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**Possibilities of interpreting the effectiveness of VET and grammar school
teachers teaching general subjects
Theses of doctoral (PhD) dissertation**

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1. Introduction

Although the definition of pedagogical effectiveness can be seen as an area that is increasingly being explored, its nature is still not clearly defined. In order to talk about efficiency and effective work, it is important to know the most typical expectations for all careers. The teaching profession cannot be an exception. It is well-known that the teacher tries to meet the expectations of parents, students, the labor market, the legal environment, and the management of institutions, but it is fact that the 'internal evaluation system' (Zeichner - Liston, 1996; Falus, 2003; 2011) developed by views and practical knowledge processes and selects stimuli from these actors.

However, how a given pedagogue selects the ones he or she reflects on from the impulses that affect him or her depends on what he or she means by success, what expectations he or she has towards himself or herself, what factors he or she feels as a barrier to success, what challenges he or she sees.

However, expectations and challenges depend on the type of institution and, of course, can also be influenced by the nature of the subject being taught.

Our dissertation is intended to explore the views of pedagogues teaching vocational school and grammar school general subjects on effective work and the possible role expectations associated with them, as well as the main difficulties they perceive. It also outlines the main criteria and expectations for teacher effectiveness from a student perspective. It does all this in an institution-dependent way.

2. Justification for the choice of the topic

The given research topic was formulated in the author as a teacher of general knowledge (communication-Hungarian, social knowledge, communication) and professional (pedagogy) subjects working in vocational education as a result of student and collegial reflections.

Although our colleagues who taught both professional and general knowledge subjects considered student lack of motivation as 'evidence', the former believed that if a student is committed, desires to practice the given profession, he or she can be persuaded to work.

The latter voiced that students should not be expected to 'study general education subjects enthusiastically' if they did not show 'sufficient interest' in vocational subjects either. Our experience as a teacher has also shown that those with whom students are respectful are usually prepared for their lessons, while those who are less valued by their

teacher are reluctant to study the subject, and are typically contemptuous. Sometimes on the grounds that the expectations are too high for them, other times on the grounds that 'that subject is incidental, the teacher just doesn't fail', while young people strive for the best possible grades from other subjects - in the case of scholarship trainings.

It was also not uncommon for students we know to say that they do not understand why it is necessary to study general subjects, even in vocational school, if they want to be welders, shop assistants or social workers. It has also been said that a teacher is not liked not only because they do not like the subject they think is 'completely unnecessary' but also because these teachers 'cannot accept where their place is' and, 'if they want to teach hard-working children, they should go to an elite grammar school'.

In this way, we drew our attention to the negative expectations of vocational school students towards the teacher and themselves and the different possibilities of interpreting 'student performance' as an effectiveness criterion (See Fűzi, 2007, 2012), as well as the issues surrounding the teacher-subject relationship.

3. Purpose of the Research

1. To examine how effectiveness is defined by vocational school and grammar school pedagogues teaching general education subjects. Are there any characteristic differences and, if so, which characteristics are they.

2. On the basis of the answers received, to examine the expectations of students studying in vocational training and grammar school from the point of view of pedagogical effectiveness. We sought to shed light on whether the expectations of teachers and students regarding effective pedagogical work converge. We also examine how students interpret the possible difficulties and challenges raised by teachers.

4. Genre and Characteristics of the research

Our research was developed in the spirit of the model of sequential planning, including the model of interpretive sequential planning. The steps were as follows:

1. quantitative data collection and analysis
2. based on quantitative data, using them qualitative analysis (Sántha, 2015, 62)

In terms of its genre, the sub-method appears embedded in the main method, ie embedded in or in addition to the main method. (Sántha, 2015, 65)

In the present study, qualitative elements embedded in the main quantitative method (metaphor research, open-ended questions), followed by focus group students based on quantitative results and semi-structured individual teacher interview studies were also included.

5. Presentation of the structure and relationship of the research questions and hypotheses

At the beginning of our research, we formulated hypotheses for our rudimentary research questions, so our aim was to examine them - to prove or reject them. We saw this to be feasible through a quantitative measurement of two phases among pedagogues and among students. This was complemented by a qualitative (individual) interview with teachers and a focus group interview with students. All of these were complemented by two individual student interviews, which highlighted the background of the main problem, the unfavorable student well-being, and the most characteristic success criterion, learning motivation.

In the course of our study, the correlations of certain manifestations of learning motivation played a major role grades.

Then, considering our results in the synthesis of those outlined in the literature review, identifying 'learning motivation' as a student performance criterion, we saw the exploration of its correlations related to subject preference as a necessary complement to our study. Our aim was also to explore which factors are most dominant in the development of the subject's popularity and learning motivation (as a subjective student performance) and what role the teacher's personality, readiness, activity and role implementation play in it. This is because we have found that teachers 'excuse' themselves from the problem of 'student unmotivation' and blame almost exclusively students and sometimes their family background for it.

However, the results of the student surveys showed that the students' lack of motivation and low willingness to prepare are due to the shortcomings of the subject, and the popularity of the subject is usually related to the degree of fulfillment of expectations perceived by the students. We therefore sought to understand and identify the deeper background of all this, in order to explore the factors that can motivate them to learn and which ones reduce the willingness to prepare, and that if pedagogues meet the expectations expressed by students, it is a guarantee. for them to make their students more motivated to study their subjects.

Thus, while the aim of formulating our initial research questions and the hypotheses given to them is primarily the individual success criteria (popularity among students; certain

forms of 'subjective student performance' such as further learning tendencies, support for constructive life management, dropout pedagogical expectations and their comparison with the students' perceptions and expectations of their importance, until then the questions formulated as a result of the results and the hypotheses based on them were less broad, general, as the results obtained were based on knowledge, they tried to explore the connections, focusing on the study of the sample of students and the question of the development of learning motivation, thus identifying played a role of a teacher and the subject.

Thus, the initial hypotheses identified the interpretation of teacher effectiveness in teaching general education subjects, the teacher and student expectations for effective general knowledge education, and their conditions, but the hypotheses developed during the research are clearly related to the subject's popularity.

The 'new' research questions developed in this way were presented continuously, following the previously formulated questions, as well as the confirmation and rejection of the relevant hypotheses as doctoral theses. Our initial research questions were numbered from 1 to 5, while the questions formulated as a result of the results were given a number from 6 to 9. Accordingly, they are included in the same number among the theses.

6. Research questions

1. What tendencies prevail in the views of teachers of general education subjects in grammar and vocational education regarding the interpretation of effectiveness?
2. Is there a difference in the perception of teacher preference and subject's liking as a criterion for effectiveness in the views of teachers working in grammar and vocational education?
3. To what extent do teachers in grammar school and vocational education consider the development of the classroom atmosphere to be an important criterion for effectiveness? Is there a difference?
4. Does the professional cooperation of pedagogues play a role as a possible tool to ensure effectiveness and, if so, to what extent do pedagogues? Is there a difference in the views of teachers working in grammar school and vocational training in this regard?
5. Do students attach as important a role to teachers to the teacher-student relationship?

6. Do students prefer to prepare for lessons in their favorite subjects?
7. Do students feel more comfortable in their favorite subject lessons?
8. Do students perceive the characteristic expectations to be more strongly fulfilled in the case of the preferred subjects than in the case of the less popular subjects?
9. Is the lack of striving for good grades typically a feature of unpopular subjects?

7. Stages, methods, samples, main areas of the research

In the case of pedagogues, our study consisted of a quantitative and an individual interview with a qualitative phase. In the case of students, a quantitative as well as a controlling, comprehensive measurement phase, which more broadly identifies the correlations between subject popularity and learning motivation and student expectations, was implemented. Qualitative elements (open question, metaphor analysis) were included in the quantitative measurement conducted among the teachers. Based on the obtained results, we started the individual semi-structured interviews of the teachers, as well as the focus group studies of the students, the results of which were supplemented by individual interviews among the students who felt unfavorable and then returned. In the case of teachers working in vocational training, $N = 180$ took part in the quantitative measurement, and in the case of grammar school teachers, $N = 150$, the survey was national, covering all counties, but not representative.

The subjects of the first student quantitative examination phase included 124 grammar school students and the same number of students in vocational training. (Of which $N = 72$ vocational high school students and $N = 52$ lower vocational school students). $N = 103$ grammar school students and $N = 118$ students in vocational education (of which $N = 72$ vocational high school students and $N = 46$ lower vocational school students) were among the subjects of the comprehensive study, which checked the results of the correlations between subject preferences.

We interviewed two vocational training institutions in Borsod-Abaúj-Zemplén County, with a total of $N = 6$ teachers and 6 groups of students. At the first site, we also had the opportunity to conduct two in-depth interviews with individual students. $N=2$ teacher interviews were conducted in two Borsod-Abaúj-Zemplén County grammar schools, and also in $N = 2$ pedagogue interviews in a Budapest grammar school. Only one institution, a Borsod-Abaúj-Zemplén County grammar school, agreed to the student examination. Here we had the

opportunity to conduct a focus group interview with two groups of students. The grammar schools in Budapest refused to study the students. Being a view research, edited into the quantitative measurement tool for teachers, a metaphor analysis task was included as part of it as a qualitative, yet large-sample method.

Metaphor research is a new set of methods - its introduction in Hungary is named after Vámos (2003) - which can be used for exploration of views. The metaphor is distinguished from the analogy by a deeper meaning and complexity, which is an open comparison ('I walked like a cloud') and its complexity from the metonymy, as the latter is based on only one part. ('The school went on a trip' = students and their teachers.) (Vámos, 2003, 11)

The results of the quantitative measurement alone prove to be small and do not shed enough light on the individual cases and specifics, so we considered the implementation of a qualitative measurement phase to be essential. Since we wanted to analyze the examined areas of the written questioning tool in more depth, we still sought the atmosphere of informal conversation, so we chose the method of semi-structured interview, as it is the we can remain open to the respondent's answers and thoughts, and accordingly, we can conduct the interview within the given broad framework. (Sántha, 2009)

We chose the in-depth interview as a method that complements the results and examines its personal, unique aspects because it is the method that provides an opportunity to explore problems in the intimate sphere (Sántha, 2009), which may shed light on the expectations of pedagogues, on the extent to which students reported that this method was the most appropriate in addressing the problems. Its use can only be ideal in cases where we find interviewees 'who are able to reflect on themselves, their group, or their culture and are motivated enough to bear the intensity of the in-depth interview well.' (Szokolszky, 2004) In-depth interviews are usually rarely used as a stand-alone data collection procedure. (Johnson, 2002, cited in Szokolszky, 2004). This genre, according to Seidman, can be seen as a kind of storytelling, essentially a process of interpretation. When people tell stories, they highlight details from the flow of consciousness of their experiences. Storytelling becomes an interpretation in such a way that the interviewees reflect on their own experiences and perceptions. As a result of highlighting the essential elements of the experiences, reflecting on them, arranging them and becoming aware of them, storytelling becomes an interpretation. The purpose of the interview is never to get questions answered to test hypotheses, nor does it focus on 'evaluation in the traditional sense,' but on interest in others. It is meant to help us understand the experiences of others and how they are interpreted. (Seidman, 2002, 17-20)

While we planned individual interviews with teachers to examine and get to know personal expectations, we planned to conduct a focus group interview among students, with the participation of groups of 4-10 students. Focus group studies usually take 4-6 people, but Sántha (2009) and Szokolszky (2004) also mention a number of 6-12 people. The basic difference between individual and focus group interviews is that in the focus group the researcher explores the thoughts and feelings of the participants in relation to the topic to be examined, while during the individual interview he focuses on exploring the thoughts and feelings of the examined person. (Szokolszky, 2004; Sántha, 2009)

In the case of students - especially among lower vocational school students - we were able to get most of the information with this method, as there were some who were reluctant to answer in writing and more.

Their teachers also preferred to agree to this type of study, so we were more open to getting to know the opinions and expectations of lower vocational school students. According to Szokolszky (2004), 'the advantage of the focus group is that the familiar and natural environment of the group discussion encourages the spontaneity and honesty of the manifestations. It is common experience that a group interview produces richer material in the same amount of time as an individual interview.' She sees the disadvantage of the focus group in that it is difficult to translate the conversation into text. (Szokolszky, 2004) This is even more true in the case of groups of students, due to the institutional 'basic noise', as it is not possible to provide a quiet, noise-free background in a school. In our case, this also made it significantly more difficult to record individual interviews with teachers and students. The in-depth interviews consisted of only one question. As both were special cases and those involved were aware that we wanted to talk to them about it, we did not make a series of questions about it, the thread of the conversation was directed by the interviewee.)

The main areas of our research can be characterized as follows:

- Definition of teacher effectiveness from the perspective of teachers

- According to teachers, the 'pledge' of effective education - Factors that make class difficult, according to teachers

- Factors that make everyday work difficult, according to teachers

- Perception of personal preference

- Perception of the subject's popularity

- Students' expectations for effective general education
- Characteristics of ineffective general education according to students (based on pre-research and teacher findings, highlighting the issue of student motivation, interpreting motivational education as effective education).
- The correlations of certain manifestations of learning motivation (by this we mean the willingness to prepare, the pursuit of a good mark)

8. Quality parameters of our research

We paid special attention to reliability, objectivity and validity. In the case of validity, we wanted to meet the requirements of substantive, conceptual and match-based validity. To ensure objectivity, we placed special emphasis on several factors. An important criterion is that we used mostly closed questions in our quantitative measurement tools. In the circumstances of the measurement, objectivity was ensured by the choice between anonymity, the online and paper-based format of the measuring instrument (teachers mostly chose online, students preferred paper-based completion), and the questionnaire was structured for transparency and comprehensibility. In the case of the qualitative stages, external reliability was judged to be feasible primarily by its theoretical soundness, careful presentation and presentation of sampling and comprehensive conception of the methodology. The reliability of the quantitative measurements was calculated using the Cronbach's alpha coefficient. In the case of the qualitative stage and the metaphor analysis, the internal reliability was ensured by intracoding. The reliability index was calculated using the formula of Dafinoiu and Lungu, (2003, quoting Sántha, 2015. 77) ($km = 2n / i + j$). (n = number of units where the coding is the same; i = number of codes received for the first time; j = number of codes received for the second time; km = reliability index of the coding) This means that we decode the same texts twice a few days apart and then formula to check their reliability.

Preliminary research phases, which were carried out from the 2nd half of the 2015/2016 academic year to the 1st half of the 2017-2018 academic year, also contributed to ensuring the reliability of our self-developed measuring instruments.

Our goal was to identify the effectiveness components and to establish their formulation as an expectation, in this context to clarify the measurement tools, research questions, hypotheses, and to establish the concept of the final research. During the quantitative phases of our pre-research - taking into account the number of teachers and

students in the public education information system, striving to represent all counties, we contacted heads of institutions by e-mail and informed them about the objectives of our research, and asked them to . We then agreed on the method, date, details of the inquiry by phone or email and conducted the research in person or online as needed. (October of the 1st semester of the 2016-2017 academic year)

The embedded structure necessitated a special procedure called triangulation, which means the parallel use of different groups of methods, procedures, or techniques or boiling points to reinforce each other, thus ensuring validity. (Szabolcs, 2001) Following Flick, we can distinguish four types of triangulation, triangulation of data, personal, theoretical, and methodological triangulation. (Flick, 2002)

The implementation of the triangulation is illustrated in the following figure. (Figure 1.)

Levels of triangulation	Realization of triangulation
Theoretical triangulation	Incorporating the knowledge of the international and domestic literature related to the topic, using research results in the development of measurement tools, and examining them in a conceptual structure determined as a result of pre-research and teacher-based, later two-stage student measurement
Triangulation of data	<u>Personal triangulation:</u> Both the teacher sample of pre-research and doctoral research quantitative research and the pre-research and doctoral research student sample are independent of each other, just as the sample of students in the two phases of quantitative research does not overlap and the participants in the qualitative phase do not overlap with those in quantitative research.
	<u>Temporal triangulation</u> Each phase of the studies took place at different times, just as the measurements of the quantitative and qualitative phases took place at different times
	<u>Local triangulation:</u> Data collection in different arenas
Methodological triangulation	<u>Between methods:</u> semi-structured interviews, in-depth interviews, online questionnaire, paper-based questionnaire
	<u>Within methods:</u> Within qualitative methods: models queried with MAXQDA 2020 software, metaphor research; open questions Within quantitative methods: Likert-scale and multiple-choice question types, question lists; SPSS 20 software queries

Figure 1. Levels and realization of trinangulation. (own edition)

10. Theses of the research and their justification

H1: The interpretation of teachers' effectiveness is influenced by the nature of the type of institution.

Teachers of general education subjects working in both vocational training and grammar schools consider a teacher who is able to provide a useful, practice-oriented and perceptibly developmental education that is perceptible to students to be effective. The pursuit

of practicality and the need to love lessons typically coincide, however, the popularity of the subject is not included among the main success criteria.

Developing a positive relationship with students is also considered important by pedagogues - and we are thinking primarily of those working in vocational education - who pay little attention to the development of positive student well-being, meaning supporting students or reducing school aggression. Motivation as an expectation appears more strongly in the case of vocational training, however, it is not formulated by pedagogues against themselves, but rather suggests that students becoming motivated is a condition for the success of their work, or its lack makes their pedagogical goals more difficult. Student motivation is considered to be both a pledge and a criterion of their success, as the 'performance' of students depends on it, and the learning motivation and willingness to prepare itself appear as a kind of achievement in their view system.

H1.1: In the system of views of teachers working in vocational education, the expectations related to the support of constructive life management and the reduction of drop-out come to the fore.

Pedagogues clearly see that a positive teacher-student relationship has a role to play in motivating students. This expectation is complemented by the role of supporting the learning of professional subjects in vocational education, however, examining the opinions of both teachers and students, the role of supporting further learning appears here as well, as in the grammar school.

H1.2: In grammar school, teachers' perceptions of effectiveness can be related to measurable performance.

Among teachers working in grammar school, the role expectation to support further learning is dominant, but here, too, the expectation of striving to make students motivated appears, in which the intention to establish a favorable teacher-student relationship plays a key role. There is also support for constructive life management, and the joint foundation of successful adult education with colleagues and parents. This factor seems to be less of a key expectation for teachers working in VET.

H2: Teachers do not assume a correlation between a preference for their own person and their subject.

Our research results have shown that teachers see a close, but not undoubted, correlation between their own preference for their own person and subject. In the case of

teachers working in vocational training, the correlation is $r = 0,444$; $p = 0,000$, among grammar school teachers $r = 0.476$; $p = 0.000$.

H2.1: Teachers assume that they are more preferred by students than the subject they teach.

Teachers estimate their degree of personal preference to be slightly higher among students than their subject in all types of institutions.

In the case of teachers working in vocational education and teaching general subjects, the feeling of respect for the person (average 4.02, median 4.00, mode 4) is more favorable, while that of the subject is less favorable (average 3.4, median 3,000, mode 3). The results of high school teachers are also similar, the perception of personal liking (average 4.13; median 4.00, mode 4) is slightly higher than the average pedagogical perception related to the subject's popularity in this direction is 3.69, median 4, mode 4).

H2.2: Teachers do not consider subject popularity to be an essential success criterion, however, they feel it is important that they are liked by their students. (This is independent of the school type.)

Teachers feel that the popularity of their subject is a more important criterion than their sympathy for themselves, but that students consider their lessons to be a more important criterion than their liking, and that a favorable teacher-student relationship is a prerequisite for a teacher-student relationship.

H3: The development of the classroom atmosphere is considered by teachers in all types of institutions as an important criterion.

Shaping the classroom atmosphere is considered an essential criterion by teachers in all types of institutions. They articulate it as an expectation of themselves, but they feel they have little responsibility for reducing problems related to students' community building deficiencies. A related result is that teachers stated that student feedback is important to them, it is important that students feel comfortable in class, but the expectation of well-being typically coincides with the expectation of lesson activity and level of knowledge. Thus, favorable student well-being, of which there is little assurance, is seen as a condition rather than a goal of work.

Students are usually informed about their pleasant well-being in a 'direct way', relying more on their own perception, perhaps on their 'intuitions', saying they see if they are feeling well (N = 128 out of N = 180 respondents in vocational education, N = 100 out of 150

grammar school teachers). answered as such) or just considered classroom activity as a sign of it. (In the case of grammar school teachers we received N = 107, among teachers working in vocational education we received N = 98 such answers). Only N = 30 of grammar school teachers and N = 31 of those working in vocational education used to ask students to make a kind of naive SWOT analysis about the lessons in cooperation with them.

H3.1: Grammar school teachers strive to create a classroom atmosphere that also aims to build relationships with students.

There is no significant difference in the assessment of the role of atmosphere in the case of teachers teaching in vocational training and grammar school.

H4: The professional cooperation of teachers is considered important by teachers working in both vocational training and grammar school. In this context, it is more common for VET teachers to complain about difficulties than for their grammar school colleagues.

The professional cooperation of teachers is not considered by teachers working in either vocational training or grammar school to be a key success criterion, however, its role is significantly more significant in vocational training. The results of our interview research also showed that it is primarily pedagogues working in vocational education who point out the shortcomings of this as a factor complicating their work. Difficulties in collaboration were usually perceived to be discovered in the negative attitudes of their colleagues towards students, in which the pedagogues involved destroy students' self-esteem.

H5: Students, like pedagogues, see the teacher-student relationship as an important motivating force, but there is no correlation between teacher and subject popularity.

Students consider the teacher-student relationship to be as important as teachers, they also formulate it as an expectation, but this is not the primary expectation among them, but practice-oriented, helping to learn professional subjects (preparing for graduation and further studies in grammar school). substantive implementation of education.

H5.1. Students typically prefer the teacher to the subject, regardless of the type of institution.

Students typically prefer the teacher of the preferred subject the most, while the least popular one is more closely related to the popularity of the subject, the usefulness of the labor market, pleasant atmosphere, interesting tasks, subjects) supportive attitude. Responses to

student dissatisfaction with teacher characteristics are primarily related to attitudes toward less-favored subjects.

This means that if a student does not like a particular subject, he or she is less tolerant of the teacher. This statement is more strongly true for vocational training than for high school. The relationship with the teacher, subordinated to the pleasant atmosphere, appears as its 'element'. It is considered by students primarily as a basic condition for their learning motivation, however, this alone does not guarantee the favorableness of the subject attitude.

H5.2. In the case of students in vocational education, practical reasons can be related to the popularity of the subject. (eg feeling of usefulness in the labor market, teaching professional subjects)

Our research confirmed this sub-hypothesis, according to which practical reasons can be related to the popularity of the subject in the case of students in vocational education. (eg. feeling of usefulness in the labor market, teaching professional subjects)

H5.3. The popularity of the subject in the grammar school is primarily related to the preparatory function for further study.

In addition to the function of preparing for further studies in grammar school, the popularity of the subject is related to the perception of high educational standards and satisfaction with measurable academic performance, but factors such as favorable classroom well-being, perception of a favorable relationship with the teacher and teacher methodological diversity.

H5.4. The value pattern of vocational high school students related to subject preferences is closer to that of high school students than to those of lower vocational school students.

In the case of vocational high school and lower vocational school students, there is no significant difference in how satisfaction with the degree of fulfillment of each expectation develops depending on the popularity of the subject.

There are only three differences in the satisfaction of vocational high school students and lower vocational school students with the least popular subject. These areas are the student's pleasant classroom well-being, perceiving a positive relationship with the teacher, and experiencing whether there is an opportunity to compete. In all cases, the average for lower vocational school students is lower. In the case of the most popular subject, the experience of the possibility of competition should also be highlighted as an essential element.

Lower vocational school students are also less satisfied with this area. However, it is worth emphasizing that there is no significant difference between the shortcomings of the pursuit of a good mark between these two subsamples in vocational education and training depending on the popularity of the subject.

Overall, it can be stated that we can reject this sub-hypothesis, because the results of the subsamples of VET students are closer to each other than the respective results of high school and grammar school students.

H6: Students are glad to prepare for lessons in popular subjects

We found that the willingness to prepare for students in vocational education (N = 124) could not be considered outstandingly high for the preferred subject.

It can also be stated that there is a correlation between the preparation for lessons of the least popular and generally taken general subjects ($r = 0.552$; $p = 0.000$), while the correlation between the aspiration to prepare for the lessons of the generally popular and most popular subject is already somewhat weaker ($r = 0.361$; $p = 0.000$), and the correlation between the willingness to prepare for the lessons of the least and most popular subject is the weakest, but not negligible ($r = 0.276$; $p = 0.000$)

The results of the monitoring instrument examining the correlations of the popularity of individual subjects also suggest that the willingness to prepare has the strongest correlation with the popularity of neither preferred nor rejected subjects (history as a 'midfield' subject: $r = 0.515$; $p = 0.000$; in the case of the most popular subjects the correlation is weaker: Hungarian language and literature $r = 0.385$, $p = 0.000$, foreign language $r = 0.380$, $p = 0.000$, while in the case of the least popular subject (in this case mathematics) the correlation is the closest and willingness to prepare $r = 0.202$; $p = 0.033$)

Thus, it can be concluded that in vocational education there is a correlation between subject liking and willingness to prepare, but it cannot be considered to be particularly close. A similar tendency was pointed out in our interviews, in which students said that they like a given subject if they are satisfied with the teacher's work or if (s)he does not have a negative attitude towards them, but there are some who attached importance to primary school. teachers took a similar view - which may underpin subject attitudes.

Typically, the subject is liked when it is understood, considered interesting, but the teacher is also given a role in this. In grammar school, there is a correlation between the preparation for the lessons of the least popular and generally taken general subjects ($r = 0.379$; $p = 0.000$) and the preparation for the lessons of the most popular and generally taken general

subjects. Here, in the course-by-subject correlation study of willingness to prepare, we found that in high school, if one is conscientious, it is usually the case for all subjects, but the correlations are strengthened by the nature of the subject rather than its popularity. Anyone who enjoys making mathematics is also interested in physics, but at the same time the willingness to prepare a second foreign language (which is otherwise one of the less popular subjects) is most strongly related to mathematics. Those who like the first foreign language also like geography. (Since more people attend bilingual grammar schools, these may be due to the fact that these students also study geography in a foreign language.)

In the case of high school students, reviewing the results of the control study, we found that in the case of the least popular subjects, there was a strong correlation with the willingness to prepare (mathematics: $r = 0.433$; $p = 0.000$) (physics: $r = 0.535$; $p = 0.000$). The same is true for the most popular subjects (Hungarian: $r = 0.440$; $p = 0.000$; foreign language: $r = 0.578$; $p = 0.000$) However, it is interesting that between the love of physics and the willingness to prepare, if not to a greater extent, but less there is a strong correlation between the willingness to prepare physics and mathematics subjects. The relationship between the willingness of the 1st foreign language to prepare and the willingness of the Hungarian language and literature to prepare is also similarly close. Similar correlations are true for subjects described as average ($r = 0.5-0.6$; $p = 0.000$). The willingness to prepare for high school students is higher than the subject preference, which was confirmed by a similar procedure for both the main study and the control measurement. This hypothesis can therefore be partially rejected.

H7: Student well-being is typically more favorable in the lessons of popular subjects, but the perception of usefulness and practice-orientation is more closely related to the popularity of the subject.

The classes of the most popular subject are those in which students in vocational education feel best (average: 4.08; median 4, mode 5); they generally feel comfortable in general knowledge classes (mean 3.81; median 4, mode 4), however, the least popular classes are least characterized by favorable well-being (mean: 2.76, median 3, mode 3). Based on the results of the control study, there is a correlation in the case of the most popular subjects (informatics $r = 0.61$; $p = 0.000$; foreign language $r = 0.530$; $p = 0.000$; Hungarian language and literature: $r = 0.547$; $p = 0.000$). The same is true for the least popular (mathematics $r = 0.532$; $p = 0.000$) and neither the preferred nor the rejected subjects ($r = 0.5-0.6$; $p = 0.000$).

Similar results were obtained in grammar school. Our results showed that, of course, students feel best in the lessons of the most popular subject (average 4.23; median 4; mode 5), followed by pleasant well-being in the lessons of general subjects (average: 3.5; median 3; mode 3), finally, the least popular subjects are those in which, according to their own statements, the students' well-being is least favorable (average: 2.58; median: 2, mode: 2). The popularity of the subject thus seems to be related to the pleasant classroom well-being. This is also supported by the control tests: In the case of the most popular subjects (Hungarian language and literature $r = 0.609$; $p = 0.000$; 1st foreign language $r = 0.734$; $p = 0.000$) the correlation is remarkably close, but not the least popular (mathematics $r = 0.570$; $p = 0.000$; physics $r = 0.611$; $p = 0.001$) nor in the case of the generally taken ($r = 0.55-0.7$; $p = 0.000$) subjects is not negligible, of similar strength as the preferred subjects respect. This hypotheses was confirmed.

H8: There is a correlation between the degree of fulfillment of student expectations and the popularity of the subject.

Among students in vocational education, the leading expectations are typically not realized in the case of unpopular subjects (average: 2.4-2.7), however, vocational high school students are subjectively satisfied with the preparatory function for graduation (average 3.32; median: 3; mode: 5 standard deviation: 1.425).

However, in connection with the teaching of general education subjects, the main emphasis is not on pleasant well-being, but on the meaningful implementation of the preparation for the matriculation exam (average 4.2 median: 5; mode: 5, standard deviation: 1.012), while vocational secondary school students are less satisfied in general for general knowledge subjects (mean: 3.35, median: 3, mode: 3, standard deviation: 1.012). In fact, they are outstandingly not satisfied with any of the criteria, perhaps even the relationship with teachers (mean: 3.57; median: 4; mode: 4, standard deviation: 1.0108) with which they feel generally satisfied.

This is also true for the most popular subject (mean: 4.02; median: 4, mode: 5, standard deviation 1.131) as well as pleasant classroom well-being (mean: 3.96; median: 4; mode 5; standard deviation 1.065). In addition, the teacher's helpfulness is emphasized. (mean: 4.02; median: 4; mode: 4; standard deviation: 0.952) In the control study, we found that the degree of popularity of the subject is also related to all these factors. The main correlations are the facilitation of learning professional subjects, motivating, attention-grabbing teaching work and the preparatory function for graduation, as in all cases $r > 0.5$ $p =$

0.000 for both popular and least popular and general subjects. Incidentally, the assumption that perception to support the learning of vocational subjects would be the most determining factor was not fulfilled in vocational secondary school. This was not indicated as the main value in relation to the preferred subject, nor did the correlation between the degree of popularity of the subject and the facilitation of learning professional subjects appear in the control measure measuring subject preference. The degree of popularity of the subject among them is most related to pleasant well-being ($r = 0.4-0.5$; $p = 0.000$); and to the degree of support for applying for graduation training ($r = 0.4-0.5$). In all cases, this was also identified as a leading factor in the 'main' questionnaire.

Based on the analysis of grammar school results, we can also conclude that the degree of fulfillment of expectations is related to the popularity of the subject. In general, students can be considered more satisfied with the expected characteristics (practicality, usefulness, meaningful implementation of the preparatory function for further studies, function of preparing for graduation, ensuring pleasant well-being) in relation to general education subjects (average 3.42-3.67). Most of all, the preparation for graduation (average 3.67, median 4 mode 4) and the perceptible developmental effect are what they feel is usually realized in general knowledge classes. In the case of the least popular subject, students feel that the least preparatory function for further learning is functional (average 2.46; median: 2 mode 2), but the other expected functions are significantly less than they are generally satisfied with in terms of teaching general subjects. (2.55-2.58), however, the perceptible developmental effect (average 2.78, median: 3; mode: 3) and the function preparing for graduation (average: 2.96; median: 3) can be more or less highlighted here as well. mode: 3) In the case of the most popular subject, they are satisfied with all areas. (mean: 4.14-4.23, median 4, mode 5 in all cases.)

Grammar school students are the least satisfied with the preparation function for graduation (average: 3.99; median 4; mode: 4). These results also appeared in the follow-up study. The fulfillment of all expectations is closely related to the degree of popularity of the subject. This correlation is the weakest in the case of the least popular subject, but it is especially strong ($r > 0.45$; $p = 0.000$), but they are also closely related to each other ($r > 0.5$; $p = 0.000$).

In the case of the most popular subjects (1st foreign language; Hungarian language and literature) the closest ($r > 0.6$; $p = 0.000$) It is the perception of pleasant well-being and preparation for further learning that most closely correlates with the perception of the subject's popularity. ($r > 0.7$; $p = 0.000$) In the case of 'average, neither popular nor rejected

subjects, the correlation is similarly close, ($r > 0.5$; $p = 0.000$) in all cases and in both popular and in the case of the least liked, neither unpopular nor rejected subjects, it can be stated that there is a correlation not only between the fulfillment of each leading expectation and the degree of popularity of the subjects, but also between the degree of fulfillment of each expectation.

H8.1: Typically, in the case of the most popular subject, students judge that their expectations are met.

Examining this sub-hypothesis, as we found above, we found that the correlation is closest in all cases for the preferred subject, but can be considered strong in all cases. The sub-hypothesis thus proved to be true.

H8.2. There is a close connection between the degree of popularity of the subject and the perception of usefulness and practice orientation.

The fulfillment of this sub-hypothesis is confirmed by the results of both this first and the second quantitative measurement phase among students. Thus, it can be stated that the students' perception of usefulness and practice-orientation is of paramount importance in terms of the popularity of the subject.

H8.3. Among vocational high school students, there is no close correlation between perceptions of facilitating the learning of vocational subjects and the popularity of the subject.

This sub-hypothesis was fulfilled, as our results show that there is no close correlation between the perception of facilitating the learning of vocational subjects and the popularity of the subject among vocational high school students.

H8.4: In grammar school, the correlation between the satisfaction with the function supporting further learning and the degree of popularity of the subject is the strongest.

In the case of the most popular subjects, the correlation is closely related to the degree of popularity of the subject (in the case of Hungarian language and literature $r = 0.421$; $p = 0.000$; in the case of the 1st foreign language $r = 0.771$; $p = 0.000$), however, the high level of education precedes its relevance. (in the case of Hungarian language and literature $r = 0.564$; $p = 0.000$; in connection with the 1st foreign language $r = 0.798$; $p = 0.000$) Even in the case of the least popular subjects there is a close relationship between satisfaction with the further learning function (in the case of mathematics $r = 0.539$; $p = 0.000$ for physics subject $r =$

0.532; $p = 0.000$), but with the pleasant classroom feeling (for mathematics subject $r = 0.565$; $p = 0.000$; for physics subject $r = 0.683$; $p = 0.000$) or the degree of satisfaction with the grades (in the case of a mathematics subject $r = 0.690$; $p = 0.000$; in the context of a physics subject $r = 0.693$; $p = 0.000$) the relationship is closer. Therefore, this sub-hypothesis was not fulfilled.

H9: The popularity of the subject cannot be related to the pursuit of a good mark.

The results of our research show that the sub-sample of vocational high school students is the one in which it is rather not typical that they do not strive for a good grades. In general, it is rather not true for general subjects (average: 2.44, median: 2; mode: 2), for the least popular subject it is moderate (average, 2.68, median: 3, mode: 3) while it is not true for the most popular subject. it is typical that they would not try to get a good mark (mean: 1.95; median: 1; mode, 1). Of the 72 students, 12 say it is not important for him to have good grades in general education subjects, and 16 think this is moderately true. In the case of the least popular subject, 16 people consider this statement to be completely or rather correct, while 16 people consider this statement to be correct on average.

Regarding the lessons of the most popular subject, 6 students say that it is not important for him to have a good grade. 13 moderately consider this to be true. Similar results were obtained during our measurements among vocational high school students. However, it can be stated that while in other types of institutions it is not typical for students to think that it is not important to have a good grade in general education subjects, in vocational secondary schools this is least true for the most popular general education subject (average: 2.55; median: 2, mode : 2) somewhat more characteristic in general for general subjects (average: 2.46; median: 3, mode: 3) and moderately for the least popular subject (average 3: median: 3, mode: 3).

Overall, it can be stated that for vocational high school students, the popularity of the subject does not automatically lead to the pursuit of a good grade, and it can be concluded that the popularity of the subject as a whole cannot be considered an essential consideration for motivating to obtain a good grade in vocational secondary schools. We also found in the confirmatory, subject-by-subject measurement that there is no correlation between the degree of popularity of subjects in vocational education and the pursuit of a good grade. The hypothesis was thus confirmed.

H9.1: The lack of striving for good grades is most strongly related to the perception of the lack of usefulness and practice-orientation related to the teaching of the subject.

It can be stated that sub-paragraph 1 of our Hypothesis 9 also proves to be true, according to which the pursuit of a good mark is related to the perception of practice-orientation and usefulness ($r > 0.5$; $p = 0.000$) for all types of institutions and all subjects.

10. Significance of the research, possibilities for continuation

Our results can be used in teacher education, before teaching practice, as a basic knowledge background (each criterion could form the material of a lesson).

It can also provide support in the implementation of quality assurance in individual institutions, as our measurement tools, if we interpret the effectiveness in the light of the model we present, also allow us to examine the effectiveness of individual teachers. At the institutional and class level, in the case of teachers in a class, the opinions and expectations of the teacher and the student can be assessed. Examination in the case of individual subjects can play a role in increasing the effectiveness of both the subject and the given teacher. In addition, the present study can be a tool for creating hypotheses and developing measurement tools if a secondary school adaptation of the Complex Basic Program (Komplex Alapprogram, KAP) or a similar development is introduced. As a possible continuation, in addition to parental measurement, the correlations of students 'and parents' expectations and satisfaction with teachers can be researched, and it is possible to identify whether there is a correlation between parents 'pedagogical image (traditional or innovative role expectations) and students'. Of course, all this can be done in all types of institutions. It can be tested even among upper secondary school students, their parents and teachers, providing several research directions: the possibilities of interpreting the effectiveness of primary and secondary school teachers, comparing the trends related to primary school teachers working in small settlements and big cities; differences and commonalities between the possibilities of interpreting the effectiveness of teachers of general knowledge and 'skills subjects' and the possibilities of interpreting the effectiveness of teachers of general knowledge and vocational subjects working in vocational education. A more comprehensive examination of each stage of the study would also be worthwhile. Within groups of learners in vocational education, based on the results obtained, additional semi-structured individual interviews may also be included in order to explore the personal views of the learners. We also consider it worthwhile to conduct a metaphor research survey among students, for example on issues related to teachers of

general education subjects, learning general education subjects and preparation, in order to get a more comprehensive picture of the views and expectations of students. In addition to increasing the number of items, individual sub-areas should also be considered, e.g. examining the relationship of vocational high school students and vocational high school students to the subject, teacher, learning - measured in a prominent and comprehensive way.

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