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*A II. Rákóczi Ferenc Kárpátaljai Magyar Főiskola
tudományos évkönyve*

*Науковий вісник
Закарпатського угорського інституту ім. Ференца Ракоці II*

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МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
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Закарпатського угорського інституту ім. Ф. Ракоці ІІ

2019
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RESULTS OF THE SURVEY ON STUDYING FINANCE BASICS

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Tanulmányunkban arra kívánunk rávilágítani, hogy a pénzügyi ismeretek diszciplína elsajátítása során alkalmazott oktatási módszertant szükséges-e átalakítani, és ha igen, akkor azt milyen irányban célszerű megtenni. Ezzel nem az oktatási rendszer kritikáját kívánjuk megfogalmazni, hanem a hallgatók oldaláról tapasztalt komplex gondolkodás elősegítését erősíteni. Nekünk – a felsőoktatásban oktatóknak – ehhez a folyamatosan változó, kihívásokkal teli helyzethez kell az oktatási technikáinkat igazítani, ezzel nem elfeledve a régi oktatási módszereket, hanem azt kiegészítve, a siker érdekében a modern technika adta lehetőségeket maximálisan ki kell használnunk. Kutatásunk létjogosultságát mi sem bizonyítja jobban, minthogy más felsőoktatási intézményben is keresik a hatékony pénzügyi ismeretátadás oktatási formáit és módszereit.

Kulcsszavak: *pénzügyi ismeretek, empirikus, oktatás, oktatási módszerek*

ABSTRACT

In our paper we wish to highlight whether there is a need to modify the teaching methodology used for teaching the discipline of finance basics and, if so, in what direction it is practical to start. Our objective is not to criticize the education system, but to enhance the complex way of thinking on the part of the students. We, the instructors in higher education, need to adapt our teaching techniques to this ever-changing, challenging situation while not forgetting the traditional teaching methods, but complementing them. We must make the most of the opportunities offered by modern technology for success. Nothing justifies the timeliness of our research more than the search for other forms and methods of effective financial knowledge transfer at other higher education institutions.

Key words: *financial knowledge, empirical, teaching, teaching methods*

INTRODUCTION

In our study we sought to answer the question of what educational methods the respondents used to acquire financial knowledge during their studies and what they think of the effectiveness of each method. Our main hypothesis is that groups of students can be distinguished on the basis of the learning methods and they can achieve a high level of knowledge of the desired competences by applying different learning methods. It is also clear from the analysed literature that not only did we start the study of teaching finance basics but also we can read statements from many excel-

lent specialists. Nowadays there are no countries where no steps have been taken to improve or expand their financial literacy, but most of these steps have been largely delayed. Several organizations deal with the assessment of financial literacy at national and international level (Csiszárík-Kocsir-Garai-Fodor 2018).

LITERATURE REVIEW

JEL code: A23

In their study, Luksander et al. (2014) conclude that young people have different financial

knowledge. For instance, men who are older and have higher incomes have higher financial literacy similarly to young people who have a smaller share of their income from family funds, that is, they are financially more independent from their family. Their important remark is that financial and business studies in higher education have had a positive impact on young people's financial literacy while teaching the same subject at secondary schools has not affected the level of their financial literacy (Luksander et al. 2014).

Hegedűsné et al. (2017) and Hegedűs (2017) carried out surveys with secondary school students. They concluded that the financial knowledge acquired did not affect the level of financial literacy. While surveying students in higher education, Németh (2015) made a surprising statement similarly to Luksander et al. (2014): the level of financial literacy varied depending on all demographic and other sociological factors, except the fact whether the respondents studied finance basics in the secondary school or not (Németh, 2015).

According to the article by Horváthné Kökény – Széles (2014) one must be taught how to deal with and think about money at a young age. In our opinion, which has also been proved by our questionnaire conducted on a broad basis, the practical education of finance should be introduced even to primary schools, something which both households and society desperately need (Horváthné Kökény – Széles, 2014).

We agree with Horváthné Kökény – Horváth – Széles (2013) by echoing them to highlight that in most cases it is financial logical basics that are missing although financial expressions and processes cannot be avoided by the majority of the adult population (Horváthné Kökény – Horváth – Széles, 2013).

All in all, we entirely agree with Garman – Forgue's (2006) creed according to which financial behaviour is an important determinant of financial well-being.

1. Material and methods

Our examination is based on our teaching experience of nearly 20 years during which several subjects were taught at different courses by means of various methods.

Material

For our research we used a questionnaire covering the period between January and July 2019. The survey was completed by using an electronic questionnaire. The questionnaire was completed by our acquaintances using the snowball method, preferring those who were studying finance or had previously studied it. The number of questionnaires completed and actually evaluated was 150.

Method

We used statistical methods to analyse the issues we examined. We considered it important to test our assumptions by carefully analysing primary data. In addition to general descriptive statistics, we also performed single- and multivariate analyses. During our questionnaire research, we created a complex database that included both categorical and metric data. As a result, different methodologies were used for different data. The relationship between the categorical variables was tested by Pearson's Chi-square (χ^2) test, and the strength of the existing relationships was investigated by the Cramer association coefficient. We also employed factor and cluster analysis to investigate the various interdependencies. If the interdependence relationship is directed towards variables, then it is advisable to use factor analysis. Otherwise, if it is directed to cases, then cluster analysis should be used in the analysis. In the results described in the following chapters, we will discuss possible methodological details (Sajtos–Mitev 2007; Domán–Taralik 2017).

2. Results

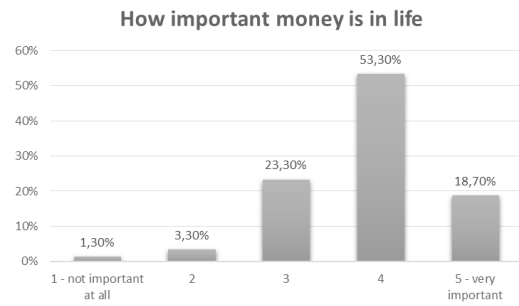
The objective of the paper is to analyze how respondents evaluate the teaching methods

used in their studies in relation to financial literacy. Of course, in addition to the analysis of descriptive statistics, we also aim to determine the different preferences and attitudes of the respondents from their responses. We have all been involved in financial knowledge transfer for decades both in adult education and higher education. The success of our direct work would be facilitated by the survey and its results if we found out what characteristics those have who think acquiring financial knowledge is important and useful. The questionnaire was completed by 150 respondents between January and July 2019.

EVALUATION OF DESCRIPTIVE STATISTICS

In the first round, 150 respondents rated our criteria on a scale of 1 to 5. These factors initially focused on general, later on professional aspects. Eighty three percent of the respondents considered their family to be very important in their lives, similarly to friends, but 34% had already marked the very important category. The importance of the role of money was extremely important for 19%, with 53% believing that "that is not all", but 23% of the respondents attribute moderate importance to having money. The role of health was also very important for the respondents, with about 81% giving significant marks for this aspect. The perception of the role of social status was typical for those who voted with medium and good marks. Eleven percent of the respondents indicated that it is extremely important for them, and for only 2 persons it is irrelevant what their social opinion is and how well they can meet environmental expectations. For 71% of the respondents, careers are important, which also correlates with social perception. By means of these questions our goal was to get a picture of what really matters to the respondent. The following figure illustrates respondents' preferences.

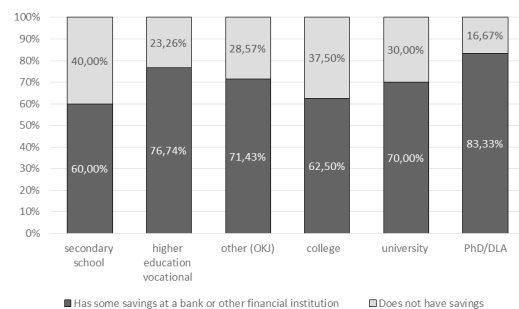
Figure 1. Respondents' preferences



Source: authors' editing based on their survey

Further evaluation of the responses was directed at the use of financial services. Sixty-eight percent of the respondents said they had savings, with 48 not having such a service. Respondents were considerate with loans, as in the case of 61%, 92 people have no credit; 58 said they had a loan at the time of the answer. It can be said that the highest level of education does not show a statistical relationship with the existence of savings. The significance level of the χ^2 test that examines the strength of the relationship was 54.4%, and since it was well above the 5% generally accepted in social sciences, it can be stated that the educational level of the population did not influence the existence of savings.

Figure 2. Savings related to education and qualification

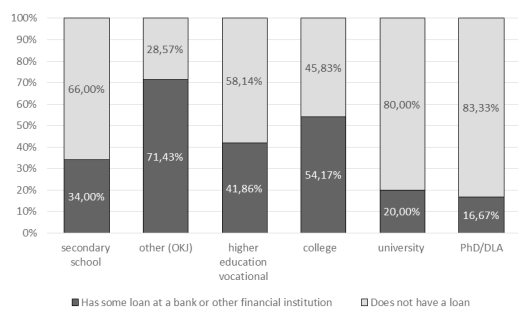


Source: authors' editing based on their survey

We already have more interesting results regarding the existence of loans. In the case of the examined sample, the significance level

of the χ^2 test was 6.5% and the Cramer score was 26.3% between the highest educational level and the existence of loans, respectively. It is true that the 5% margin of error is generally accepted, but if we also accept 10% reliability from the methodology, we can see that education and existing credit are correlated. The figure below shows that those with higher education in the sample under study borrow less.

Figure 3. Loans related to education and qualification



Source: authors' editing based on their survey

ASSESSMENT OF TEACHING FINANCIAL BASICS

The next area surveyed was when to start learning finance, how to learn the way to deal with money, according to respondents. To answer this question, we first tested the idea of introducing kindergarten "education". According to 32% of respondents, this issue is not at all important at preschool age, while only 18 people thought it would be important to know how to manage money at a young age, even outside the family environment. Twenty nine percent of respondents consider it important to familiarize children with finance when they go to the senior section of the secondary school, with most respondents (65) considering it to be of medium importance. At this age, parents make their own school payments in most cases, and even avoiding the school buffet is recommended. At 10-11, a task accompanied by a small

amount of money can be solved, probably due to the fact that more people consider financial matters important at the junior section than at the nursery school.

Seventy percent of the respondents believe that the issue of finances at the senior section would be sufficient if they were to be discussed, but that at the secondary level 92% would be very concerned. The 'get started with finance as soon as possible' view is an unsupported initiative from the respondents' point of view. The secondary school is seen as the appropriate forum to deal with this issue, but it should be noted that even if we think of our lives, we did not just deal with money at the age of 15.

In his paper, Okos (2018) concluded that although there are several opportunities to study the process of organising finances in childhood, money management, together with its basic concepts and frequent tasks, they become routine-like much later, in our adult years or maybe later.

We agree with Okos's (2018) statement that developing financial habits is too late in adulthood. In addition, we have to note that it is never too late to study and gain proficiency. According to Filius (2014) children are not taught by their parents either how to manage everyday finances or how to interpret financial terms. In the article it is further examined that even the majority of parents are lagging much behind in these areas mentioned above. We also think it is a real problem that the adults from whom their children need to learn how to deal with finances often make the wrong decisions themselves. This can only be prevented by conscious school preparation, which, we believe should start as early as possible. In their paper, Machánné Tatár – Kapásné Pleskó (2012) present best practices, among others, why it is important to improve financial and economic culture at a very young age. Among others, they mentioned that financial behaviour patterns are estab-

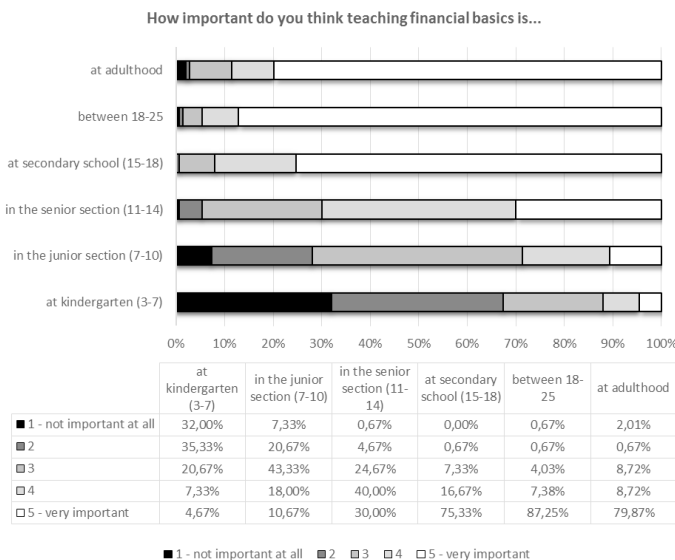
lished between the ages of 5 and 14 through exchanges. Our current research also highlights this very important fact, emphasized by the authors above, that it is not possible to start and develop the financial and economic knowledge early enough. Respondents consider the age between 18 and 25 to be the most appropriate age when it would be advisable for someone to deal with financial education in more detail.

involved before. About 74 of the respondents took part in courses, and 140 studied finance in higher education.

KNOWLEDGE OF TEACHING METHODS AND ITS EVALUATION

Ninety-five percent of the respondents obtained theoretical knowledge during their studies of finance, but in addition, the use of

Figure 4. The optimal start of teaching financial basics



Source: authors' own editing based on their survey

Respondents reported that 97% of them had studied finance and continued to consider it important to keep their knowledge up-to-date in adulthood. One hundred and nineteen people said that it would be very important to acquire financial education in their adult years while 95% of respondents did not study financial/business basics at elementary school, which means that they may not feel the need for it in the forthcoming generations. At secondary school, 39% of the respondents studied finance, of which 36% at vocational secondary schools. The interesting point is that secondary school education would be the best though the respondents had not been

calculating tasks on the board was of similar importance. Situational roleplay games, playful problem solving occurred for only 23% of the respondents. The presentation and application of case studies has already been referred to as a well-known method among respondents, but 35% have still not encountered such an educational method. Fifty-four percent of the respondents did not come across problem solving in groups although effective teamwork is an increasingly important requirement on the labour market. In his study, Dóra (2015) writes about teamwork in which he emphasizes the importance of using this method in education as students learn the

importance of working with the person they choose (voluntarily or by force), and also that efficiency and success are strongly influenced by the atmosphere in the group. Because of choosing the wrong person, group cohesion cannot be maximized, which will also be reflected in the work done or not.

We recognize the importance of teamwork, and this type of method is inevitable in most workplaces. If students learn to select the members of their group right at school (if they have the opportunity), they will be able to perform more effectively at work. We know that not all subjects are suitable for teamwork, and we do not strive to do just that, but we strongly recommend using it to gain experience (Hezam et al. 2017).

The presentation of individual solutions is also not one of the most popular forms of education although 61% of the respondents have not yet come across this form but it is often necessary to make presentations at the workplace. This is very important as career is essential for the respondents together with social judgment, good leadership and fluent presentation. While studying at school, it would be extremely important to invite and employ an external expert. However, 55% of respondents have met external invited professionals during their studies. Assignment was a well-known teaching method for respondents, but there were still 20% who did not receive this type of knowledge transfer method. Oral assessment is a well-known form of knowledge transfer for 77% of respondents although it is not typical during the courses apart from the oral examinations. Oral assessment shows an almost complete exclusion as 96% of the respondents report their knowledge in writing, especially in tests as 116 mentioned them as being of particular importance. In the field of finance, combining with computer skills is gaining more popularity. However, 81 people did not encounter this method during their

training. Power point presentations express the lecturers' preparedness or a kind of educational fashion, with 81% of respondents having experienced this method. Learning has been greatly facilitated by the use of word documents, but spreadsheets are also well known, as is the use of the Internet as a well-known teaching method, providing students with direct access to databases and forms. Unfortunately, 83% of the respondents did not take part in an external professional practice – the so-called field practice. The teaching of finance is further shadowed by the fact that students have not even met demonstrative tools in class, for example banknotes. The interactive whiteboard is rather a well-known educational device at secondary school. Patrik Tamás (2018) emphasizes the importance of oral assessment as a method that requires continuous engagement with the material and, most importantly, children can practise speaking to different people.

According to the author, oral assessment is rarely used in educational systems that are described as modern (such as in Austria), saying that children are under constant stress. Instead of verbal assessment, students should report on their knowledge in writing, which has the advantage of reflecting on the questions before answering – the advantage being that the focus is not so much on lexical knowledge but on practical knowledge. In addition, evaluation of the written essay is less subjective, as many students reported that they had received lower marks because they did not seem nice for the teacher.

The author points out another fact that we consider very important: lack of creativity and practical application of what has been learned.

We also agree with the author that oral assessment is very useful – we try to apply it in our daily work because of its many benefits.

Written assessment is much more accurate, it can be evaluated with scores, but we can create a system for ourselves that can exclude our subjective opinion as much as possible.

The variety of methods we try to incorporate into our daily teaching practice, including role-play, teamwork, field practice, and, last but not least, practical instruction in theory, facilitates the practical application of creativity and knowledge.

ASSESSING THE EFFECTIVENESS OF EDUCATIONAL TOOLS

Teaching theoretical knowledge is considered as an efficient solution by 69% of the respondents, 44 consider it less effective and 127 consider it to be very important in financial matters. Only 22 think that calculations are less important in finance. Few people have ever come across role-playing, but 79 people find it a good solution anyway, and about 111 people consider it as a good opportunity to know finances in more detail. Teamwork would also be an expected teaching method. Ninety-four people said they regard it as an effective learning method. In education, students make presentations whose effectiveness is rated by most respondents (60%) as moderate or worse. Inviting an external professional is an effective solution, with 82% of students seeking or liking to meet an external professional in financial education. The role of assignments and homework is not diminishing; 70% of respondents consider it an effective method of education. Despite the fact that few have met oral examinations during their studies, this is considered to be an important method. Fifty-two percent of the respondents had a positive opinion about this method, but written examination proves to be more effective with 74%. However, the use of the tests was not very well received by the respondents; they are considered to be of medium or good efficiency, as are the opinions about computing and various

word documents. Forty-seven per cent of the respondents consider the use of the Internet to be a fully effective method of teaching and learning, and participation in field exercises is similar. Lessons would be more appreciated if more illustrative tools were used. The interactive whiteboard has the smallest success in education, and it is obvious that a large part of the respondents has not met this solution yet.

UTILIZATION OF FINANCIAL KNOWLEDGE

Respondents deliberately pursued financial studies, with 92% of respondents saying that they will need this knowledge in the future in their work. The same holds true for their private life, which is a double benefit for respondents. Twenty-five percent of the respondents read financial literature and financial news only in Hungarian, so the majority follow financial events in foreign languages. Respondents clearly expect the technical terms to be known in another language during the lesson.

EVALUATION OF REQUIREMENTS FOR TRAINERS

Respondents have a justified and fundamental expectation that the instructor has up-to-date knowledge, is able to communicate fluently, has a clear task specification and solution process. It is very important for the respondents (72%) that they solve the problem not only once in the class, but also, if possible, practise problem solution through several sample tasks. Only 15 of the respondents think that an instructor should be lenient, with 48 showing that it would be good but more important is a fair and consistent assessment for about 93%. Based on their experience so far, respondents have met up-to-date instructors, mostly with good communication skills. In the case of 31 respondents there was a lack of clarity about the concrete task and the solution, which would be extremely important in finance, as knowledge is not limited to the theoretical

part. In 39% repeated assignments were typical, in 80% the tasks were accurate, and in 91% the instructor was prepared for the given field of knowledge. Seventy-three percent of the respondents were women, the average age was 36 years, and the youngest was 19 while the oldest respondents were 79 years old.

The age-specificity of the groups formed during the cluster analysis is shown in the figure below. 66.7% of the respondents had qualification, including vocational education and vocational higher education while 29% had a university/college degree. Eighty-eight percent of the respondents were engaged in studies at the time of the survey. Of the respondents, 42 (28%) of the respondents live in villages while the rest in towns or cities. We examined whether there was a specific correlation between the place of residence and group membership. The significance level of the χ^2 test was 47.7%, so there is no statistical correlation between the respondents' place of residence and grouping results. The significance level of the χ^2 test was 47.7%, so there is no statistical correlation between the respondent's place of residence and grouping results. The table below shows the number of members of the various groups by residence.

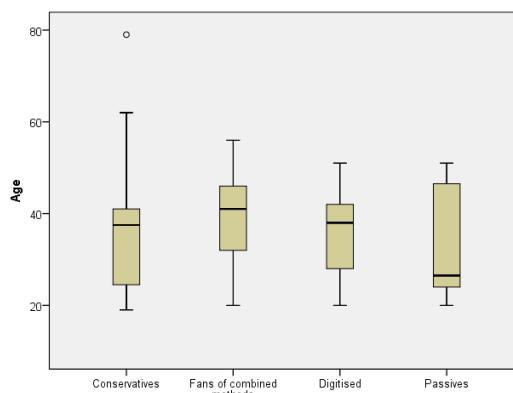
Table 1. Classification by number of respondents in groups by place of residence (people)

Groups	Village	Town	County seat	Budapest	Total
Conservatives	14	28	5	5	52
Fans of combined methods	6	17	0	5	28
Digitised	12	20	6	4	42
Passives	4	6	2	4	16
Total	36	71	13	18	138

Source: authors' own editing based on their survey

We examined whether age influenced the formation of a group, but there was no verifiable correlation. The figure below shows the age characteristics of each group. A similar conclusion was reached with regard to per capita income.

Figure 5. Age characteristics of the examined groups



Source: authors' own editing based on their survey

The central hypothesis of our research was whether respondents could be segmented based on the educational methods they defined. Among others, the aspects examined were the following: awareness and acceptance of the methods of evaluation, e.g. written examinations, oral examinations, home assignments, application of test tasks, use of the Internet in education and assessment. Based on the answers, four clusters could be distinguished. However, we had prepared factors before the clusters.

1. The components of the third factor: the decisive role in it is that problem solving should take place together with roleplay, processing case studies and student presentations that also play a decisive role. Knowledge can be greatly enhanced by means of home assignment, and it is important for respondents to have the instructor conduct the tasks on the board in a visual way.
2. The components of the second factor: the use of teaching aids, workbooks and internet surfaces which have gained ground during the application process, also contribute to the efficiency of education.
3. The components of the third factor: the decisive role in it is that problem solving should take place together while role-

play, processing case studies and student presentations also play a decisive role.

- The components of the fourth factor: external experts, highlighting the role of field practice, using visual aids, displaying an interactive whiteboard are stressed.

Two of the four factors were selected, which made it possible to define clusters. The first factor was called "*classical teaching methods*" and the other factor was defined as "*modern IT tools*". Alongside these two factors, four distinct groups emerged, and for the "blue" termed as **Conservatives** the traditional methods of education and assessment are necessary for efficient learning. The "purple" or the **Passive** ones think one can integrate anything into education, but we are likely to meet complete disinterest. In the case of "greens", that is to say "**Proponents of combined methods**", the use of both traditional and modern tools is considered to be effective in education and assessment. The "yellow ones" are clearly voting for the use of modern IT tools for assessment and knowledge transfer; that is why they have been named **Digitised**.

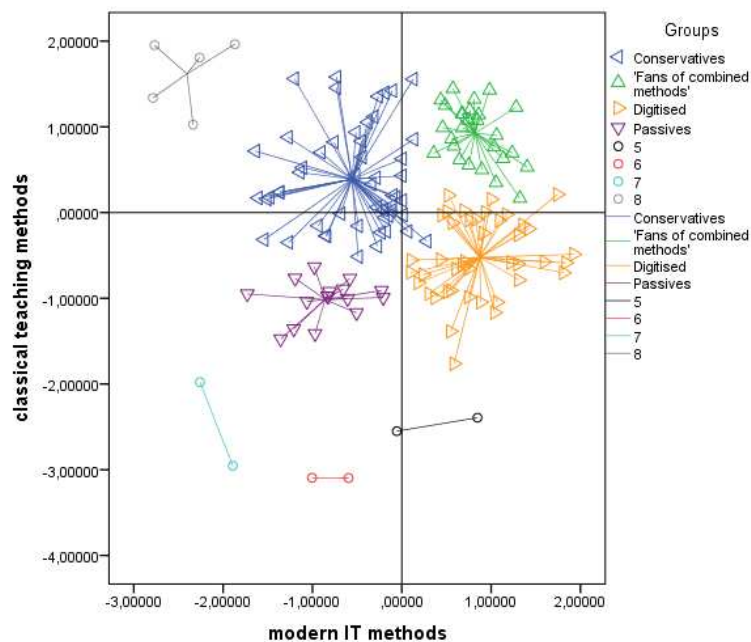
The location of each cluster is shown by the following figure.

What are the characteristics of each cluster? The following part describes the characteristics of each group.

Conservative: 38% of the respondents belong to this group, basically those who are in favour of classical, traditional teaching methods. For the members of the group career is important, and, in their view, they will surely use the economic knowledge they have learned in their work and private lives. The members of the group show interest in economic news and are characterized by restraint. They like studying by means of traditional methods, do not expect miracles from methodological innovations, believe in practice and active learning, and also need to take part in class.

Passive: 12% of the respondents make up this group. They do not consider the accomplishment of their careers important at all. Their answers reveal that financial knowledge is used by them only in their work and not in

Figure 6. The cluster group of the respondents



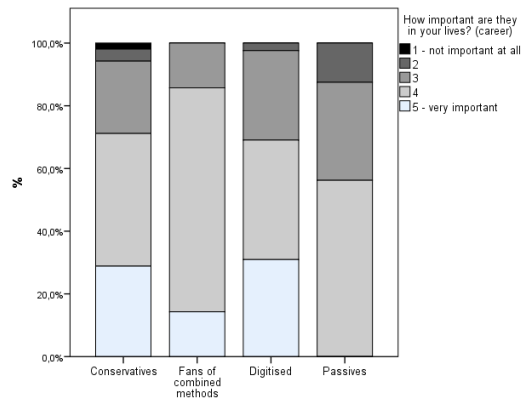
Source: authors' own editing based on their survey

their private life. They are the least interested in business news either in Hungarian or in another language and they do not consider the theoretical part of the material essential at all. It is difficult to find a method and material that would keep their attention and interest.

Proponents of combined methods: they attach little importance to career building, and this group has the highest response rate to use their financial and economic knowledge both in their work and in their private lives. There is considerable interest in business news, even in foreign languages, which obviously contributes to professional development. It is in this group that the theoretical foundation for knowledge is most important, not a waste of time. 20% of the respondents belong to this group. Considering teaching methods, the picture is clear, namely, in addition to traditional front-lectures, digital group work on practical topics can be added and there is a demand for them.

Digitised: they are the ones who attach the greatest importance to building their careers, and they do not think that they will benefit from the knowledge they have learned in their private lives when compared to a group of conservatives and proponents of combined methods. They are less interested in business news than the previous two groups, but more interested than Passives. The theoretical part of the material is not an important aspect of learning, but they do learn it. The group is made up of 30% of the respondents. For the conservative group, careers are important, just as for this “digitised” group while it does not matter as much for those who like combined methods, and the passive group does not consider it important at all. The figure below illustrates this.

Figure 7. Differentiating the examined clusters on the basis of the importance of career



Source: authors' own editing based on their survey

SUMMARY

The basic hypothesis of our research has been proved, that is, according to different criteria, the financially literate students can be classified into different groups. In our survey of finance basics, we examined the methods the respondents encountered while acquiring financial knowledge and, in parallel, the method that the same respondents would consider appropriate. Research shows that finance is a major area of education that needs to be dealt with as much as possible in adulthood. Students have high demands on the teachers who meet these requirements. At the same time, it appears that the large amount of material does not allow for a better understanding of the tasks, and the pressure of making progress in education does not match by the need for deeper learning that students expect. The traditional theory and practical problem solving processes do not necessarily have to be forgotten or replaced, however, it is extremely important to keep up with the modern requirements, apply new methods in daily use such as independent problem solving and its presentation, processing of case studies in groups, inviting external experts, incorporating field exer-

cises during the semester. Education should be even more in line with corporate practice by preparing students for independent problem solving and teamwork. More than 50% of the respondents consider the need to use other educational methodological tools in addition to traditional frontal education, but do not consider it an exclusive solution.

There is still a need for a common solution of the task with the assistance of the instructor for practicing, but the audience would like to see how this will be useful in practice. The challenge is how instructors can meet this need through continuous self-education, and how they can keep pace with the quality and content of education.

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