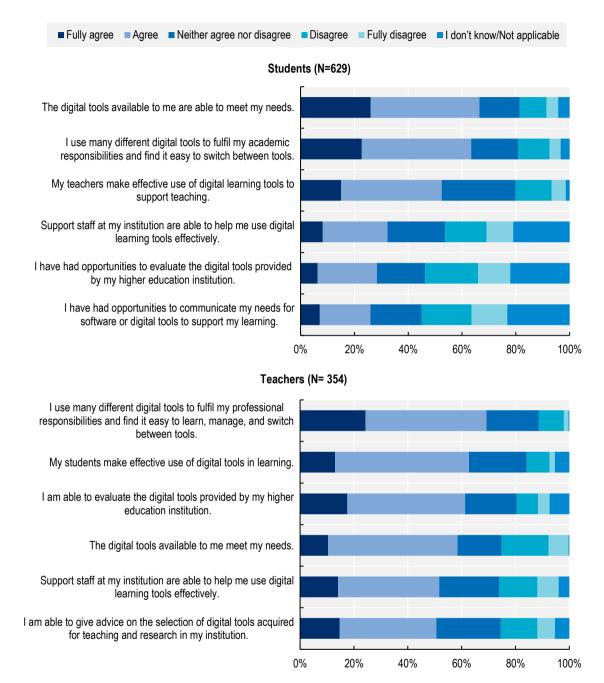
Both student and teacher respondents actively used digital learning tools in the academic year 2020/21. Over 60% of student respondents reported having used digital tools daily to prepare for classes and to attend lectures, with another 30% doing so weekly. Over half of them used digital tools at least weekly in in-class and out-of-class collaboration with peers (69% and 52%, respectively), conducting research (54%) and undertaking assessments (51%). Around 40% of them also used digital tools weekly or more often to access support from instructors (e.g. advising, mentoring and course support). Similarly, three-quarters of teacher respondents reported using digital tools at least weekly for class instruction and student support. In addition, around one-third used digital tools weekly or more often to assess students' learning outcomes, with another 30% doing so monthly. Over 60% also reported using digital tools for research and institutional management activities at least weekly.

In addition, the responses of students and teachers show that they were reasonably satisfied with the digital tools available to them and made good use of these tools despite the sudden transition to an online environment due to the pandemic. Around 60% of student and teacher respondents indicated that digital tools available to them met their needs (66% and 58%, respectively) (Figure B.2). In addition, over 60% agreed that they used different digital tools to fulfil their academic/professional responsibilities and found it easy to learn, manage and switch between tools (63% for students and 69% for teachers). However, while over 60% of teacher respondents rated that their students made good use of the tools, around 50% of student respondents agreed that their teachers made effective use of digital tools to support teaching.

Teacher respondents were more likely to agree that support staff at their institutions could help them use digital tools effectively than student respondents (52% for teachers and 32% for students) (Figure B.2). Teacher respondents also reported more opportunities to evaluate the digital tools provided by their institutions or communicate their needs for digital tools than student respondents (61% and 51% for teachers and 28% and 26% for students).

Figure B.2. Students' and teachers' experience with digital tools

"To what extent do you agree with the following statements regarding your experience with digital tools at your institution?"



Note: Items are listed in descending order of the share of the respondents who selected "fully agree" or "agree".

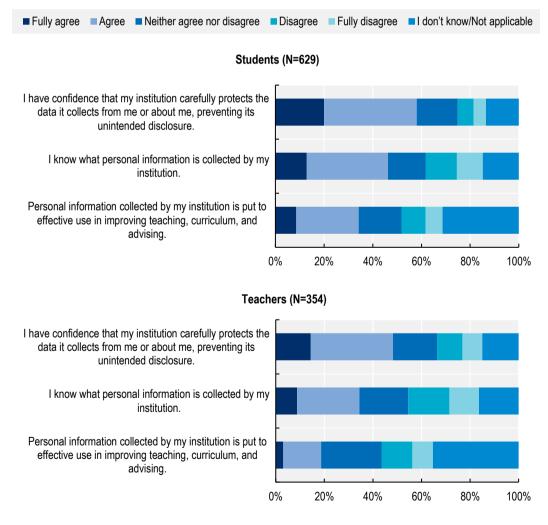
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A small share of students and teachers reported having a good understanding of institutional data governance policies

The collection, use and protection of personal data seem to be areas where further improvement is required. First, less than half of student respondents and one-third of teacher respondents indicated they were aware of personal information collected by their institutions (Figure B.3). In addition, only around one-third of student respondents and less than one-fifth of teacher respondents agreed that the collected personal information is used effectively in improving teaching, curriculum and advising. Around 60% of student respondents and fewer than 50% of teacher respondents were confident that their institution carefully protected their personal data. A relatively large share of student and teacher respondents selected the option "I don't know/Not applicable", suggesting there may be a need to increase awareness of the collection, use and protection of student and teacher personal data.

Figure B.3. Collection, use and protection of personal data

"To what extent do you agree with the following statements regarding how your institution collects, uses and protects data?"



Note: Items are listed in descending order of the share of the respondents who selected "fully agree" or "agree".

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Digitally enhanced teaching and learning, research and engagement

In the second part of the survey, students and teachers were asked a set of questions related to their teaching, learning and research experiences in a digital environment. They were asked the extent to which teaching, learning and research activities had migrated on line since the onset of the pandemic, the availability and use of support services on line, and their experience in the online setting compared to the in-person setting. They were also asked to examine the best-suited communication channels for different teaching, learning and research activities, and to assess the level of their digital skills.

The majority of student and teacher respondents reported having their teaching, learning and research activities migrated fully or partly on line due to the pandemic. Following this extensive migration to an online environment, access to and use of student support services on line have increased. Students report both positive and negative impacts of online learning and prefer an online environment for certain activities, such as accessing study information and materials, attending large lectures and taking exams. Teachers, on the other hand, highlight the challenges of online teaching and prefer an in-person setting in general for their teaching and research activities. Students and teachers both reported having a good level of digital skills.

The majority of teaching and learning activities have migrated on line since the onset of the pandemic

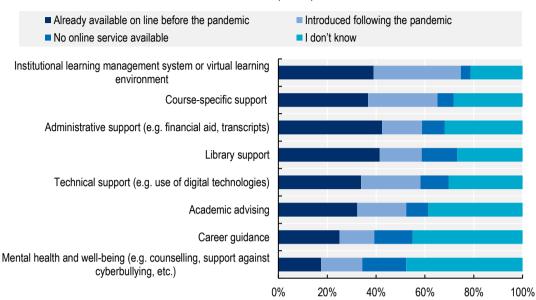
The responses of students and teachers show that higher education activities in Hungary have mostly migrated on line since the onset of the pandemic. More than 95% of student respondents reported that their core learning activities, namely attending classes and taking exams, have migrated on line to some extent (over 85% reported full migration, with around 10% reporting partial migration). In addition, approximately 85-95% of student respondents reported that different types of interactions with teachers and peers had fully or partly migrated on line (receiving teachers' feedback, sharing learning materials, inclass collaborative work, etc.). Similarly, over 90% of teacher respondents reported having delivered a class, conducted student assessments and provided feedback to students on line.

Access to student online support services has expanded during the pandemic

Student access to online support services improved during the pandemic. Before the pandemic, less than half of the student respondents were able to access various services on line, such as administrative support (e.g. financial aid, transcripts) (42%), library support (41%), an institutional learning management system or virtual learning environment (39%), course-specific support (37%), technical support (e.g. use of digital technologies) (34%), and academic advising (32%) (Figure B.4). Following the onset of the pandemic, more student respondents reported having access to online support services, especially with respect to academic supports. An additional 36% reported getting access to an institutional LMS or VLE, an additional 28% reported having access to these services reaching between 60% and 75% of the respondents. Access to other services, such as online mental health and well-being support (e.g. counselling, support against cyberbullying, etc.), and career guidance, also improved during the pandemic, but the total share of the respondents having access to these services on line remained modest (34% and 39%, respectively) compared to the shares reporting access to academic services.

Figure B.4. Availability of online student support services

"Which of the following support services were/are accessible on line, before and after the pandemic?"



Note: Items are listed in descending order of the share of the student respondents who selected "already available on line before the pandemic" or "introduced following the pandemic".

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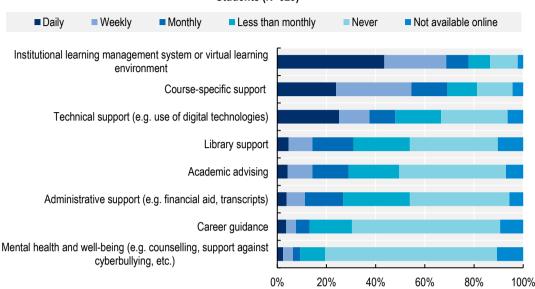
Students regularly use academic support services on line

Among the available online student support services, student respondents used an LMS or VLE, as well as course-specific support, the most. While three-quarters reported having used an institutional LMS or VLE at least once a month (44% daily, 25% weekly and 9% monthly), around 70% reported having used course-specific support (24% daily, 31% weekly and 15% monthly) (Figure B.5). Around half of the students also used technical support regularly (25% daily, 12% weekly and 10% monthly). The use of the other services remained modest. For example, around two-thirds of the respondents reported never using online mental health and well-being support or career guidance support.

Students (N=629)

Figure B.5. Use of online student support services

"How often do you use online services to obtain support in the academic year 2020/21?"



Students (N=629)

Note: Items are listed in descending order of the share of the student respondents who responded "daily", "weekly" or "monthly".

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Students reported both positive and negative impacts of online learning, while teachers highlighted challenges of online teaching

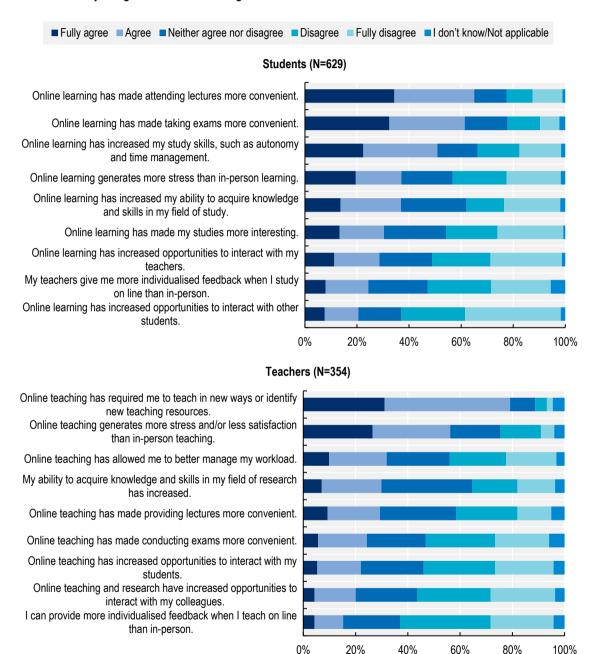
Student respondents generally indicated they were satisfied with the flexibility of online learning and the opportunity to develop their study skills but viewed online learning as less useful with respect to interactions with peers and teachers, obtaining individualised feedback, or making their studies interesting. Figure B.6 shows that over 60% of the student respondents agreed or fully agreed that online learning made attending lectures and taking exams more convenient. Half of the respondents also agreed that online learning increased study skills, such as autonomy and time management, and over one-third reported that it increased their ability to acquire field-specific knowledge and skills. At the same time, nearly 40% of the student respondents disagreed that online learning increased opportunities to interact with their teachers, and over 60% disagreed that it made more opportunities to interact with their peers. Moreover, nearly half disagreed that it made their studies more interesting and helped to receive more individualised feedback from teachers.

Teachers were generally less likely than students to report the positive impacts of online teaching. Approximately 80% of the teacher respondents agreed or fully agreed that online education required them to teach in new ways or identify new teaching resources (Figure B.6). Teachers identified the same types of benefits of online learning as students did but were fewer to report these benefits. For instance, around 30% of teachers indicated that online learning made the provision of lectures more convenient, compared to about 60% of students reporting increased convenience. Similarly, around 30% of teachers reported that online learning allowed them to better manage their workload and increased their ability to acquire knowledge and skills in their field of research. A larger share of teachers (over 50%) than students (close to 40%) reported that online teaching generated more stress and/or less satisfaction than in-person

teaching. Similar to the student respondents, around 60% disagreed that online teaching helped them provide students with more individualised feedback, and about 50% disagreed that it helped increase interactions with their colleagues and students.

Figure B.6. Impact of online teaching, learning and research, in comparison with in-person experiences

"To what extent do you agree with the following statements?"



Note: Items are listed in descending order of the share of the respondents who selected "fully agree" or "agree".

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Students prefer an online environment for certain activities, whereas teachers, in general, are in favour of in-person settings

Student respondents believed an online environment is more suited than an in-person setting for accessing study information and materials, attending large lectures and taking exams. At the same time, they highlighted the value of in-person interaction for small group classes or labs and communication with peers and teachers.

Figure B.7 shows that two-thirds or more of the student respondents considered access to course information and learning resources (e.g. research databases) is best provided on line. In addition, around half of them believed that attending large lectures, accessing new learning opportunities (e.g. courses in other institutions, micro-credentials) and completing exams are best conducted on line. On the other hand, over two-thirds thought that attending small group classes or labs is best conducted in person. Moreover, 50-60% believed collaboration with other students (e.g. group work) and obtaining feedback from teachers are best done in person.

The teacher respondents, in general, reported a preference for their work to be conducted in person. Three-quarters of the respondents believed teaching small groups is best conducted in person (Figure B.7). In addition, half or slightly over half considered that providing support and feedback to students, supervising student research or work-based learning, and collaborating with peers in institution governance are best done in person. More than 40% of teacher respondents also believed an in-person environment is best suited for conducting assessments of student learning and delivering lectures to large groups. Around 30%, however, considered an online environment best suited for delivering lectures to large groups and conducting collaborative research projects. Additionally, about one-quarter indicated that they saw no difference between online and in-person communication to provide support and feedback to students, conduct collaborative research projects and collaborate with peers in institutional governance.

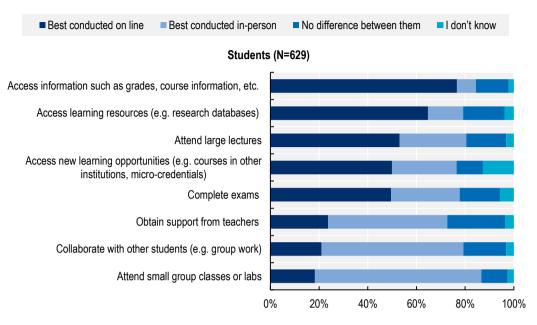
Students and teachers report having a good level of digital skills

Students assessed their digital skills as generally satisfactory for their study programmes and reported that their access to skills development opportunities differed depending on the type of digital skills. Nearly 85% of the student respondents fully agreed or agreed that their current level of digital skills was sufficient for their academic programme (Figure B.8). In addition, approximately 70% reported that they had a clear understanding of the types and levels of digital skills they needed to meet employer needs and progress in their chosen career. Around half agreed that their institution provided them with an opportunity to develop digital skills specific to their field of study, research and analytical skills in an online environment (e.g. manage information overload, identify relevant information) and digital literacy skills (i.e. ability to read, interpret, communicate through digital texts and sources). Less than 40% agreed that they had an opportunity to develop study skills (organisational skills, etc.) and critical thinking skills (e.g. identify facts from false information). One-third or less agreed that they had an opportunity to develop advanced digital skills (e.g. computer programming) and skills to navigate the online environment safely (protecting devices and content, protecting personal data and privacy).

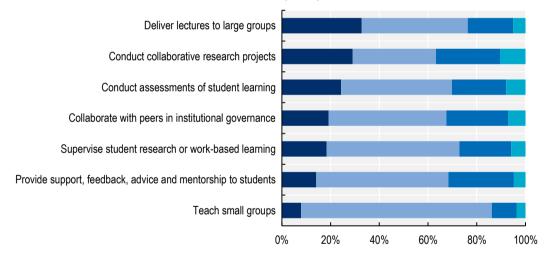
Teachers also thought their digital skills were satisfactory for their professional needs, while they were less confident in their ability to develop students' digital skills. Over two-thirds of the teacher respondents agreed or fully agreed that their current level of digital skills was entirely sufficient for their professional needs (Figure B.8). While nearly 60% agreed that they were aware of the types and levels of digital skills their students need to meet employer expectations and progress in their careers, less than 50% agreed that they were confident in their ability to prepare students to be digitally competent upon graduation. Furthermore, only 42% of teacher respondents reported that their institution provided them with opportunities to further develop digital skills specific to their field of teaching and research.

Figure B.7. Channels best suited for teaching, learning and research activities

"On balance, which channels of communication do you think are best suited for each of the following activities?"



Teachers (N=354)

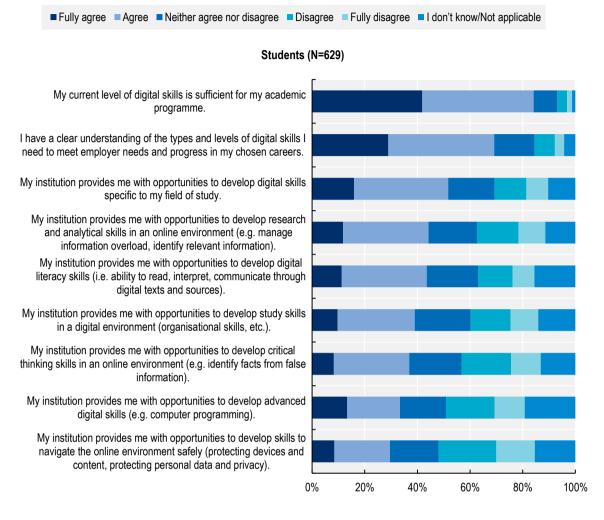


Note: Items are listed in descending order of the share of the respondents who selected "best conducted on line".

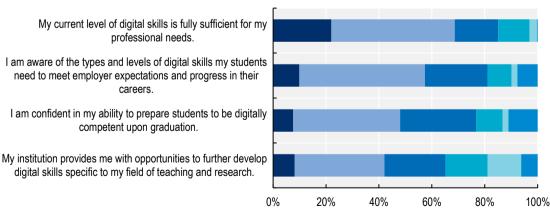
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Figure B.8. Students' and teachers' self-reported level of digital skills

"To what extent do you agree with the following statements regarding your digital skills?"



Teachers (N=354)



professional needs.

careers.

competent upon graduation.

digital skills specific to my field of teaching and research.

Note: Items are listed in descending order of the share of the respondents who selected "fully agree" or "agree".

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Public policy and institutional framework

Students, teachers and individuals in a leadership role at higher education institutions were invited to share their views on public policy priorities for the successful digital transformation of Hungarian higher education. Leader respondents were also asked to report actions taken at their institutions to support digital transformation.

When the survey was conducted (February-March 2021), the majority of Hungarian HEIs had already implemented some institutional framework to promote digital transformation. In order to realise the successful digital transformation of Hungarian higher education, stakeholders highlighted the continued importance of public investment in digital infrastructure.

The pandemic has accelerated the adoption of institutional practices supporting digital transformation

Respondents in a higher education leadership role reported their institutions' responses to the pandemic, in relation to institutional planning and governance; policies on staff, quality assurance, recognition and intellectual property rights; and budget. Their responses showed that the pandemic has accelerated the adoption of institutional practices supporting digital transformation in all of these areas. While the majority of responding institutions have already established a strategic plan to support digital transformation and allocated a budget to improve their digital infrastructure, a smaller share of institutions have taken steps to update staffing policies to take digitally enhanced learning and teaching into account (Figure B.9).

Institutional planning and governance

Nearly all leader respondents reported that their institution either had an institutional digitalisation plan or was in the process of developing one. The move to develop and adopt a digitalisation plan for the institution plan was accelerated by the pandemic. While around half of the leader respondents reported that their institution had a strategic plan supporting its digital transformation prior to the pandemic, one-third reported having developed such a plan since the pandemic started. Around 20% were developing it at the time of the survey.

Similarly, the majority of the institutions currently have an institutional structure dedicated to the steering and monitoring of the institution's digital transformation (e.g. a dedicated position or office at senior leadership level) or have a development plan for such a structure. Around one-quarter of the respondents reported having the institutional governance structure responsible for digital transformation before the pandemic. Nearly one third reported having changed the institutional governance structure since the start of the pandemic, and another one-third reported they were in the process of developing such a governance structure.

Institutional policies

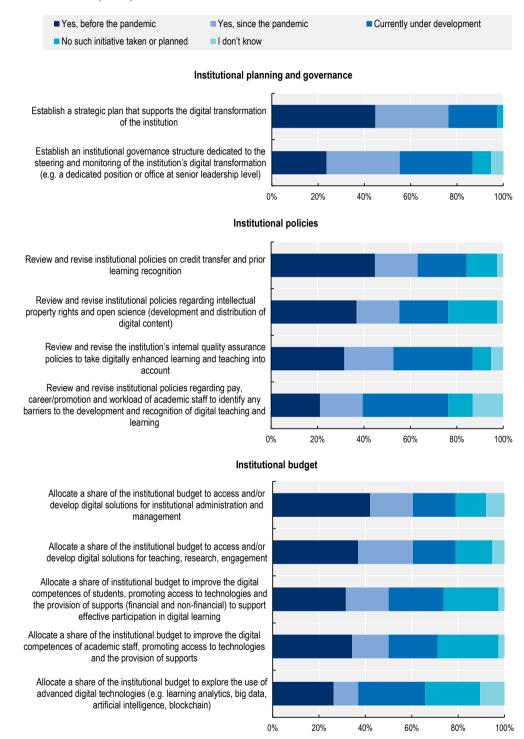
The pandemic also led many institutions to reconsider policies relevant to the digitalisation of higher education, ranging from credit transfer to intellectual property rights or staff-related policies. A relatively small share of leaders (20-45%) reported actions to revise institutional policies before the pandemic, but at the time of response, more than 75% reported having taken or were currently developing actions to review and revise institutional policies in areas relevant to digitalisation.

Credit transfer and prior learning policies constituted the institutional policy area in which the largest share of respondents reported revisions were made before the pandemic. Approximately 45% of the leader respondents reported revisions in this area before the pandemic, 20% reported having done so after the pandemic, and another 20% responded that they were currently in the process. A similar pattern can be found with respect to institutional practices regarding intellectual property rights and open science, with close to 40% of respondents having revised policies in this area before the pandemic, 20% since the pandemic, and 20% reporting current work in this area.

Figure B.9. Institutional practices to support digital transformation

"Which of the following actions has your institution taken and when, to support its digital transformation?"

Higher education leaders (N=38)



Note: Items are listed in descending order of the share of the respondents who selected "yes, before the pandemic" and "yes, since the pandemic".

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Policies on internal quality assurance and policies related to staff pay, promotion and workload to take digital teaching and learning into account were less of a focus before the pandemic, with approximately 30% and 20%, respectively, of leaders reporting having reviewed and revised these policies. However, many institutional leaders began focusing on these policy areas since the pandemic: for both areas, around 20% of respondents reported revising these policies since the pandemic, and 35% reported currently reviewing and revising these policies. This might point to the growing importance of these areas and perhaps also to their complexity, which could explain why many leader respondents reported work to be ongoing at the time of the survey.

Institutional budget

Hungarian higher education institutions have also taken steps to allocate institutional budgets to support the digital transformation of their institution. The responses of higher education leaders show the increasing importance of "core" digital solutions to support both institutional management as well as teaching, research and engagement activities. By comparison, fewer leader respondents reported investments in direct supports to students and teachers and in advanced digital technologies (e.g. learning analytics, big data, artificial intelligence, blockchain, etc.).

At the time of the survey, close to 80% of the leader respondents reported that a share of the institutional budget was allocated to accessing and/or developing digital solutions for institutional management, and teaching, research and engagement activities, or reported planning to do so. This includes 40% for whom such investment began before the pandemic, 20% for whom the budget allocation for digital solutions was made after the pandemic, and 20% who reported a plan to make such investment.

Around 70% of leader respondents reported that their institution allocated, or was planning to allocate, a budget to improve the digital competencies of students and teachers, promoting access to technologies and the provision of supports for effective participation in digital learning. While around one-third already invested in digital skills development before the pandemic, over 15% have done so since the onset of the pandemic. Over 20% of respondents indicated their institution was currently discussing such investment.

A smaller share of the respondents reported allocating a budget to explore the use of advanced digital technologies or having a plan to do so. Prior to the pandemic, one-quarter of the institutions had a budget to explore the use of advanced digital technologies. The share of institutions allocating the budget for this purpose increased by 10% following the pandemic, with around 30% currently discussing this possibility.

Students, teachers and institutional leaders view investments in digital infrastructure as the most important policy option to support digital transformation

Student, teacher and leader respondents were asked to rank six policy options in order of importance to support the digital transformation of Hungarian higher education. Figure B.10 shows the share of the respondents ranking each option as the most and second most important among the six.

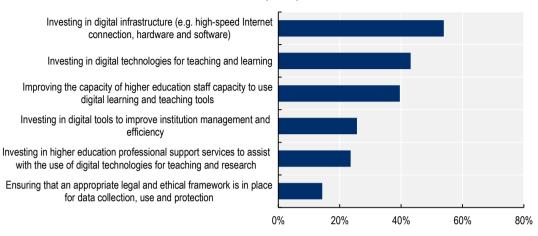
When ranking the six policy options by the share of the respondents selecting them as the most and second most important, the orders of the options were the same for the student and teacher respondents:

- 1. Investing in digital infrastructure (e.g. high-speed Internet connection, hardware and software)
- 2. Investing in digital technologies for teaching and learning
- 3. Improving the capacity of higher education staff to use digital learning and teaching tools
- 4. Investing in digital tools to improve institution management and efficiency
- 5. Investing in higher education professional support services to assist with the use of digital technologies for teaching and research
- 6. Ensuring that an appropriate legal and ethical framework is in place for data collection, use and protection.

Figure B.10. Policy options to support the digital transformation of Hungarian higher education

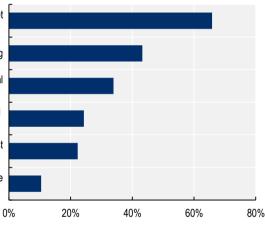
"Please rank in order of importance for the successful digital transformation of Hungarian higher education." The share of the respondents who selected the following as the most and second-most important among the six options

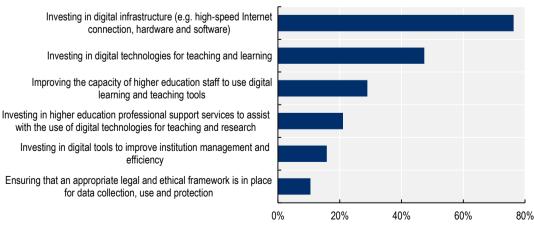
Students (N=629)



Teachers (N=354)

- Investing in digital infrastructure (e.g. high-speed Internet connection, hardware and software)
- Investing in digital technologies for teaching and learning
- Improving the capacity of higher education staff to use digital learning and teaching tools
- Investing in digital tools to improve institution management and efficiency
- Investing in higher education professional support services to assist with the use of digital technologies for teaching and research
- Ensuring that an appropriate legal and ethical framework is in place for data collection, use and protection





Higher education leaders (N=38)

StatLink ms https://doi.org/10.1787/888934279358

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Leaders showed a similar preference, with the only difference being that they prioritised "investment in higher education professional support services to assist with the use of digital technologies for teaching and research" over "investment in digital tools to improve institution management and efficiency".

This finding from Figure B.10 indicates that while students and teachers generally report sufficient access to digital infrastructure (see the section above on digital infrastructure and data systems), they seek improvements in their access to a high-speed Internet connection, hardware and software.

Institutional leaders view the establishment of a national strategy and provision of public funding as the most important policy measures

Leader respondents were invited to share their views on policy priorities in more detail in four policy areas, namely strategic planning and governance; funding; policies, regulations and guidelines; and information (Figure B.11). When comparing policy options by the share of respondents providing the rating of "4" or "5" – on a scale of 1 (not important) to 5 (very important) – the following options appeared as priorities:

- Strategic planning and governance
 - Establish a national strategy for the digital transformation of Hungarian higher education with clear targets and public reporting on progress (74%)
 - Establish a publicly funded body responsible for promoting the adoption and use of digital technologies in higher education by supporting procurement, interoperability standards, data protection and other measures (66%).
- Funding
 - Providing new public funding to institutions to support the development of digital infrastructure and data systems (68%)
 - Providing new public funding to institutions to support higher education staff in acquiring digital competencies, accessing digital technologies, and accessing supports for digital teaching (66%).
- Policies, regulations and guidelines
 - Revised procedures for internal quality assurance (i.e. institutional processes) of existing programmes and establishment of new programmes that support further use of digital technologies in teaching and learning (76%)
 - Revised workload policies and teaching performance evaluations used by higher education institutions to support the use of digital technologies (68%)
 - Guidelines or regulations regarding intellectual property rights and open science (66%)
 - Revised procedures for external quality assurance (i.e. processes led by the Hungarian Accreditation Committee) of existing programmes and establishment of new programmes that support further use of digital technologies in teaching and learning (66%).
- Information
 - Conduct research and evaluation on the impact of digitalisation on higher education efficiency, quality and equity (66%)
 - Provide information to all HEIs, staff and students about existing government supports for digital equipment, teaching, research and engagement and learning in a digital environment (63%).

The policy options related to strategic planning and governance and funding, were of particular importance to leader respondents, with around half of them selecting "5 (very important)". Policy options related to policies, regulations and guidelines were regarded as important, though a smaller share of respondents selected them as very important.

Nearly half of the respondents rated as very important the provision of information to all HEIs, staff and students about existing government supports for digital equipment, teaching, research, engagement and learning in a digital environment. This suggests that the higher education community may not have a good understanding of government initiatives, such as an interest-free Student Loan Plus that was used by 5% of student respondents (see the section on digital infrastructure and data systems).

Figure B.11. Policy measures to support the use of digital technologies in higher education

"How important are these measures in promoting the effective use of digital technologies in higher education?"

Higher education leaders (N=38)

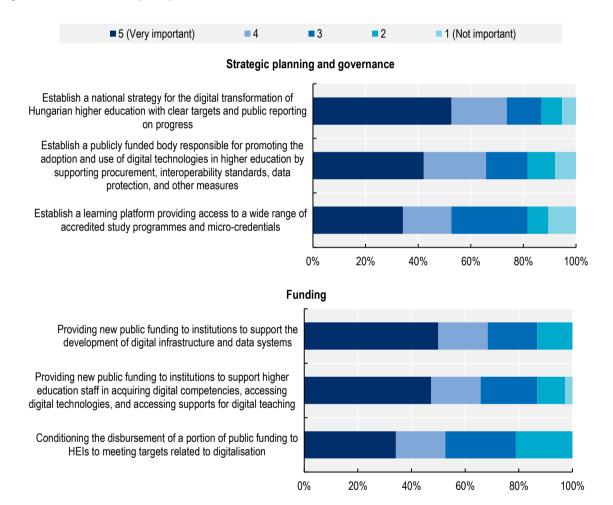
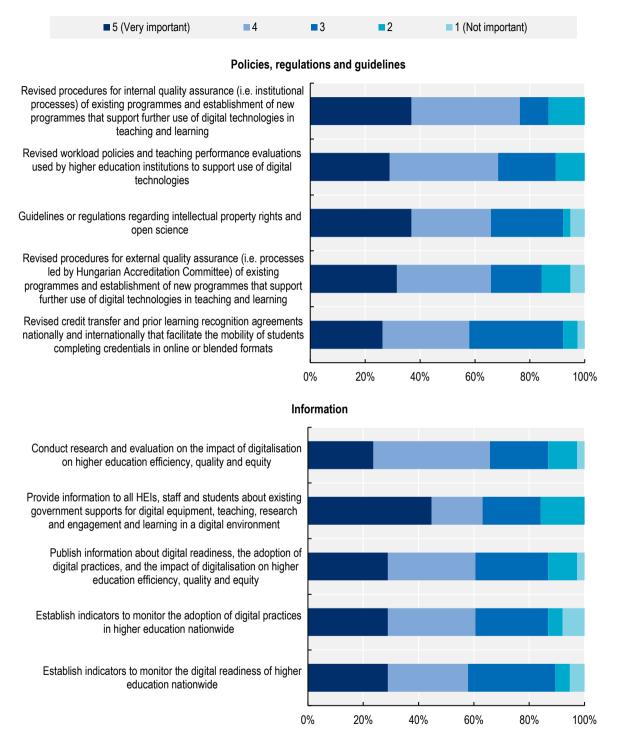
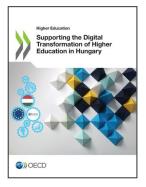


Figure B.11. Policy measures to support the use of digital technologies in higher education (cont'd.)



Note: Items are listed in descending order of the share of the respondents who selected "5 (very important)" and "4" (second-most important).

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