

# Lessons learned from the past ten years and future challenges in teaching taxation

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**Abstract:** Our research team was formed with the intention of investigating the challenges associated with business-related courses and finding answers to the difficulties identified. Tax-related courses are of particular interest to this research. We intend to examine the context of the issue of using a sophisticated methodology and interdisciplinary perspectives. We first examined student achievement data available nationally to determine the likely characteristics of our potential future students. We also analysed the performance of current and former BBS students in tax courses over the past decade. Our data analysis led us to conclude that our university faces a new challenge based on national and university level student performance. The research findings suggest that the further research planned by our research group is timely and important.

**Keywords:** education; taxation; method; performance; efficiency; economics subject

## 1. Introduction

The world around us is constantly and rapidly transforming. Social and future employers', and students' expectations of higher education, among other things, are also changing. Accordingly, education tools and methods must be continuously improved to meet these changing expectations. Tax-related subjects are no exception to the need for continuous improvement in education.

At the same time, sustainability and sustainable development have played an essential role in our lives in recent years. The United Nations developed the 2030 Agenda for Sustainable Development, signed by member states in 2015, containing 17 Sustainable Development Goals (United Nations, 2015). It is the responsibility of countries and organisations to achieve those goals. Using taxation as a tool to mobilise domestic resources can effectively achieve Sustainable Development Goals.

In terms of tax education, there is a wide range of objectives to be achieved such as providing a better understanding of tax collection and redistribution methods, developing tax-literate individuals and fostering a tax-compliance culture. Tax education may contribute to achieving countries' Sustainable Development Goals. Various actors at different levels are involved in tax education, including government agencies, tax authorities, business entities, and educational institutions.

Members of our research team have been teaching tax-related subjects at Budapest Business School (BBS) for several years. Our university's history began in 1857 with the establishment of the Pest Academy of Commerce. Budapest Business School was founded in 2000 from three previously separate colleges, which then became faculties: the Faculty of Finance and Accountancy (FFA), the Faculty of International Management and Economics (FIMB), and the Faculty of Commerce, Hospitality and Tourism (FCHT). There was also an FFA institute in Salgótarján and one in Zalaegerszeg. Since 2012, no new students have been enrolled at the Salgótarján Institute. The Institute in Zalaegerszeg, however, through its Faculty

### Citation:

Galántainé Máté, Z., Kovácsné Sipos, Á., & Tóth, O. É. (2024). Lessons learned from the past ten years and future challenges in teaching taxation. *Prosperitas*, 11(1), Article 1. Budapest Business University. [https://doi.org/10.31570/prosp\\_2022\\_0049](https://doi.org/10.31570/prosp_2022_0049)

### History:

Received:	17 Dec 2022
Revised:	12 Apr 2023
Accepted:	26 Apr 2023
Published:	3 Jul 2023



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of Business Administration became the fourth faculty of the university in 2011 and functioned as such until 2020. Budapest Business School became a university in 2016 (BBS, n.d.).

In September 2022, 6,258 first-year students started their studies at BBS, the second-best result in terms of the number of first-year students in the last decade. In 2022, 67 per cent of the first-year students started their studies at BBS as state scholarship holders. In addition, all three faculties of BBS were among the top ten most popular universities in terms of the number of applicants (Felvi.hu.).

Many questions arise in our teaching work from semester to semester: what to teach, how to deliver it effectively, what method to choose, and how to motivate our students. We also reflect on how well we did at the end of each semester, such as: have I achieved my goals, did I meet my expectations, and what could be improved?

Several factors determine the effectiveness and efficiency of training, and one of them is the teachers themselves. At many universities, students can voice their opinions, make special remarks, and make recommendations, which can be most valuable. Therefore, BBS also implemented an anonymous evaluation system focused on courses (usefulness, materials, requirements) and teachers' professional preparedness, communication styles, attitudes, and helpfulness.

Students are also a crucial factor in the learning process. Measuring the effectiveness of the learning process is a challenging task. It is common to test students' level of knowledge as part of the teaching process (homework, quizzes, exams, essays, research projects, case studies, etc.). Prospective employers also consider the level of knowledge, and the university's role is to equip students with proper knowledge and skills.

This research group aims to identify how BBS can improve tax education. To achieve that primary goal, it was necessary to identify research phases due to the complexity of the factors involved. The first phase of our research project focuses on two main areas. First, it aims to provide an overview of what has happened in the field of tax courses in the past ten years in terms of students' performance at the university level. The second aim is to provide a general picture of the high school performance of our students, as we believe that students' prior high school achievements influence university performance. Further research phases of our research project focus on different factors and elements of the learning process, and these research results will be published later.

This research article is organised as follows. The next section provides a summary of the relevant literature, and then the research methodology is discussed. The following section provides the results of the research. Finally, the limitations, conclusions, and potential future research areas are presented.

## 2. Literature review

### **2.1. Tax education, tax knowledge and tax compliance**

Eriksen and Fallan (1996) found that learning about taxation increases tax knowledge. There is no standard definition of tax knowledge among researchers. Bornman and Ramutumbu (2019) has developed a conceptual framework to define tax knowledge, and they conclude that tax knowledge has three elements: general, legal and procedural knowledge. According to Bornman and Ramutumbu (2019), general tax knowledge refers to basic financial knowledge and understanding, while legal knowledge refers to understanding the legislation itself (technical and conceptual). Finally, compliance issues belong to procedural knowledge (Bornman & Ramutumbu 2019).

Academic literature also discusses the impact of tax knowledge on tax compliance. Eriksen and Fallan (1996) found that increasing tax knowledge results in higher tax compliance, which is also echoed by Kurniawan (2020).

In 2015, the OECD and FIIAPP published Building Tax Culture, Compliance, and Citizenship: A Global Source Book on Taxpayer Education, which includes taxpayer education initiatives from tax authorities worldwide highlighting the importance of citizen education (OECD & The International and Ibero-American Foundation for Administration and Public Policies [IIAF], 2015).

Tax education programmes can be categorised according to their purposes. Some programmes focus on the upcoming generation of future taxpayers, aiming to equip them with

basic, relevant knowledge. At the same time, there are programmes targeting current taxpayers, including awareness of new tax legislation or new procedural techniques (De Clercq, 2021).

Providing students with primary tax education at the university level is an appropriate way not only to enhance their tax compliance but also to prepare them for dealing with tax issues in the future. Through understanding tax concepts, students are better equipped to start their businesses or enter the labour market. Beyond this general objective, university-level tax education plays a significant role in educating future tax professionals, members of the tax administration, and decision-makers.

## **2.2. The characteristics of tax-related subjects**

### **The necessity of preliminary studies**

Tax-related subjects can be challenging for students. To effectively solve tax-related problems, students are required to apply their knowledge in various other areas, including their prior accounting and legal studies. It is crucial to recognise when previous knowledge is insufficient since, in such instances, a discussion of tax issues cannot be successful without the revision of students' past studies.

### **Accuracy, punctuality, mathematical skills**

The second challenge for the students is the requirement for accuracy, punctuality and calculation proficiency. Although performing complicated calculations (e.g., derivations) or understanding complex mathematical phenomena is not required for tax calculations, poor knowledge of mathematics can lead to inaccurate tax calculations. Even math-savvy students can be surprised when calculating taxes, as the actual computation methods occasionally deviate from standard fundamental mathematical principles. For example, the VAT Act requires that the decimal fraction be rounded up to determine the amount of deductible VAT under the proportionate VAT rules (Act VAT Annex 5, Point 5).

### **Characteristics of tax legislation**

As for the *language and terminology of tax legislation*, both students and professionals face difficulties. During their studies, students will encounter a number of terms commonly used in colloquial language but those terms have a different meaning in taxation from those they are used to in daily life. Moreover, some terms or definitions are used differently in specific tax laws than in other tax or non-tax laws. Occasionally, a definition established and explained in one tax law is also referred to in another tax law. Finally, the same phenomenon can have two definitions in the same tax laws.

We can conclude that there are numerous tricky examples if we thoroughly examine tax legislation. For instance, the definition of a passenger vehicle is mentioned twice in Act LXXXII of 1991 on Motor Vehicle Tax (Motor Vehicle Tax Act). There can be no more than nine permanent seats in a vehicle designated for passenger transportation according to the definition provided in the interpretation requirements of this law (with an exception). Taxpayers and students may conclude that this clause is applicable throughout the entire law since this section of the Act begins with the phrase "In the application of this law". However, this Act contains provisions for company car tax as well, but, in that case, "passenger vehicle" refers to the definition of passenger vehicle used in the personal income tax act. The personal income tax definition states that the vehicle must be "...suitable for the transportation of up to eight adult persons" with several other considerations.

The *structure of tax legislations* is an essential factor affecting students' performance. Individual tax laws often exhibit logical patterns that are similar to those found in many other tax laws. These patterns can be helpful when trying to discover answers to a particular problem or questions. However, some laws are quite specific, which makes it more difficult to find solutions to some problematic issues.

Some tax laws are based on *international legal sources* (e.g., the VAT Act). Several laws have been in effect for a while and have been amended several times after their promulgation (e.g., the Duty Act was codified in 1990, and corporate tax law in 1996). The

year in which an act was promulgated may indicate that its logic has remained consistent. However, frequent partial revisions may jeopardise the consistency and coherence of legal texts. Concerning the phrasing of tax laws, some of the language used in some provisions may make it challenging to comprehend. Even professionals have trouble understanding lengthy, complex sentences that may also refer to other paragraphs in various other laws.

In many cases, the *legislative intent* shall be used as guidance in interpreting and applying an act. Legislative intent may be declared by words or assumed by referring to the purpose or object of certain legislation. When the legislature's intent is not clearly expressed in a particular paragraph, students (and taxpayers) may encounter difficulties.

The fact that there is room for different interpretations and that there is not always a consistent professional understanding of certain topics further emphasise how challenging it is to interpret the law. Experts may have differing viewpoints, but the Hungarian Tax Authority may provide different answers to the same query, generally orally. Moreover, neither the written nor the oral opinions of the tax authority are valid and binding in court.

Students, professionals, and taxpayers may have trouble *finding reliable, relevant sources of information*. According to Act CLI of 2017 on Tax Administration Procedures, the Hungarian Tax Authority is obliged to inform the taxpayer of the information necessary to comply with the law, to familiarise them with the tax return and tax payment procedures, and to warn them to enforce their rights. The "Guide to Completing Tax Returns" provides the most comprehensive information, although it, too, often lacks precise and accurate guidance or interpretation. However, the length of these guides can be daunting to both students and taxpayers. The fill-in instructions for the 2021 personal income tax return (21SZJA return) are 336 pages long (National Tax and Customs Administration [NAV], n.d.). These documents published by the Tax Authority can help taxpayers better understand legislation requirements. Professional tax consulting firms also provide information to the public, but this is limited to fundamental issues and general regulations. Accurate and reliable tax advice is provided only on specific tax issues based on individual consultation.

Students like to look for solutions to their assignments in the free web resources, which is also true for tax-related assignments. However, they are sometimes more interested in exciting cases of tax evasion published in the media than in working on challenging tax problems on their own or in groups. It is important to note that they may be unable to judge whether the information they find is accurate or sufficient.

Regardless of the source of information, be it the tax authority, a professional tax consultancy, or randomly selected websites, it is the taxpayer's responsibility to assume all risks associated with using that information. Therefore, teaching students how to find and select reliable online sources is important. However, it is still indispensable for them to be familiar with the law and to practise its interpretation since they will have to apply it as future employees and entrepreneurs to solve problems.

### **2.3. Learning loss, the impact of COVID-19**

Among other sectors, the educational environment dramatically changed as a result of COVID-19 as well. Implementing associated preventive measures, such as lockdowns and social distancing, resulted in a shift from the regular learning process to something unfamiliar, unexpected, and undeveloped. Changes were often required with short prior notice, giving little chance for educators, learners, families, and decision-makers to be adequately prepared. The transformation ultimately influenced every level of the education system, from early childhood education to adult education as well.

As a result of the pandemic, the performance of the educational system is changing worldwide, including in Hungary, and this has a long-term impact on the economy and society as well. Regrettably, the closure of school during COVID-19 will most probably result in considerable learning loss in the long term (Engzell et al., 2021; Nahalka, 2021). To gain a better understanding of the impact of learning loss on individuals or the economy, several vital pieces of research have already been conducted (Azevedo et al., 2020; Blaskó et al., 2021; Hanushek & Woessmann, 2020; Horn & Bartal, 2022).

### 3. Research methodology

One of our research aims is to examine the overall students' performance at tax-related courses in the past ten years. We formulated research questions to guide our research as follows:

- ***RQ1: What has been the trend in the average grades of BBS students in basic and advanced tax-related subjects over the past decade?***
- ***RQ2: What is the relationship between the signature requirements and the number of exams needed to complete tax-related subjects?***

Our research focuses on the basic and advanced level subjects of taxation from the 1st semester of the 2011/2012 academic year to the 2nd semester of the 2020/21 academic year. The performance of full-time BA students enrolled in the Hungarian language programmes of our university is the main subject of our research. Since there were no newly registered students in Salgótarján and only a few students in Zalaegerszeg were affected, we excluded their data from our research.

Basic tax-related subjects must be taken in the third semester (in specific programs), and advanced level courses of the same theme follows in the next semester. Commencing in 2018, a tax specialisation was introduced; it is not included in our current analysis as the curriculum of that specialisation is different from those of other programs.

We systematically analysed data about signatures, exam results and added subjects from the Neptun platform. In our article, we refer to FFA students as those enrolled in the current Faculty of Finance and Accountancy or its legal predecessor, and we use the same logic for other faculties.

During the research period, the signature requirement was associated with attendance requirements. No more than three absences from the seminar (90 minutes) were allowed. From the academic year 2018/2019, FFA introduced new attendance requirements. According to the new procedure, if the student adequately documents their absence (hospital / medical certificate, etc.), but the total number of absences (certified and unverified), exceed three but not more than 6 classes, they may take a verbal test in the final week of the term to compensate for the missing signature. In addition to the participation requirements, students may have to complete a task during the semesters to obtain a signature. Semester-by-semester, these assignments could differ. A student is permitted to take an exam up to three times subsequent to their registration for a course.

The second objective of our research is to present an overview of the performance of our past or future students in high school. We created a research question as follows:

- ***RQ3: How did PISA scores and graduation results change during the research period?***

PISA assessments are often used to assess a country's educational system. PISA has been evaluating education systems worldwide every three years since 2000, involving randomly selected fifteen-year-old enrolled students. The test is divided into three sections: reading, mathematics, and science. Since 2012, the PISA test has included a section on financial literacy. However, this part is not mandatory. The 2021 test has been postponed due to COVID-19 (PISA, n.d.). Hungarian high schools have two levels of final exams: standard and advanced. University admission procedures consider graduation results based on specific (variable) criteria.

Analysing PISA scores and graduation results allows us to predict the future characteristics of our university students.

### 4. Results

The number of students and grades attained tend to fluctuate significantly between semesters. The model curriculum semester typically has a higher rate of students signing up for courses. Some faculties, such as the FIMB, and the FCHT, may limit the number of students or not announce courses during cross-semesters. Moreover, the number of students decreases towards the end of the research period, owing to a separate tax specialisation foundation. As of 2019, these advanced courses have been replaced with new ones.

According to our dataset, the highest number of students was 453 in the case of FIMB, 862 in the case of the FFA and 529 in the case of FCHT during our research period.

#### 4.1. Achievements concerning basic tax-related subjects

There is no doubt that basic tax-related subjects are crucial. Firstly, these are courses that aim to provide basic knowledge. However, they may also serve as a motivating and encouraging factor for students to continue pursuing studies in taxation. The basic tax-related subjects are mandatory for the students enrolled in specific university programmes (for example, in Finance and Accounting) in the third semester.

##### Achievements in the light of obtaining the signature

According to the standard of the FIMB, obtaining a signature was not automatically possible until the first semester of the academic year 2018/2019 because there were criteria to be met. Looking specifically at this period, there were semesters where almost 90% of students obtained a signature, but there were also instances where only 70% of students succeeded (Figure 1). We can also see peaks/outliers between 2013 and 2014 over three semesters and between 2016 and 2017 over three semesters when the percentage of those who received the signature dropped to 50%. As for other faculties, a special signature requirement was introduced. At the FFA, there are no apparent outliers/discrepancies, while at the FCHT the percentage of earning signatures was most consistent throughout the period, never falling below 80% and only very occasionally reaching 100%.

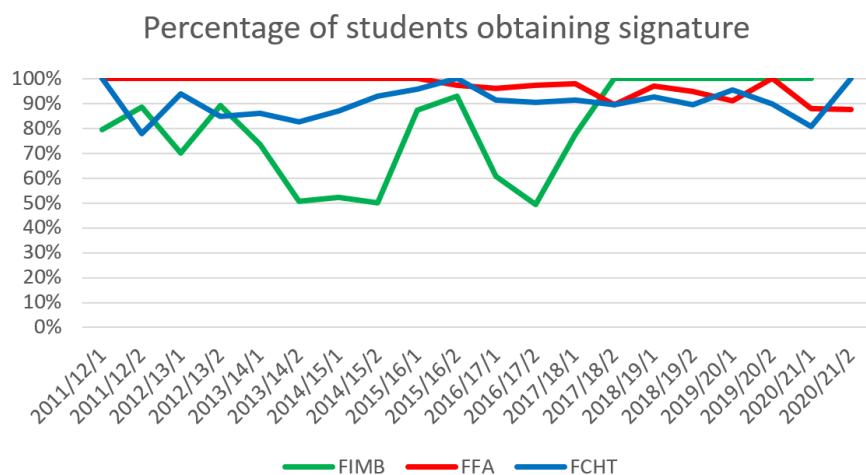


Figure 1. Obtaining signature – basic subjects. Source: Authors' own

##### Exam results – basic subjects

As a result of the comparison between the three faculties, the FIMB was found to have the most significant difference. Students who took the course in line with the curriculum obtained the best average results. However, the average results of students who did not complete the subject in line with the curriculum were significantly lower than the above results. Similar patterns can be observed in the other faculties, but none have the same outlier average results as FIMB. The FFA had the lowest average result in the 2nd semester of the 2012/13 academic year, and it has never reached 3 (except in the last semester of the research period), which FIMB has surpassed several times with its average results.

The correlation between the average grades and the percentages of students who received a signature for each of the three faculties was examined. As predicted, the correlation was negative for all three, meaning that the greater the percentage of students who received a signature, the lower the value of the average grade for the semester. However, the Pearson correlation value for the FIMB was found to be -0.52, indicating a moderately strong relationship and confirming the above-mentioned connection between a more robust signature condition and passing the subject.

On the other hand, as seen in the case of FIMB, we can conclude that a high requirement for obtaining signatures can significantly improve subject performance and grade quality.

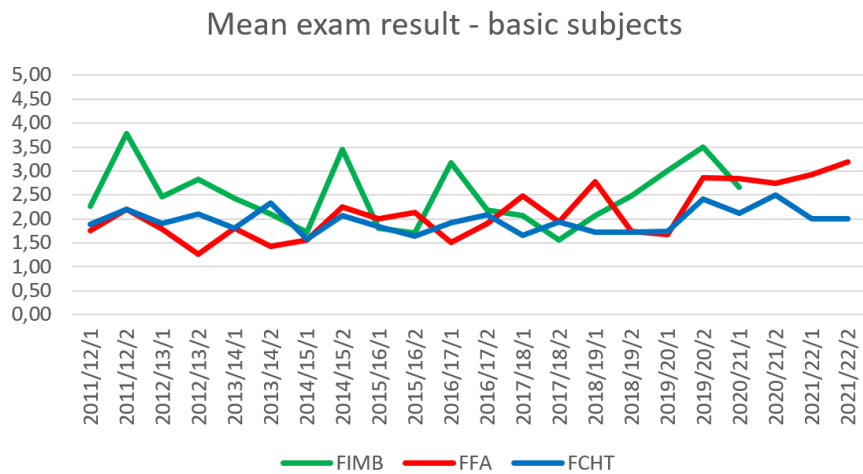


Figure 2. Exam results – basic subjects. *Source: Authors' own*

### Achievements based on the repetition of the same subject

How many times students take a particular course is a good indicator of how many semesters are needed to complete a subject's requirements. As the total number of course registrations is available in Neptun per student (relating to the specific course), the mean of the course registration could be calculated. Our results show the most significant co-movement of faculty data in this respect (Figure 3). The average number of subjects taken until the academic year of 2014/2015 varied between 1.5 and 2.5. (Of course, a fractional number of subjects taken by a single student cannot be meaningful, but here we looked at the average number of subjects taken by a student population in general.) The average number of subjects taken by students for the FFA varied between 1 and 3.2, while the minimum value of subjects taken for the other two faculties was one, and the maximum value was 3.5.

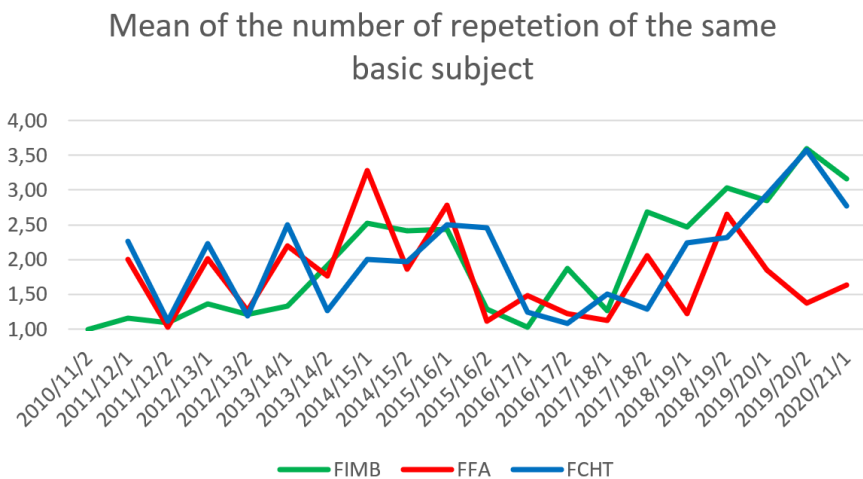


Figure 3. Number of repetition - basic subjects. *Source: Authors' own*

## 4.2. Achievements concerning advanced tax-related subjects

### Achievements in the light of signatures obtained

Based on the information provided by Neptun regarding the number of FFA students who obtained a signature (Figure 4.), we can see no difference between the percentage of students who obtained a signature in basic and advanced-level tax-related subjects. That could be related to the fact that the signature criteria for the two semesters of the taxation course were likely set to be the same. The methodology used by the FFA can be described as extreme as the signature requirement was weak or there was even no signature requirement. The diagrams for advanced-level subjects in the FCHT and the FIMB significantly differed from those for introductory courses. A low point for FIMB was recorded in the first semester of the 2016/2017 academic year, when only slightly more than 20% of students obtained a signature. Looking at the entire research period, the percentage of students who received a signature is higher, and no peak was observed.

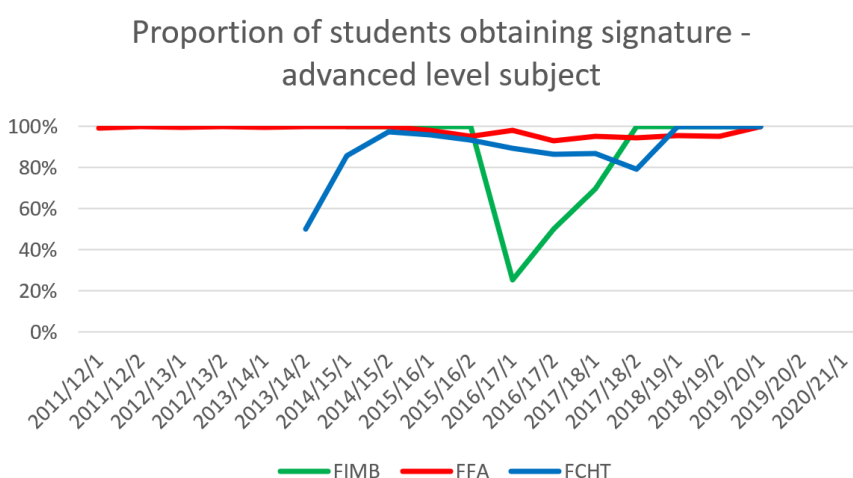


Figure 4. Obtaining signature – advanced level subjects. *Source: Authors' own*

### Exam results – advanced subjects

The results of the three faculties are presented separately in charts showing student performance in terms of exam grades. In this section, we first present the results of the FFA (Figure 5), then those of the FIMB, to be followed by those of the FCHT, and finally we focus on the mean of the obtained grades.

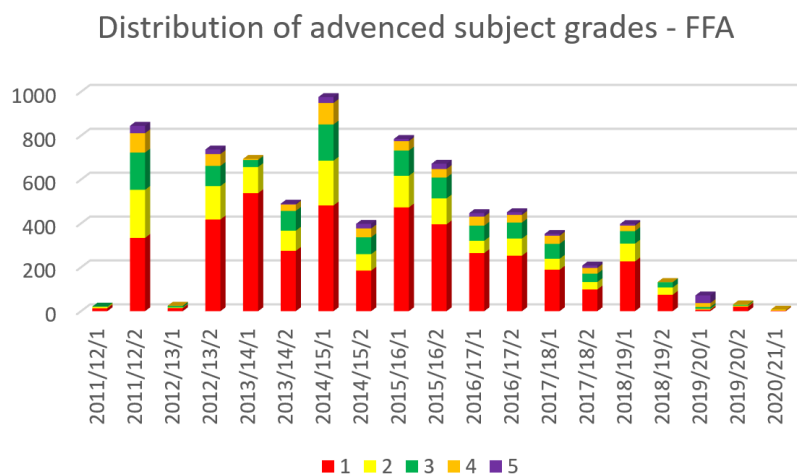


Figure 5. Exam grades of FFA – advanced level subjects. *Source: Authors' own*



The number of grades in the case of FFA shows considerable variance across semesters (this is probably because subjects in the same curriculum may have “overlapped” in one semester, so students received many more grades in that semester). Nevertheless, the proportions in the bar graphs for the semesters are comparable, with the most significant ratio of poor grades and an outstanding proportion of good grades. The proportion of excellent and good grades is negligible. The proportion of average grades is about one half or one third of the ratio of poor grades. This distribution shows that advanced tax-related subjects are complex subjects. A high proportion of insufficient grades prevails, and the proportion of students who completed the course with satisfactory grades is the highest.

Regarding the FIMB (Figure 6), the picture is more varied, and the distribution is also varied over the research period. First, it should be highlighted that from the first semester of the academic year 2011/2012 to the first semester of the academic year 2013/2014, there were no advanced-level courses, and no data could be retrieved from the Neptun system. Further reorganisation of the main curriculum is witnessed from the academic year 2017/2018. The pattern is almost identical to the one presented concerning FFA.

Distribution of advanced subject grades - FIMB

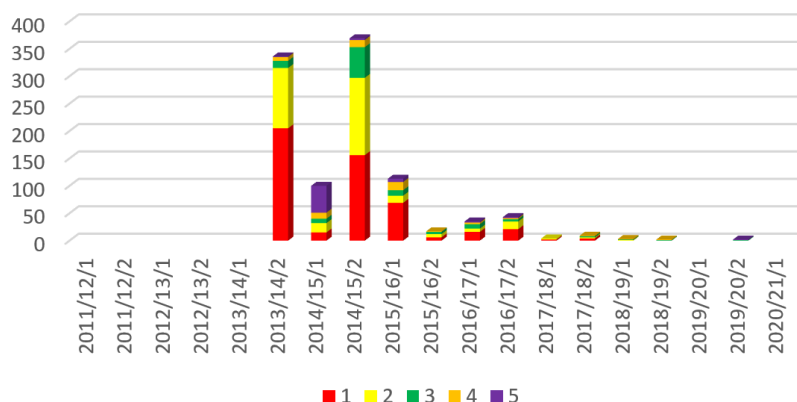


Figure 6. Exam grades of FIMB – advanced level subjects. Source: Authors' own

We can observe similarities between the FCHT (Figure 7) and the FIMB as far as the advanced-level tax-related courses are concerned. Also, there were semesters without advanced-level tax courses and a reorganisation of the main curriculum took place from the academic year 2017/2018. Compared to the picture at the FFA, the ratio of sufficient and insufficient grades is almost the same, but the sufficient ratio is never higher than the insufficient one. The proportions in the other grades are almost the same as those presented at the FFA.

Distribution of advanced subject grades - FCHT

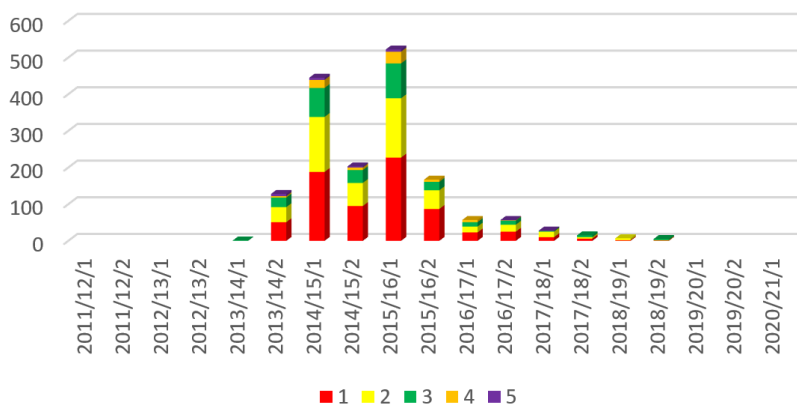
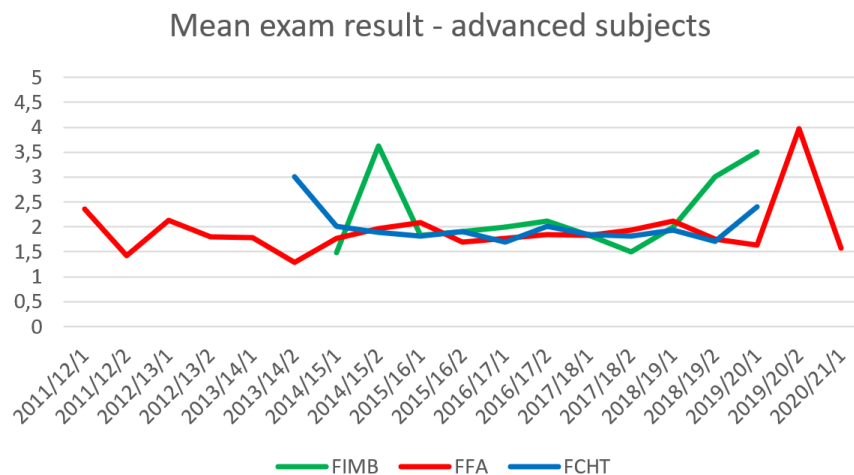


Figure 7. Exam marks of FCHT – advanced level subjects. Source: Authors' own

Considering the mean of the exam grades, the diagram of advanced tax-related subjects (Figure 8) contains fewer steep peaks than the diagram for the basic subjects if the average is taken into account. The mean of the grades of the advanced tax subjects at the FIMB shows the most significant variation; however, this variation is less than in the case of basic subjects. For all three faculties, smaller peaks are found. The students who did not complete the subject during the first semester had a mean exam grade falling well below the results of those who completed the subject in time. Diagrams of the FCHT and the FFA show similar shapes. In many semesters, the average result for the FFA was 1.5 or slightly below, and the average result for the FFA has never reached sufficient levels (except in the last academic year of the period, which is briefly discussed below), and students from the FCHT or the FIMB have exceeded these average results several times.



**Figure 8. Exam results – advanced level subjects. Source: Authors' own**

The results of FFA were fairly balanced throughout the period examined (Figure 8). The mean of the exam result at the end of the period was 4.00, a significant increase over the average scores of the previous years. In this case, the results are related to the pandemic during which online exams were administered. The average result of the online exam reached a first-time high, which is surprising. Since this research does not aim to investigate the COVID-19 effect, further investigation was not conducted. There was a similar trend between the average results of advanced-level subjects in the case of the FCHT and the FIMB, just like in the case of the FFA.

For each of the three faculties concerned, we examined the relationship between the percentage of students who obtained a signature and the average grades. As expected, the relationship was negative for all three faculties, i.e., the higher the proportion of students who obtained a signature, the lower their average grade for the semester. However, for the FCHT, Pearson's correlation coefficient was -0.7, indicating a more substantial than medium relationship, supporting the above relationship between a stronger signature condition and successful completion of the subject. The connection is also negative in the case of the FFA, but its value – and thus the strength of the relationship – is well below that of the FCHT, with a Pearson correlation coefficient of -0.1922.

### Achievements based on repetition of the same subject

In the case of the FFA faculty, the average number of added subjects does not exceed 2.5, which is considered relatively normal. At the FIMB and the FCHT, the situation is much more hectic. Here, the average number of subjects taken reaches 4.5 and 5 in some semesters. The average number of courses taken during the examination period fluctuated much more than the average number of courses taken by FFA students. The range for advanced-level subjects at FFA was much smaller than for basic-level subjects. It appears that those who had taken the basic level subject were more "trained" and "experienced", and therefore more successful in the advanced level subject. In the case of the FIMB and FCHT,

no such relationship can be seen from the graphs of the basic level or the advanced level subjects.

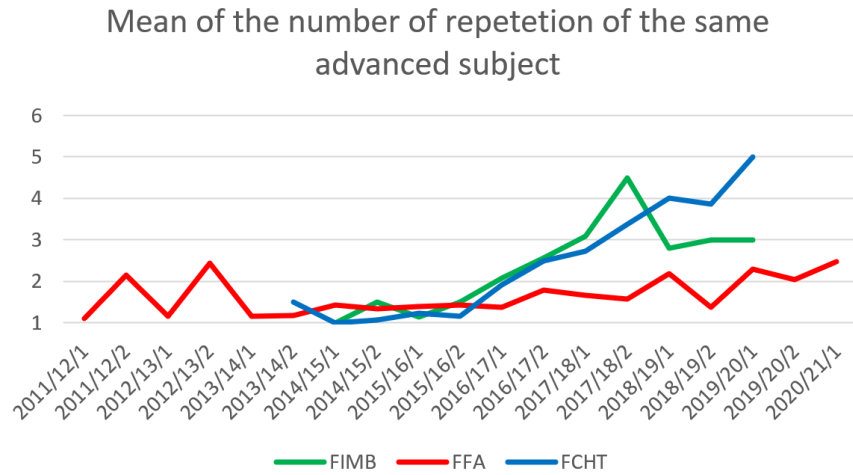


Figure 9. Mean of the number of repetitions of the same advanced subject. *Source: Authors' own*

### 4.3. High-school performance

Since this is not in the focus of our research at the moment, it is not our intention to discuss theories about how and how not to measure the performance of students, schools, or the education system in general. As part of this research phase, we analysed general graduation results as well as results of the PISA test in relation to the period of this research. We assume that these two datasets help better explore the characteristics of university students.

#### Performance of students – graduation results

Final exams at Hungarian high schools have two levels: standard and advanced. The Hungarian Educational Authority publishes a comprehensive dataset each year, along with an in-depth assessment of students' performance. Based on the data published by the Educational Authority, the landscape, in general, is balanced, there are no outliers during this period (Oktatási Hivatal, n.d.). (Figure 10).

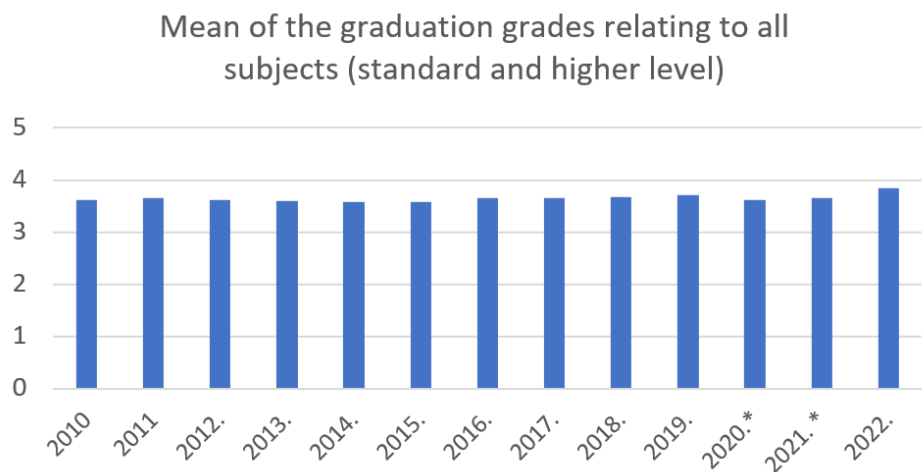


Figure 10. Mean of the graduation grades relating to all subjects (standard and higher level). *Source: Authors' own based on Educational Authority data.*

\* Note: No oral exam due to Covid-19

Considering the subject of mathematics, it appears that students' performances at basic-level exams are balanced. (Figure 11). However, there has been a decline in performance in advanced exams in recent years. After a negative trend for the past few years, the trend reversed in 2022.

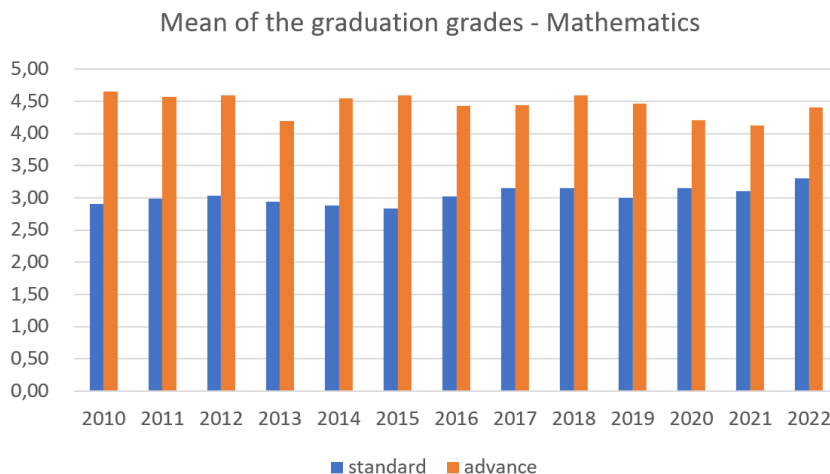


Figure 11. Mean of the graduation grades - Mathematics. Source: Authors' own

### Performance of students – PISA test

As far as Hungary is concerned, the PISA scores are not so favourable (Figure 12). From 2000 on, Hungary's performance in reading and mathematics was under the OECD average. In terms of science, the results were above the OECD average in 2006 and 2009, but after that, the trend turned negative, and the Hungarian students' average score point is now below the OECD average, according to the results of the most recent survey (OECD, 2019).

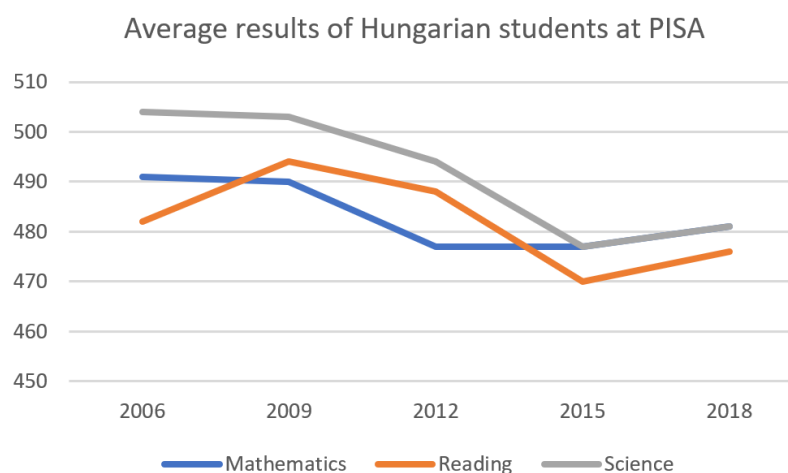


Figure 12. Average results of Hungarian students at PISA. Source: Authors' own

## 5. Discussion

The present research aimed to investigate the ten-year academic performance of students enrolled in the faculties of Budapest Business School, with a specific focus on courses related to taxation. During the research period, the university offered both basic and advance tax-related courses. However, starting from the year 2018, advanced courses were

replaced by tax specialisation in an exceptional curriculum. The research examined patterns and trends in obtaining signatures, mean grades, and course repetition rates relating to both basic and advanced tax courses.

The findings of this research suggest that implementing strict signature requirements may contribute to higher pass rates and improved academic performance of students. Based on the results, we can conclude that achieved grades were more likely to be either “sufficient” or “satisfactory” especially in case of advanced courses. However, the results were slightly better for basic courses. The results of our research indicate that FFA students achieved the best results in the advanced tax course during the pandemic, with significant increase in their average marks compared to their average marks in the previous period. This means that during the period of online examination the results became better.

To the best of our knowledge, no similar research has been conducted on the same topic at other Hungarian universities; consequently, the comparison of our results with those of other institutions is not feasible.

## 6. Conclusions, limitations and future directions

In our current research phase, we examined the evolution of the performance of students participating in Hungarian-language bachelor’s programs in basic-level taxation subjects and some advanced-level taxation subjects over the past ten years. Our study aimed to identify any perceptible trend in average marks. We were interested in how many students obtained signatures and how many times they took the given subject on average.

Our research did not include a deeper investigation of what factors influenced these results in the past, as our target was to get a general picture. In line with our research plan, the first in-depth examination of different factors is in progress among bachelor-level students taking basic-level taxation subjects. This ongoing research covers all students studying basic-level taxation subjects in Hungarian-language programs in the second half of 2022/2023.

Furthermore, our research did not cover taxation specialisation or English-language courses, and we only examined full-time students. These areas are also worth further investigation.

Based on the students’ past university performance, we may conclude that it is not easy for students to learn about taxation. Based on our data analysis, we can conclude that there are some students for whom these subjects are indeed very challenging. In the light of our findings, we recommend maintaining a solid signature requirement system to ensure more successful exam results.

As far as the general picture associated with tax-related subjects is concerned, there is no doubt that their perception is not favourable, and one can argue that there needs to be some improvement in this area. Moreover, it is vital to consider the effects of COVID-19, as students may suffer learning losses and mental problems due to the lockdown period. There is also need to prepare tax education for changing circumstances. Our research group is committed to contributing to this process by researching various topics such as student motivation, professor performance, and curriculum development.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

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