

Self-Regulated Learning in the Post-Pandemic Era: A Study of Hungarian Secondary School Students

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Abstract:

Introduction: This study examines how the shift to online education during the Covid-19 pandemic affected self-regulated learning among students preparing for the 2022/2023 matura exams.

Methods: A digital questionnaire was shared via social media to gather insights into students' learning habits, strategies, and resource use.

Results: Analysis revealed common issues with concentration, openness to digital tools, and uncertainty in choosing effective learning methods.

Discussion: Challenges emerged in motivation, information literacy, and learning strategies. While students are open to digital tools, more support is needed to foster critical thinking and self-regulation.

Limitations: The sample may be biased toward digitally engaged students due to the distribution method.

Conclusions: The effects of online education are varied and complex. Strengthening self-directed learning and digital literacy is key to students' academic and civic development.

Key words: self-regulated learning, post-pandemic, secondary school students, Hungary.

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Introduction

On 13 March 2020, Hungarian public education faced with an unexpected situation: in order to control and stop the spread of Covid-19, the government ordered the introduction of online learning. From this moment on, institutions were obliged to organise all educational activities in the online environment. This extraordinary event has brought major changes to the lives of many children and young people and has created a situation in schools that many had never experienced before.

The challenge of "moving" schools into the online environment was not only a matter of time. The practice of distance learning was previously prevalent in higher education and adult training (Nagy & Fekete, 2020; Homoki & Nyitrai, 2022), which may be due mainly to the specificities of this form of education. Face-to-face education has now been restored in all secondary schools and students have been able to return from the quarantine, and with it from the digital learning experience. However, a change on the scale of the one, which has taken place in the last years, may have shaped the current situation of students. These experiences have influenced students' perceptions of learning, and some elements of distance learning may have been integrated into their learning methods. It is of utmost importance to address these kinds of consequences of online education, which have not disappeared with the reintroduction of face-to-face education.

Therefore, in this research, we would like to explore what characterises the self-regulated learning of students, specifically those preparing for the matura exams, following distance learning and its possible effects mentioned above. This assessment of the current situation may be essential if we want to investigate whether certain elements of online education have shaped the self-regulated learning of secondary school students, and if so, in which direction. Furthermore, it may help to identify certain tendencies that is essential for further studies concerning the impact of online education.

1 Literature review

1.1 Distance learning

Following the introduction of the online learning, a number of very different terms were used in the press and in the public discourse to describe the situation. In Hungary, the most common were *távoktatás* (distance learning), *digitális oktatás* (digital education), and *online oktatás* (online education). Moreover, there were instances where terms from foreign language contexts were used,

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such as “e-learning” or “homeschooling”. In many cases, of course, the vernacular does not follow scientific definitions, so it is natural that it often uses terms that are in fact imprecise.

On the other hand, the relevant literature tends to favour the use of the terms distance and online education, as these forms of education are the closest to the situation during the pandemic. However, it is important to clarify that the definition of distance learning differs in a number of aspects from the situation of learning during lockdowns.

According to Ósz (2020), a different term would be more appropriate, for spatial and content-related reasons. The teaching during the pandemic happened indeed online, but its content had much more similarities with traditional education. The majority of teachers tried to transfer timetabled lessons into the digital space, for example, by using applications and interfaces such as Zoom, Google Meet, or Microsoft Teams. The way homework was completed and handed in has not changed much either, with students usually just taking a photo of their work and uploading it to an online platform or emailing it to the teachers. Ósz (2020) describes this as a situation where teachers created a mixed approach, neither online nor traditional. She describes this situation as “emergency learning” and explains that much more time and preparation is needed to develop online education, which was of course not possible in March 2020 due to the suddenness of the change.

It is important to note that distance education is not just a transfer of traditional, face-to-face education into the digital space (Nagy & Fekete, 2020). The most important difference between traditional and distance education is distance in space and time (Kas, 2016). During distance learning, the teacher and the students are not in the same place at the same time, there is no personal contact, except from a few consultations (which of course, was not allowed during lockdowns). So, when teachers delivered lessons digitally but according to the timetable, they were mixing traditional and distance learning.

However, as much as it might be concluded from the above that the so-called “blended learning” was introduced during the pandemic, this term again covers a different form of education. In this case, parallel to contact lessons, independent (usually online) activities take place (Kas, 2016). Thus, face-to-face teaching is only complemented by digital, distance learning materials, and does not cover the whole learning process.

In this study, following the literature’s pattern, but considering the above-mentioned differences, we will use the terms distance and online education to refer to the situation introduced in spring 2020.

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1.2 Digital education in Hungary before Covid-19 pandemic

The importance of integrating digitalisation into education was recognised by experts decades ago. In 2016, within the framework of the so-called Digitális Jólét Program (Digital Prosperity Programme), Hungary's Digital Education Strategy was formulated (Malatyinszki, 2020). In this context, assessing the situation at the time, Tamás Deutsch, the Ministerial Commissioner responsible for the programme, stated that both the infrastructure, the supply of equipment and digital competences in Hungarian education need serious improvement. Though the situation has improved a lot since then, but only in certain aspects, for example, digital tools are now more widely available to schools and thus to students (Szabóné Mojzes, 2021).

However, this can be very misleading in the evaluation of distance learning, since distance learning, in addition to the technical needs, required a completely new attitude from the learners (Szabó, 2020). Furthermore, it is also significant that although ICTs fundamentally attract Generation Z (Szőke-Milinte, 2020) and students' competence in the use of social media is outstanding, but they perform modestly in practical or educational applications (Malatyinszki, 2020). An analysis by the State Audit Office of Hungary explains that the number of students fully prepared for digital education was very low at the March 2020 lockdowns (Czifra et al., 2021). Papp-Danka (2014) expresses similar ideas in a study years before the pandemic, for example, the problem that almost 50% of secondary school pupils spend several hours a day in front of a computer, although very few of their activities are related to learning.

1.3 Self-regulated learning

In March 2020, the introduction of online education brought a set-up that in many schools had not been experienced at all, or at least not often. Institutional frameworks have suddenly been loosened, and the omnipotent and dominant role of the teacher has been transformed into more of a facilitator. The online environment has influenced students' learning activities, methods and forms. For instance, Szűts (2020) compares this to the open world analogy of video games, including the importance of curiosity-inducing discovery and the logic of the non-linear quest. Both the way distance education works and the digital environment itself builds strongly on self-determined and self-regulated learning (Papp-Danka, 2014).

Experts have been working on the concept of self-regulated learning (SRL) for decades, and in the 1990s several models were developed that attempt to describe its structure, operation and functions. The term describes a very complex process that can be viewed from many different angles (Boekaerts,

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1999), this may be one reason why there is no single definition of the phenomenon. The term itself is not consistent either in international or Hungarian literature. In fact, there are two forms of the term: “self-regulated” and “self-regulating” (Papp-Danka, 2014). Another reason why there is no common understanding of SRL processes is that it is positioned at the intersection of several different research fields working with various terms and labels (Boekaerts, 1999). Different theoretical models of SRL have emerged in the literature, connected to the names of Zimmerman, Winne and Hadwin, or Boekaert (Vandavelde et al., 2013).

However, there are certain elements that can be found in all the models describing the process, and can therefore form the basis of a possible definition. Based on the work of Paul R. Pintrich, Molnár (2014) summarises these as basic conditions and lists the following:

- Active, constructive prerequisite: self-regulating learners are active organizers of their learning processes.
- Control ability: self-regulating learners are able to monitor and regulate their learning activities, motivation and behaviour.
- Goal, criterion prerequisite: self-regulating learners organise their learning processes according to their goals, criteria and expectations.
- The role of mediators between the individual and environmental expectations: the individual self-regulation links the current action to the expected action.

These basic conditions also represent the three important elements of self-regulated learning that are accepted by most theoretical models and are central to definitions of self-regulated learning: cognition, metacognition and motivation (Vandavelde et al., 2013). While students' self-efficacy beliefs, task interest, and motivation for learning are all examples of the motivation component, metacognition refers to the structuring of the learning process through goal setting, planning, monitoring, and self-evaluation. Cognition includes the application of various learning methods such as practicing, rereading, or summarizing (Pintrich, 2004).

Pintrich has been a leading theorist, researcher and advocate of self-regulated learning for many years (Schunk, 2005). In his model, he divides the self-regulated learning process into four phases, each with four possible areas of self-regulation. The model does not assume that the phases follow each other linearly, they can occur at any time during the learning process, they can operate in parallel or in bypass (Molnár, 2014; Schunk, 2005). These phases are 1. forethought, planning, activation, 2. monitoring, 3. controlling, 4. reflection, reaction (Schunk, 2005).

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In each phase, Pintrich identifies four areas in which self-regulation can take place, but not necessarily, as some activities within a given area may require little or no self-regulation (Schunk, 2005). These areas are:

- cognition (e.g. knowledge, selection and use of learning strategies)
- motivation and affective domains (e.g. interest, self-efficacy, emotions, emotion regulation)
- context (e.g. task completion, learning space and time)
- behaviour (e.g. asking for help).

2 Methodology

2.1 The aim of the research

We conducted a situation assessment, in which we examined self-regulated learning habits and methods of secondary school students before their matura exam, i.e. their self-regulated learning process. We studied these aspects specifically after the reintroduction of face-to-face education, so after the experience of distance learning.

The basis of our study is a self-report questionnaire completed by Hungarian school-leavers. The questionnaire is to provide an insight into the respondents' self-regulated learning process, especially in terms of the nature of the methods and resources used.

The main aim of the research is therefore to summarise the experiences of online education during the pandemic and thus get a comprehensive picture of how self-regulated learning of secondary school students may have evolved following distance learning and the changes it brought about. In particular, the research focuses on upper secondary school students' strategies in connection with autonomous learning, and on the different learning materials and resources they use for preparing for the matura exams.

2.2 Data collection

The research was based on a self-completion digital questionnaire, which could be filled in over two weeks from 3 October 2022 using an online platform. The questionnaire was distributed online in thematic social media groups specifically designed to help students prepare for their matura exams. This may be a limitation of the study, as the members of these types of online groups are mostly students who are more active in using online materials and seeking help, so their answers may be biased.

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The questionnaire was completed on a completely voluntary and self-report basis, i.e. students were asked to describe and reflect on their own learning process.

For most questions, the respondents had to choose from a set of predefined answers. However, there were also two open-ended questions, to which students could express their answers in using their own words (answering these questions was not compulsory, but around 64% of respondents answered both).

2.3 Population, sample

Numerous year groups were indirectly affected by the lockdowns and online education, whose students took the matura exams in the following years, so their preparation had been pervaded by distance learning. In the academic year of 2022/2023, when the study was compelled, students who took their matura exams had experienced what secondary education had been before, during and after the introduction of distance learning. Preparation for the matura exams requires students to practise regularly at home on their own, so self-regulated learning is a very topical and relevant issue for this age group. Besides, they may have acquired a degree of self-awareness and self-reflection that allows them to reflect on their past and present learning activities. For these reasons, we believe that school-leavers were appropriate subjects for this research.

For the questionnaire, 133 valid responses were received. Among the respondents who answered the question concerning gender, 115 (86.46%) women and 14 (10.53%) men were included. In terms of age, more than half (57.14%) of the students were 18 years-olds, the youngest students were aged 17 and the oldest person was aged 21.

Figure 1 shows the distribution by the types of school. Although 68.42% of the respondents were secondary grammar school students, other types of schools were also represented: 17.29% of the respondents were students at secondary technical school, 12.03% of them were students at a secondary vocational school and 0.75% of them were students at a vocational school.

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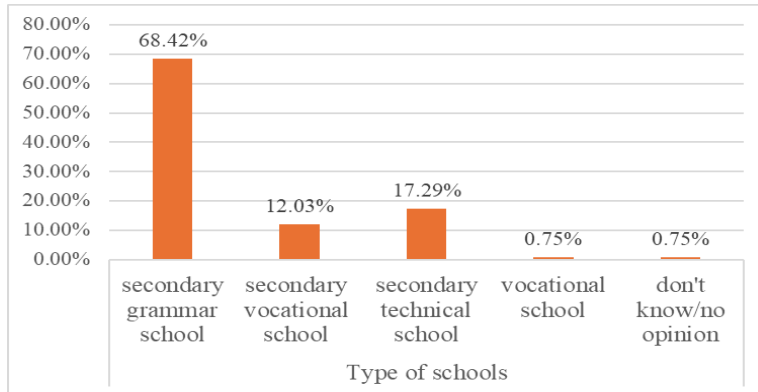


Figure 1. Distribution of institutes by school types.

The advantage of this varied distribution is that it allows the research to explore different perspectives, as different secondary school types have different roles for the matura and thus different attitudes and preparation of students (for example, in a secondary grammar school, the matura exams are primarily a means to enter higher education, whereas in a technical school, a technical qualification may be more emphasised). The geographical location of the institutions is also very diverse with schools from the Hungarian capital city and other urban or rural schools (Figure 2).

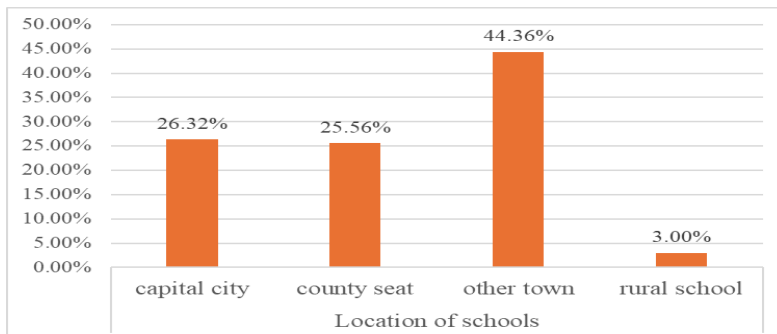


Figure 2. Distribution of institutes by location.

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3 Results

3.1 Questions on the learning process

The first part of the questionnaire focused on the process of self-regulated learning. As regards the students' note-taking habits, due to advanced technology, they have a wide range of alternatives, including the possibility to write effectively on a laptop or tablet. Nevertheless, as shown in Figure 3, almost all participating students (93.23%) take notes by hand. 39.10% of the respondents take notes by typing, for example using applications such as Microsoft Word.

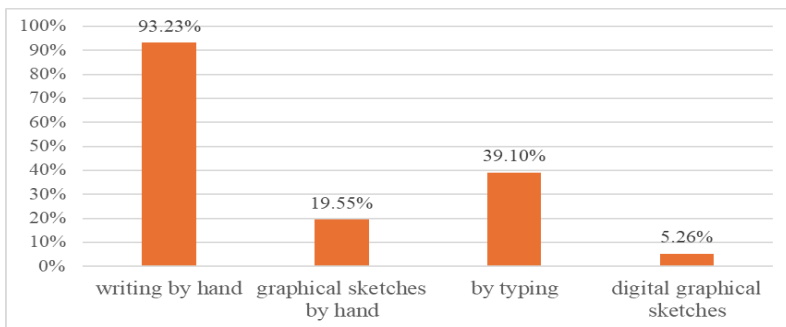


Figure 3. Note-taking methods.

The questionnaire also covered the use of graphical sketches, such as mind maps and flow charts, although they seem not to be widespread among students, with 19.55% of the respondents making graphical notes by hand and only 5.26% using a laptop or tablet (Figure 3).

Closely related to the previous question is the finding that 82.70% of the participants study from handwritten notes and, if they use typed outlines, they do so in print rather than electronically (Figure 4).

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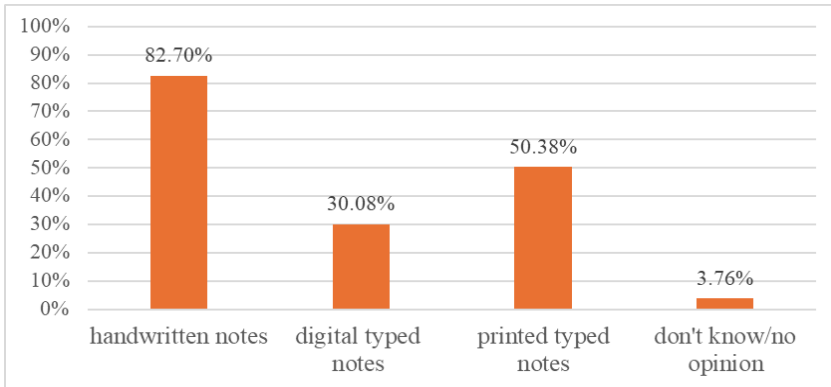


Figure 4. Types of notes used during self-study.

The questionnaire also explored the forms of help-seeking of learners. Based on the responses, it is clear that learners mainly use the online environment to find solutions: more than half of the participants (67.67%) look for information online, while only 27.07% use a paper-based material such as textbooks. Similarly, almost a third of respondents (32.33%) consult a fellow student online and only 22.56% do so face-to-face (Figure 5).

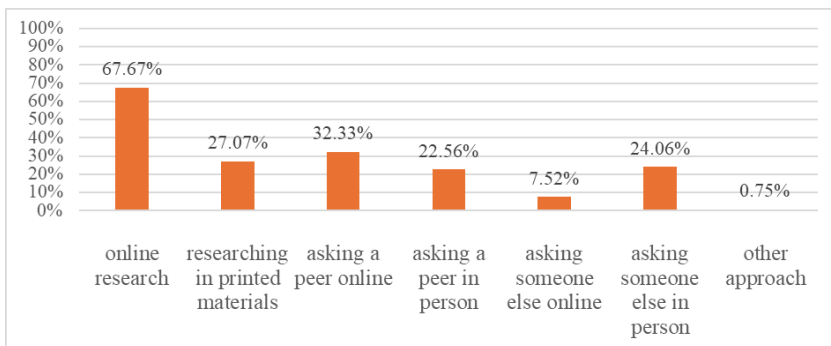


Figure 5. Help seeking methods during self-study.

Before the pandemic, digital environment was already one of the most important platforms for connecting students, thus this result is not a surprise. However,

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when comparing how students ask each other and others (such as teachers, or parents) for help while learning, an important difference emerges: according to the responses received, in the online environment, 32.33% of students ask each other for help, while only 7.52% ask others. This also underlines why literature refers to today's young people as the "internet generation". The common claim that the internet is primarily "home" for the younger generations, as it is specifically for them to communicate with each other, seems to be confirmed.

Group work and project-based learning play a prominent role in 21st century teaching methodology. Therefore, we investigated how young people approach these kinds of tasks, the results are depicted in Figure 6. Based on the responses received, the workflow of group projects has typically shifted to the online environment. 47.37% of the students who completed the questionnaire said that during projects, they speak online, using telecommunication applications like Skype, Zoom or Google Meet. In addition, 48.87% indicated that they also work in an online environment, but only in writing, e.g. through emails and messages. Of those students who responded that they work on projects in person, the most common (46.62%) response was that they meet and work at school (Figure 6).

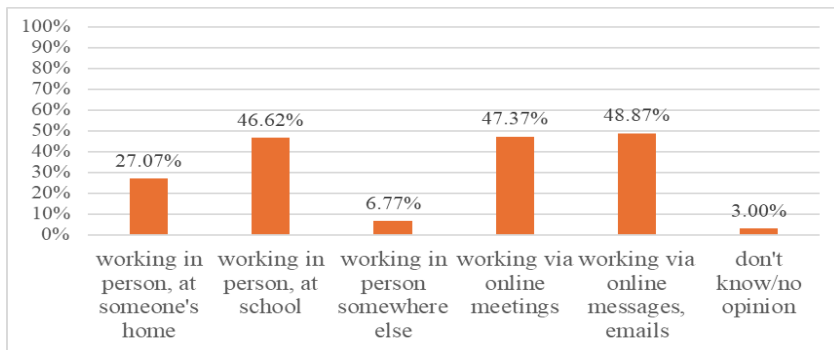


Figure 6. Working in groups on school projects.

Therefore, it can be concluded that when learners work together outside the institutional setting, it is typically shifted to the digital space. This might have been influenced by the introduction of distance learning, when students used telecommunication not only for free time activities, but also for learning. Although they now have the opportunity to work together in person again, they are probably more open to digital solutions for convenience, for example, there

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is no need to find a location, and everyone can work from the comfort of their room, there is no travel time, etc.

Distance learning has also changed the way homework is handed in at school. The most common solution during lockdowns was to photograph or scan the work, which students either submitted via a learning management system (such as Google Classroom) or sent to their teachers digitally (e.g. via email). We investigated whether these practices are still used now, during face-to-face education, the results are presented in Figure 7. Respondents were allowed to select more than one answer to the relevant question, as the way homework is handed in may vary from subject to subject, and even within a subject there may be more than one solution. The vast majority of respondents, 82.71%, said that they check their homework in person during lessons. In addition, about half of the respondents (51.13%) handwrite their homework and only 12.78% type it in and then print it out (Figure 7). This proportion also correlates with the results above, which show that handwritten notes are still the most common form of notetaking among students. However, distance learning practices occur as well, as almost half (45.87%) of the students selected the answer that they upload their homework on an LMS (Figure 7).

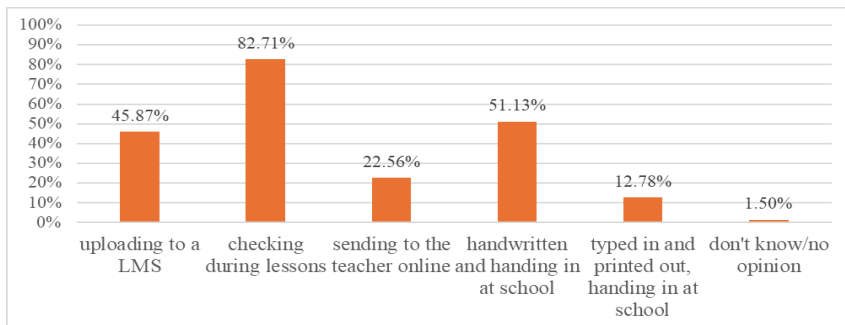


Figure 7. Forms of handing in homework.

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3.2 Questions on learning materials, resources

The second module of the survey investigated the materials and resources that learners use during the self-regulated learning process. It can be concluded that more than half of the respondents (60.15%) claim that they mainly use digital resources (Figure 8).

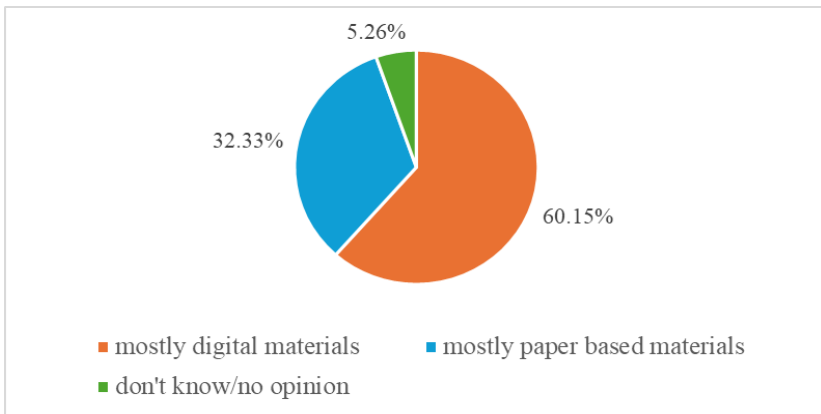


Figure 8. Materials used during self-study.

The survey also covered the notes used in the preparation for the matura exams. The results are shown in Figure 9. It emerged from the responses received that, in general, students prefer to use notes they have prepared themselves, with 77.44% of them studying from them. However, more than half of the respondents (57.90%) also use those compiled by their teachers and more than a third (34.59%) use those compiled by their peers (Figure 9.). It can also be seen that the majority of students choose more than one answer, i.e. they tend to use a combination of the above-mentioned methods.

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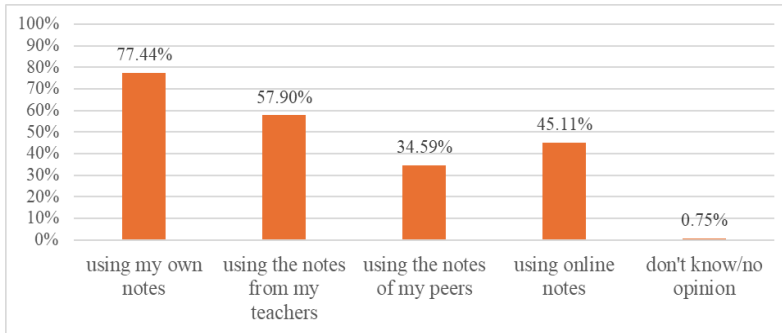


Figure 9. Notes used during the preparation for the matura exam.

Moreover, almost half of the respondents (45.11%) use notes written by others and available online (Figure 9). All of these students either think that the notes available online are not always reliable and of high quality but are generally useful and helpful; or they find them absolutely reliable, high quality and useful (Figure 10). Similarly, the students mentioned above, frequently search for online notes. Besides, it is also significant that even those who do not use online notes, think that they are somewhat reliable and useful. Only 4 respondents (4.62%) think that online notes are not credible and of high quality (Figure 10). 73.68% of the participants claim that, although not always, but the notes available online are generally reliable, of high quality and useful (Figure 10). Thus, it can be said that students are open to these digital materials.

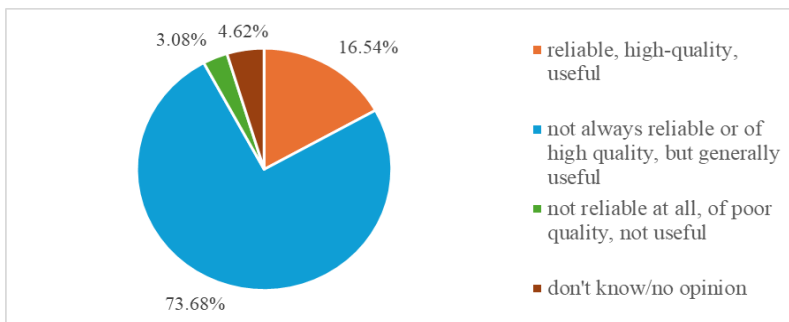


Figure 10. “In my opinion, online notes are...”.

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Nevertheless, we should not forget that the majority of respondents accessed the questionnaire through groups sharing notes on online platforms. Thus, the research sample is not representative for the questions mentioned above.

Finally, this part of the questionnaire also sought to explore the ways in which students share notes, the results of which are shown in Figure 11. Online collaborative editing - available on platforms such as Google Drive - is relatively popular, with 40.60% of respondents accessing or sharing notes with their peers. In addition, 45.87% of respondents do the same via other platforms and 25.56% do the same via email. In contrast, the number of respondents who share their items in person on paper is evenly balanced, with 43.61% of respondents indicating this option (Figure 11).

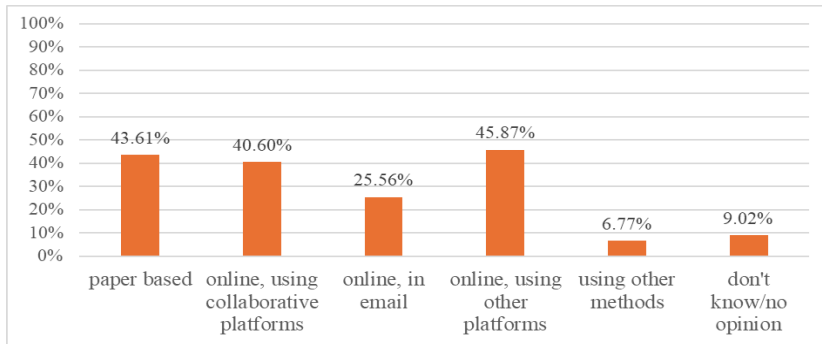


Figure 11. Forms of sharing notes.

The results clearly show that digital and online solutions are now as popular as their paper counterparts. This is in line with the results of the research presented in the previous chapters, as students are increasingly using electronic alternatives to communicate with each other or to obtain information for learning purposes.

3.3 Open-ended questions

The main purpose of the two open-ended questions was to explore aspects of the survey that students felt were of particular importance and might not have been included in the previous questions or in the pre-defined response options. Although both questions received a total of 173 individual responses that could be evaluated, they were characterised by a large number of recurring themes, motifs and issues. The results have been analysed along these lines, organised thematically.

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The first open-ended question was *"What is the one thing in which online education has changed your learning habits?"* The majority of responses indicated that students use their computers more and more easily. Many wrote that as a consequence of distance learning, more notes are taken digitally, by typing. There were also many responses about students' more frequent use of online learning materials and notes. In addition, some participants mentioned learning support platforms, which are frequently used for self-study. Some responses include *"I never used to watch YouTube and similar tutorial videos, nowadays I start learning almost all subjects with them"; "I prefer to watch online tutorials."* During distance learning, computer and internet use has become an unavoidable aspect of the learning process, which has been maintained even with the reintroduction of face-to-face teaching. Students are still keen to use their digital devices and the opportunities they offer, even if this is not compulsory.

Another focus among the responses to the first question is time management. In this respect, online education has fundamentally changed the way young people learn, as it has completely disrupted the time frames they were used to. The original timetable has often been disrupted, and periods that used to provide a stable framework for students' days (such as breaks, lunch, or travel time) have also been changed or even eliminated. Therefore, students had to plan and stick to their daily schedules individually. Some respondents said that this had ultimately had a positive effect on them, helping them to manage their time more effectively.

Another recurring response was to learn how to study independently: *"I have become much more independent"; "I study more independently, if I don't know something, I look for it myself"*. As the literature concluded, distance learning has required students to be much more independent. For many among the respondents this has been a rather positive change and has led them to be more independent in their learning process now. However, there were some who did not benefit from this kind of autonomy. Unfortunately, there were many responses from students that they had completely lost motivation and were studying less - *"I have stopped studying."; "I have become much less motivated.; I take tests less seriously (I start studying for them later) and my timetable has been upset"; "Total loss of interest."; "I find it harder to get myself to study."* are some of the responses.

The above responses demonstrate that it would be impossible to assess the impact of online education in a simplistic, positive or negative way. There were some students who benefited from certain aspects of the constraints of the situation, but there were also some who were greatly hindered.

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The second open-ended type of question was *"What is the one thing you would like to change/improve in the future about your learning habits?"*

Again, time emerged as an important aspect among the responses received. There were a number of recurring responses in this regard, which can be grouped as follows (some highlighted responses are given as examples for each):

- Studying more often: "Spend more time studying"; "I would like to spend much more time studying"; "More time studying at home".
- Changing efficiency, learning more material faster: "Learn faster and more accurately"; "I want to learn more efficiently"; "(...) I want to be able to learn quickly and efficiently".
- Improving time management: "I should manage my time better"; "I need to allocate my time better"; "I need to study according to a timetable".
- Stopping procrastinating and studying in advance by making good use of time: "I should schedule everything"; "I want to study in advance"; "I should not leave everything to the last minute".

Efficiency was not only approached in terms of time, but many respondents also wanted to find the most effective methods for their needs. This is a very important aspect, as it shows that learning to learn can still be relevant for students preparing for their matura exams. Therefore, there are students who have been part of the school system for twelve or more years and still yet need help in choosing the learning methods and strategies that are appropriate and best suited to them.

Diligence and motivation were also frequently mentioned in the responses, for example, *"Be more diligent"*; *"(...) don't just learn the minimum that will be expected of me (...)"*. There were also responses on the issue of maintaining motivation, which highlighted a very interesting aspect. However, in addition to the above, one of the most significant focuses of the responses is on concentration. This was a topic that was mentioned in many of the responses, a large number of students expressed that they had problems with concentration. They would like to concentrate better and longer during the learning process, as it is very easy for something else to distract them. According to the answers, one of the most common sources of this intervention claimed to be their mobile phone: several respondents said that they often look at it or start doing something else on it while they are studying, for example, *"Reducing the time spent on the phone while studying"*; *"(...) not looking at the phone every 5 minutes"*.

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Conclusions

Based on the results of this research, it is difficult, and also wrong, to draw a broad, universally true conclusion about online education during the pandemic. The issues and problems that emerge from the answer of the questionnaire are extremely complex, consisting of many components and often span across disciplines. Thus, they bring many new and very diverse aspects into the research topic, on which further, separate research could be built. The aim of the research was to outline, in which directions and how it is necessary to proceed further in the study of the effects of online education.

Based on the responses received, there are certain areas that raise recurring questions and concerns for the future. One of these is the use of digital resources in self-regulated learning, as this is clearly a significant issue for students. In this context, an important question that arises is the extent to which students can filter out credible information, and how they can navigate between real and untrue claims on the internet. Although the results suggest that students are critical to some extent of the material available online, but raising awareness, and teaching effective online presence is essential for schools, as the internet is now an integral part of young people's learning activities.

An equally relevant topic is the teaching of learning, as the results of the research show that many of the students preparing for their matura exams still have not found the most appropriate and effective methods for them or feel that they could improve their learning. Many respondents claimed that they would like to improve in this respect and are therefore likely to be open to learning the new methods.

Similarly, the research shows that students are likely to be open to using online materials and platforms to support their learning. Although partly out of necessity, during distance learning numerous websites and platforms have been introduced to students, and they are still using these during the self-study process.

Besides, motivation and responsibility were recurring and central elements of the responses received, and they suggest that students would like to improve their ability to regulate and maintain their motivation. As there are several motivational strategies that can all be learned, if students are given guidance in this, they could make real progress.

So, based on the results of the research, we believe that it would be impossible to evaluate online education during lockdowns in a negative or positive way, and to treat its effects in a simplistic way. It is also necessary to break down the above-mentioned aspects into smaller units, such as a specific component of the learning process or the individual dimensions of a learner. Some students were

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able to benefit from certain aspects of this strange period, others were not. Even for a single young person individually, it would be difficult to say in what way online education has influenced them overall, as there are so many factors to everything. The responses received also tended to highlight only few of them. Perhaps the main question that can unite the study of distance learning following the pandemic is whether and how learners were able to turn such a situation of constraint to their advantage. This is one of the key areas, if not the most important, of contemporary educational research, and there is room for countless further studies.

While the primary focus of this study is on the self-regulated learning of secondary school students in the post-pandemic era, it is directly relevant to the broader theme of strengthening the rule of law, particularly in the context of education. In a rapidly evolving digital landscape, students must not only master academic content but also develop critical thinking skills necessary for navigating complex issues such as misinformation, digital ethics, and the responsible use of information. As the rule of law is closely linked to the principles of justice, fairness, and accountability, fostering these skills through innovative educational approaches is crucial. This study highlights the need for students to be equipped with the tools to critically assess online content, make informed decisions, and take responsibility for their learning in a digital world—skills that are fundamental to active citizenship and the rule of law.

Furthermore, the research underscores the importance of fostering autonomy and self-regulation in learners, which is closely tied to democratic values and the notion of personal responsibility. Empowering students to take control of their learning processes not only improves their academic outcomes but also a sense of accountability and integrity. In this way, the findings of this study contribute to the ongoing discourse on how education systems can support the development of responsible, informed, and proactive citizens who uphold the values of the rule of law in both the digital and physical realms.

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