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# Determinants of the Realization of Second Chance Education

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#### Abstract

The aim of the study is to present a newly developed research instrument examining the determinants of second chance programmes' success or failure from the perspective of teachers. In the theoretical part of the study, the authors elaborate on the issues of second chance education and focus on factors having a direct impact on the results of its realization. Subsequently, the Second Chance Education Indicators Questionnaire developed by the authors, the results of the carried out internal factorial analysis, as well as the calculated correlations, are presented. Based on the gathered data from 1,038 teachers, seven factors – "Satisfying employers' needs in the field of education"; "Promoting the development of teachers' competencies for second chance education"; "Providing teachers with support in developing their professional skills in the field of second chance education"; "Funding schools providing second chance education"; "The system of dual VET in second chance education"; and "Potentials for increasing the quality of second chance education" – were identified, and the existence of an internal factorial structure was confirmed. Since there is no other available research tool for identifying these determinants, it can be assumed that the Second Chance Education Indicators Questionnaire is a unique research tool, which can be used for further research activities and can contribute to broadening the current knowledge in the field.

#### **Keywords:**

Inquiry-Based Teaching;

Education;

Learning;

Technical Education.

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# 1- Introduction

Early dropout or early leaving from education can be considered a serious issue in most European countries, including Slovakia, even though they do not mean the same. While early leavers are defined as 18-24 year-olds with only lower secondary education or less who are no longer in education or training, dropout refers to discontinuing an on-going course [1]. Both cases refer to youth who were reached and then lost by the educational system [2], which needs to take compensatory measures to re-engage these individuals in education. As stated by Euridyce [1], early leaving leads to reduced opportunities in the labour market and an increased likelihood of unemployment, poverty, health problems, and reduced participation in political, social, and cultural activities, which can have a negative impact not only on individuals' lives, but can influence the entire society. As emphasized by Zapletal et al. [3], in the long term, a higher qualification means a higher employment rate for all, not just prosperity for those who are successful.

The EU set an EU-level target stipulating that the share of early leavers from education and training should be less than 9% by 2030. In 2021, an average of 9.7% of early leavers from education and training were identified within the EU. In Slovakia, the share of early school leavers is 7.9%, which is below the EU target, but it must be noted that in 2011, only 5.1% of the population were identified as early school leavers [4, 5].

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There is often a chain of factors leading to cumulative risks, which make a young person leave the educational system, but later on, if there are any available opportunities, a specific group of them wish to return to school. As found out by Portela-Pruaño et al. [2], the most frequently occurring reasons for taking part in second chance programmes were learning—i.e., social or personal reasons or an unspecified desire to learn [5]—and qualifications, but also factors like unemployment and inactivity had a big role to play in their decision. Some second chance students were pushed back to school by their families, while others' decisions were affected by the pulling effect of institutions providing second-chance education.

Second chance education programmes are targeted equally at those who left schools voluntarily and those who were excluded or pushed out by the educational system. They are usually used as part of a country's lifelong learning strategy, aiming to either prevent early school leaving or give an opportunity to obtain a formal qualification to those who left the educational system unqualified [6]. Some institutions offer second chance programmes enabling adults to obtain an occupational qualification; others are targeted at their reintegration into mainstream education and training programmes [8, 7]. Experience has shown that these programmes represent an efficient tool for decreasing unemployment by expanding learners' opportunities on the labour market, as well as for helping vulnerable groups of people—e.g., seniors, adults experiencing social or economic problems in daily life, the unemployed, and immigrants having language problems [9]—and preventing social exclusion [10], especially in the case of groups of students from socially disadvantaged backgrounds who are likely to leave schools early [11]. Involvement in a second chance programme can be the first step for many disadvantaged participants towards sustained participation in further training and/or employment to occur [12]. Therefore, these programmes can be considered among the most important parts of education policies. On the other hand, it must be noted that it is often a challenge for school systems to create opportunities for early school leavers and to make second chance programmes attractive for them, especially when considering that returning to schools brings additional costs, including tuition fees and non-tuition study costs, such as expenses on study materials, tools, transport, and the disutility of study [13], but also, as reported in a research study carried out in Germany [14], adult students are confronted by conflicting age role expectations as they are not respected as adults. As a consequence, they start acting in a juvenile way.

A very important requirement placed on school systems and school leaders is to offer flexible and cost-saving programmes that are accessible to the broad masses, including those who are still involved in formal education but are at risk of leaving it for a variety of reasons, including the fact that formal education is not suitable for everyone. One of the advantages of second chance programmes is that they can be offered both within and outside mainstream schools and allow a more flexible way of using either the traditional classroom-based or any other suitable approach [7]. Second chance programmes should represent an alternative to formal education where organisational and pedagogical approaches different from traditional schools are applied and should build on the learners' existing knowledge, skills, and interests, considering their individual needs. Second chance curricula should be flexible and easily adaptable to second chance learners' needs and should be designed to develop holistic literacy in learners who should also learn how to learn [15]. As Savelsberg et al. [12] claim, second chance programmes should be customised to the learner, collaboratively linked with multidisciplinary services, and contextualised to be relevant to the individual, the local community, and/or the needs of industry. The major difference between second chance students and their younger schoolmates should be considered when designing second chance programmes: adults participate in these programmes intentionally and voluntarily because they seek to achieve a particular goal in terms of knowledge and skills (qualifications, employment, etc.); therefore, teaching methods promoting active participation are the most suitable for them [6]. Also, measures need to be taken to prevent second-chance students' dropout, particularly among disadvantaged students, where the dropout rate is the highest [16, 17]. Also, education in the field is important; early leavers should receive information about learning opportunities and about the ways in which second chance education can change their lives.

# 1-1-Second Chance VET and Employment

It is generally accepted that low-educated individuals face poor prospects on the labour market [18] and, at the same time, based on available research, Ross & Gray [19] claim that the number of years of education and/or training is a significant predictor of future employment. On the other hand, the desire to get a job and to earn money are among the reasons for leaving the educational system, and that is why young people often enter the labour market with no qualifications. It is an important policy challenge to find appropriate ways of providing second chances to low-educated workers and, thus, improving their labour market outcomes [20].

As pointed out by CEDEFOP [21], in the framework of second chance education, it is recommended to apply a holistic approach and use methods inspired by VET pedagogies, i.e., provide mainly hands-on educational activities that create links between theory and practice through real-life and work situations, which are more interesting for learners [22] and make their involvement in education meaningful. Meaningfulness is the basic requirement placed on second chance schools and the content of the study programmes offered by them as they should prepare their students for

employment, i.e., their programmes should be developed to meet employers' needs and requirements and should be targeted on developing learners' job-related skills as well as their competencies to perform certain jobs. On the other hand, as pointed out by McGregor et al. [23], meaningfulness means providing long-term capital in the form of skills and knowledge that may be exchanged for economic gain. It means that second-chance education programmes tailored for particular employers or targeted at gaining qualifications for a specific job can represent a serious long-term risk for early school leavers' wellbeing since they can reinforce their feelings of being incapable of performing challenging intellectual work. Therefore, it is recommended to shape second chance programmes from a futures perspective, which is in contrast with the application of the above-mentioned hands-on approach. Neither Hargreaves [24] considers VET programmes providing individuals with the skills needed to find employment the best option for everyone. She points out the fact that participating in VET programmes designed to offer alternative career paths can significantly help those less academically oriented individuals at risk who have a clear idea about what they would like to do.

# 1-2-Second Chance Teachers and Their Preparedness

Since second chance students represent a diverse group within the population of learners with specific needs and requirements, to provide high-quality second chance education, teachers need to be prepared to educate both mixed groups of students and groups consisting exclusively of second chance students. Second chance students' needs must be precisely diagnosed prior to entering a course [15] or at its very beginning, and the content of the course as well as the applied teaching methods and procedures must be adapted to them, since research evidence shows that in cases where the students' expectations regarding the work of teachers are not met, they are likely to drop out of second chance programmes [25, 26]. School leaders and educators should keep in mind that adults' educational needs are impacted by situations they experience on the level of individuals, groups, and society [27], and therefore, there is no universal educational or training programme suitable for everyone. It must also be considered that adapting programmes to students' needs may be challenging for all teachers, but especially for those of them who have not received any preservice training in the field. In their case, in-service teacher training programmes are a necessity.

Sufficient opportunities for teachers' personal and professional development contribute not only to their preparedness to perform job-related tasks but also to shaping teachers' professional identities. As pointed out by Meo and Tarabini [28], although teachers' identity is among the key factors in understanding how inclusive schools function, there is a lack of research in the field. They characterise identity as consisting of three major components: ethics of care, personalisation of education, and a concept of education based on collective efforts, which can be considered the determinants of second chance education programmes' success or failure.

In Slovakia, only a few studies have focused on second chance teachers, their role, preparedness, and identity; e.g., Pirohová & Pasternáková [29] focused on second chance school teachers' competencies; Pirohová [30] targeted her attention on teachers' competence to individualise teaching in the framework of second chance education; Pirohová and Šuťáková [31] dealt with the issues of second chance education from the perspective of teachers; and pre-service vocational subject teachers' subjectively perceived preparedness for teaching in the framework of second chance programmes was examined by Barnová et al. [10].

# 1-3-Second Chance Education in Slovakia

Even though Slovakia does not have a comprehensive strategy to tackle early school leaving [1], the situation is not as alarming as in several other EU countries. However, there is a set of factors typical for primary and secondary education that can increase the risk of early school leaving, e.g., the fact that students from socially disadvantaged backgrounds, who are typical early school leavers, are not provided with equal opportunities by the Slovak educational system as the transformation of traditional schools to inclusive ones is a slow process. In this context, developing the system of second chance education in the country appears to be a promising compensatory model, providing adults from socially disadvantaged backgrounds with opportunities to gain qualifications in programmes tailored to their needs, interests, and abilities.

In general, second chance programmes are organised in the framework of non-formal education and allow taking part in programmes from basic levels up to tertiary education [7], but in Slovakia, the concept of second chance education falls within the area of formal, i.e., school education [10] and is provided by primary and secondary (mainly vocational) schools as a lifelong learning strategy. As pointed out by Rigová et al. [32], in these schools, the conditions for the realisation of second chance education programmes are not optimal, and schools must deal with several issues, which may lead to problems with re-engaging early school leavers in education. They identified the major issues to be improved in the field, including managing and funding schools and staffing them with teachers prepared to conduct lessons in the context of second chance schools. Another factor impacting the quality of the outputs of second chance education is a lack of professionals providing guidance and counselling services to the most vulnerable groups of learners in Slovakia.

#### 1-4-Purpose of the Study

Although the benefits of second chance education are undoubtable both from the aspect of second chance students' and the entire society's prosperity, it can be assumed that it is an internationally neglected area of research. Several research studies have been published in the field, but they cover only specific areas of second chance education, e.g., social inclusion [9, 24, 33], employability and income [18, 20], the role of teachers and their preparedness [10, 28–31, 34], inequalities in educational systems [11, 35], second chance curricula [23, 34], and others provide a general or country-specific insight into the issues related to second chance education [12, 13, 15, 19, 21, 23, 25, 33, 36–38]. In Slovakia, e.g., Lukáčová et al. [36] mapped the situation in second chance education; Lukáč et al. [37] examined whether early school leavers in Slovakia have sufficient information about second chance education opportunities; and Pirohová et al.'s [35] study on culturally sensitive second chance education of adult marginalised (Roma) students is interesting from the aspect of the realisation of the present research.

Based on a precise literature review, it can be assumed that there is no available study providing a deeper insight into the determinants of second chance education from second chance teachers' perspectives. In accessible literature, second chance education and its determinants have been examined mainly from students' or employers' points of view; therefore, there is no applicable data with which the findings of a new research study in the field could be compared. As a reaction to this situation, this research study aims to contribute to filling this gap and introduces an original research instrument developed for the purposes of the grant project APVV-18-0018, "Teaching in Schools of Second Chance from the Perspective of a Teacher and an Adult Learner," to identify the determinants of the realisation of second chance education from teachers' points of view. This valid and reliable research tool can be used for further research activities within the project but also for the purposes of other research in the field, both in Slovak and international contexts, and so contribute to current knowledge.

In the presented study, the formulated hypothesis presumes the existence of an internal factorial structure in the newly developed Second Chance Education Indicators Questionnaire. Also, the calculated correlations are paid attention to, which are expected to provide initial information for carrying out research within the grant project but also a basis for future research on the determinants of second chance education.

#### 2- Research

# 2-1-Research Goals and Objectives

The basic research problem formulated in the field of second chance education within the grant project "Teaching in Schools of Second Chance from the Perspective of a Teacher and an Adult Learner" lies in the identification of the determinants of completing lower secondary, higher secondary, but also higher vocational education successfully, but no available research instruments suitable for examining these factors from teachers' perspectives were found. To reveal the determinants of the success or failure of the realisation of second chance programmes, a new questionnaire, the Second Chance Education Indicators Questionnaire, consisting of 26 items, was developed by the team of investigators. Respondents indicate their answers on a five-point Likert scale ranging from 1 (totally disagree) to 5 (totally agree). In the presented research study, the existence of an internal factorial structure of second chance education indicators was presumed. To examine the hypothesis, factorial analysis was carried out.

Since there is no available research study focusing on second chance education from teachers' perspectives, the Second Chance Education Indicators Questionnaire can be considered a unique research instrument, which also explains the fact that there is no applicable data with which the present results could be compared. In the process of creating the questionnaire, 30 items were formulated; each of them was related to the determinants of the quality of second chance education identified in accessible resources, and they are elaborated in more detail in the theoretical part of the present study. Two items were formulated to examine the impact of the COVID-19 pandemic on second-chance education.

# 2-2-Methods

First, a 30-item research instrument was constructed by using standard methodological procedures in compliance with the needs of the planned research activities and the intention to develop a questionnaire suiting an international environment as no available standardized questionnaires met the set criteria and were in accordance with the research purposes. In accordance with the KMO adequacy test results, from the 30-item questionnaire, four items were excluded, and an original questionnaire consisting of 26 items was developed. Subsequently, its reliability was tested. The value of Cronbach's  $\alpha = 0.813$ , which represents a very good level of reliability. The instruments' validity was tested by factorial analysis – Principal Component Analysis with Oblimin rotation was used.

By means of factorial analysis, a multivariate statistical method that can be used for analysing hidden associations between variables, factors having an impact on the realisation of second chance education at selected levels of education in Slovakia were identified. The aim of the analysis was to identify the critical factors and formulate proposals for their

elimination. The gathered data were coded and subsequently processed using R-3.4.3 and SPSS Statistics 22.0. The methods of descriptive statistics were used. A factor analysis allowing an analysis of the internal structure of intercorrelations was carried out. By using panel analysis, the strength of the factors' impact on second chance education was presented.

Figure 1 shows the flowchart of the research methodology through which the objectives of this study were achieved.

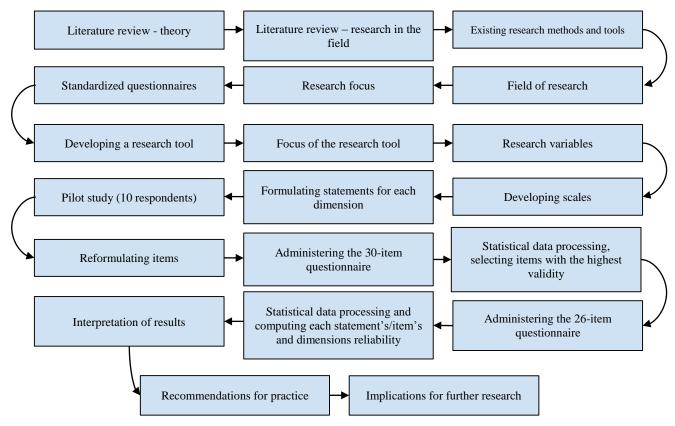


Figure 1. Research methodology

# 2-3-Research Sample

The research sample consisted of 1,038 teachers (56.45% females and 43.55% males). For their selection, stratified sampling was used. 32.56% of the respondents worked in schools providing lower secondary education, and 67.44% of respondents in schools providing upper secondary and higher education.

# 3- Research Results

The items' reliability was tested by means of Cronbach's alpha (Table 1). The results showed a satisfyingly high level of internal consistency and so, the existence of relatively strongly associated sets of items can be assumed.

Table 1. Item renability										
Rank	1	2	3	4	5	6	7	8	9	10
Cronbach's alpha	0.812	0.813	0.821	0.824	0.816	0.831	0.806	0.813	0.817	0.815
Rank	11	12	13	14	15	16	17	18	19	20
Cronbach's alpha	0.804	0.807	0.816	0.812	0.809	0.813	0.818	0.809	0.802	0.801
Rank	21	22	23	24	25	26	27	28	29	30
Cronbach's alpha	0.805	0.823	0.824	0.805	0.813	0.829	0.815	0.814	0.807	0.814

Table 1. Item reliability

Our presumption regarding the homogeneity of the factorial structure was confirmed by the results of the Levene's test, which are presented in the correlation matrix (Figure 2). The non-significant values of Spearman correlation coefficients are crossed.

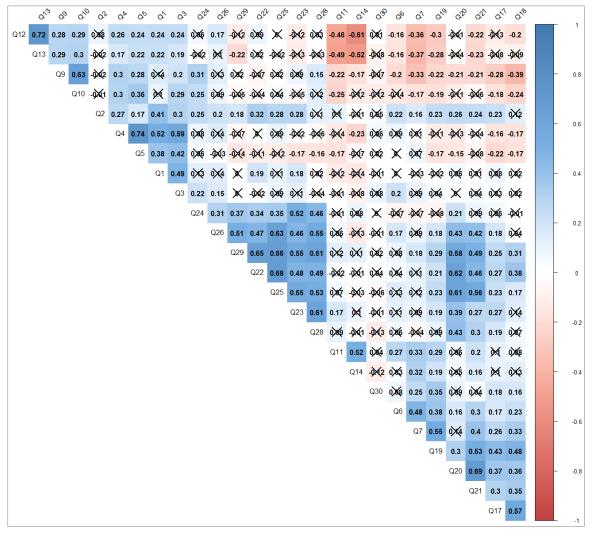


Figure 2. Spearman correlation coefficients

The adequacy of input data was tested by the application of the Kaiser-Meyer-Olkin rule. Only components explaining the same degree of variance as the original variables can be considered appropriate, i.e., the components' values must be higher than 1. The value explaining the cumulative variance for the seven components is 71.03%. The value of the KMO index is 0.738 (Table 2). Therefore, it can be assumed that the level of correlation is satisfactory. Also, using factorial analysis to identify the factors determining second chance education was appropriate.

Table 2. KMO adequacy

Rank	1	2	3	4	5	6	7	8	9	10
MSA	0.759	0.784	0.686	0.612	0.605	0.794	0.811	0.429	0.618	0.559
Rank	11	12	13	14	15	16	17	18	19	20
MSA	0.703	0.755	0.698	0.709	0.461	0.509	0.802	0.776	0.768	0.785
Rank	21	22	23	24	25	26	27	28	29	30
MSA	0.798	0.854	0.863	0.801	0.834	0.856	0.468	0.809	0.835	0.497
Total MSA:		0.738								

MSA: Measurement System Analysis.

In the context of the above-presented KMO adequacy results, items 8, 15, 16, and 27 ("The needs in the field of second chance education after the COVID-19 pandemic will be different from the situation prior to its outbreak."; "There is a need for career counsellors for second chance students in secondary schools."; "More career counsellors for second chance students are needed in secondary schools."; and "The network of secondary schools providing second chance education is outdated.") were excluded from the factorial analysis. Based on the Principal Component Analysis carried out, the results for the identified factors are displayed in the scatter plot (Figure 3).

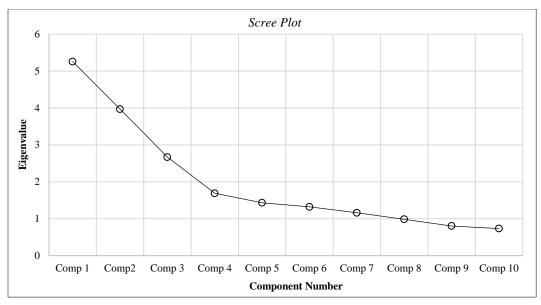


Figure 3. Component variance

In the context of examining reliability by means of Cronbach's alpha, the set value 0.805 explains 63.57% of variance. The obtained results can be considered satisfactory

Table 3. Variables – uniqueness test

Rank	1	2	3	4	5	6	7	9	10
Value	0.584	0.694	0.524	0.067	0.374	0.570	0.369	0.380	0.333
Rank	11	12	13	14	17	18	19	20	21
Value	0.747	0.335	0.266	0.601	0.561	0.372	0.384	0.312	0.249
Rank	22	23	24	25	26	28	29	30	-
Value	0.326	0.312	0.433	0.282	0.379	0.345	0.355	0.861	-

In Table 4, the reliability characteristics of the research tool for second chance education on selected levels of education are presented.

**Table 4. Characteristics of main components** 

Rank	Standard Deviation	Proportion Of Variance	Cumulative Variance
I consider the current system of second chance education on the examined levels of secondary and higher education satisfactory.	2.348	0.235	0.235
2. Taking into account employers' needs, second chance education opportunities are a necessity.	1.969	0.168	0.395
3. The chances to successfully complete second chance education on the selected levels of education are real.	1.606	0.114	0.500
4. Providing teachers with support in developing competencies in the field of identifying students' developmental characteristics is satisfactory.	1.278	0.075	0.567
5. Providing teachers with support in developing competencies in the field of identifying students' individual characteristics is satisfactory.	1.118	0.059	0.618
6. Providing teachers with support in developing competencies in the field of identifying students' social factors is satisfactory.	1.087	0.056	0.667
7. Providing teachers with support in developing competencies in the field of identifying students' social cultural factors is satisfactory.	1.014	0.049	0.709
8. There are sufficient opportunities to study in the framework of second chance education to satisfy students' demands.	0.922	0.042	0.743
9. The measures taken in the system of second chance education correspond with the educational needs of students on the selected levels of education.	0.869	0.038	0.774
10. The current system of second chance education funding on the selected levels of education is adequate.	0.851	0.037	0.803
11. The current system of second chance education funding on selected levels of education is effective.	0.779	0.032	0.828
12. The current system of second chance education funding on selected levels of education is economical.	0.743	0.030	0.851
13. The current system of second chance education funding on selected levels of education is optimal.	0.726	0.029	0.872

14.	There is a need for optimizing the selected levels of education in second chance education.	0.671	0.026	0.890
15.	There is a need to reform the selected levels of education for the needs of second chance education in Slovakia.	0.646	0.024	0.907
16.	There is a need to develop teachers' skills in the field of lesson planning in second chance education.	0.595	0.022	0.921
17.	There is a need to develop teachers' skills in the field of projecting lessons in second chance education.	0.573	0.021	0.934
18.	There is a need to develop teachers' skills in the field of lesson planning for subjects in second chance education.	0.550	0.020	0.947
19.	There is a need to develop teachers' skills in the field of teaching in second chance education.	0.521	0.018	0.958
20.	There is a need to develop teachers' subject-related knowledge in second chance education.	0.494	0.017	0.967
21.	There is a need to develop teachers' didactic knowledge and skills in the field of lesson planning in second chance education.	0.467	0.016	0.976
22.	I consider the system of dual VET suitable for second chance education as well.	0.452	0.016	0.984
23.	I consider the application of the system of dual VET in second chance education useful.	0.423	0.015	0.988
24.	I consider optimizing schools for second chance education a necessity.	0.408	0.014	0.991
25.	The system of study fields on the selected levels of education should be modified for second chance education in Slovakia.	0.387	0.013	0.995
26.	Due to the pandemic, there is a need for introducing changes in the existing fields of study.	0.320	0.012	1.000

By means of Principal Component Analysis with Oblimin rotation, the seven extracted factors were analysed. In Table 5, the final factorial load matrix after rotation is presented.

**Table 5. Factorial load values** 

Rank	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
1	0.831	-	-	-	-	-	-
2	0.694	-	0.242	-	-	0.110	-
3	0.657	-	-	-	-0.105	0.281	0.196
8	0.531	-	0.380	-	-0.133	-	0.113
9	0.492	-	0.355	0.194	0.279	-	-0.237
4	-	0.979	-	-	-	-	-
5	-0.208	0.722	-	-	-	0.226	-
6	0.200	0.550	-0.099	-	0.165	-0.142	0.202
7	0.173	0.499	-0.140	0.264	0.196	-	0.113
16	0.254	0.311	-	0.215	-	-	0.214
17	-0.113	-	0.781	0.277	-0.126	-	-
18	-	-	0.728	-	-	-	0.195
19	0.451	-	0.574	-	-	-	0.005
20	0.354	0.005	0.517	-0.148	-	-	0.298
21	-	0.124	-	0.677	-0.166	-	-
10	-	-	-	0.670	-	-	0.211
11	-	-	-	0.640	-	-0.130	-0.117
12	0.279	-0.102	-0.105	0.339	-0.196	-	-0.216
13	-	-	-	0.307	-	-	0.197
22	-0.107	-	-	-	0.848	0.111	-
23	-	-	-	-	0.785	-	-
24	0.162	-0.138	-	0.215	-0.490	0.157	-
25	-	-	-	-	0.126	0.774	-
26	0.235	-	-0.129	-	0.114	0.647	-0.116
14	-	-	0.160	0.186	-	-	0.657
15	0.164	-0.136	0.005	0.336	-	-	0.425
Sum of squares	2.823	2.218	2.162	1.947	1.892	1.298	1.125
Eingenvalues	0.113	0.090	0.088	0.080	0.078	0.055	0.048
% of variance	0.113	0.198	0.281	0.356	0.429	0.478	0.522

As shown in Table 6, in the context of the presented results, the variance of the described factors ranges between 11.3% and 4.8%. "Satisfying employers' needs in the field or education" (items 1, 2, 3, 9, and 10) explains 11.3% of variance, the second factor. "Promoting the development of teachers' competencies for second chance education" (items 4, 5, 6, and 7) explains 9.0% of variance, the third factor. "Providing teachers with support in developing their professional skills in the field of second chance education" (items 16, 17, 18, 19, 20, and 21) explains 8.8% of variance; the factor "Funding schools providing second chance education" (items 10, 11, 12, and 13) explains 8.0% of variance; the fifth factor "The system of dual VET in second chance education" (items 22 and 23) explains 7.8% of variance, the sixth factor "Potentials for increasing the quality of second chance education" (items 24, 25, and 26) explains 5.5% of variance, and the seventh factor "Need for changes in second chance education" (items 14 and 15) explains 4.8% of variance.

Table 6. Extracted factors

No.	Factor	Number of items	% of variance
1	Satisfying employers' needs in the field of education	5	11.3
2	Promoting the development of teachers' competencies for second chance education	4	9.0
3	Providing teachers with support in developing their professional skills in the field of second chance education	6	8.8
4	Funding schools providing second chance education	4	8.0
5	The system of dual VET in second chance education	2	7.8
6	Potentials for increasing the quality of second chance education	3	5.5
7	Need for changes in second chance education	2	4.8

By summarising the present results, the main determinants of the success of second chance programmes, as perceived by teachers, were identified. As it is displayed in Table 6, the extracted factor "Satisfying employers' needs in the field of education" puts pressure on students to complete their studies. In compliance with Nordlund et al. [18], it can be explained by the fact that gaining a qualification is a strong motivating factor, as it is often the precondition for keeping a job, a job position, or for career advancement. Even though funding educational institutions is a broadly discussed issue in many countries and in Slovakia it is perceived as a serious issue, the present results show that "Funding schools providing second chance education" is not considered by the participants as a priority from the aspect of the success of second chance programmes as it was expected based on Rigová et al.'s [32] research results. Following the identification of the seven factors of the questionnaire, the existence of strong and moderate associations was presumed between the following factors:

- 1. "Satisfying employers' needs in the field of education" and "The system of dual VET in second chance education";
- 2. "Promoting the development of teachers' competencies for second chance education" and "Providing teachers with support in developing their professional skills in the field of second chance education", "The system of dual VET in second chance education", "Need for changes in second chance education";
- 3. "Providing teachers with support in developing their professional skills in the field of second chance education" and "Potentials for increasing the quality of second chance education" and "Need for changes in second chance education";
- 4. "Funding schools providing second chance education" and "Potentials for increasing the quality of second chance education", "Need for changes in second chance education";
- 5. "The system of dual VET in second chance education" and "Potentials for increasing the quality of second chance education"; and
- 6. "Potentials for increasing the quality of second chance education" and "Need for changes in second chance education".

Based on the results of the factorial analysis, a correlation matrix of factors showing the associations (correlations) between latent variables was created.

Table 7. Second chance education – correlation matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Factor 1	1.000	-0.005	0.109	-0.267	-0.272	0.072	-0.024
Factor 2	-0.005	1.000	0.302	0.026	0.119	0.420	-0.207
Factor 3	0.109	0.302	1.000	0.251	0.189	0.074	-0.221
Factor 4	-0.267	0.026	0.251	1.000	0.209	-0.026	-0.134
Factor 5	-0.272	0.119	0.189	0.209	1.000	-0.098	-0.111
Factor 6	0.072	0.420	0.074	-0.026	-0.098	1.000	-0.153
Factor 7	-0.024	-0.207	-0.221	-0.134	-0.111	-0.153	1.000

As can be seen in the correlation matrix, the highest degree of correlation can be observed between Factor 2 and Factor 6. It can be assumed that the factor "potentials for increasing the quality of second chance education" is associated with developing the factor "promoting the development of teachers' competencies for second chance education". A moderate correlation was found between Factor 2 "Promoting the development of teachers' competencies for second chance education" and Factor 3 "Providing teachers with support in developing their professional skills in the field of second chance education".

Based on the results of the factorial analysis performed, the hypothesis was verified and the existence of an internal factorial structure was confirmed.

# 4- Discussion

Since there was no suitable research instrument examining the determinants of the success or failure of second chance education from the perspective of teachers, for the purposes of the research activities carried out in the framework of the grant project APVV-18-0018 "Teaching in Schools of Second Chance from the Perspective of a Teacher and an Adult Learner", the Second Chance Education Indicators Questionnaire was developed. In the current research study, its psychometric properties were measured, and both the instruments' reliability and validity were confirmed. It can be considered the main finding of the study, as these values show that it is a suitable research instrument for further research activities both in the framework of the project and for the purposes of other research activities. Based on the responses by 1,038 participating teachers, by means of factorial analysis, the following seven determinants (factors) of the realisation of second chance education contributing to the successful completion of second chance programmes were identified:

1) satisfying employers' needs in the field of education; 2) the system of dual VET in second chance education; 3) funding schools providing second chance education; 4) promoting the development of teachers' competencies for second chance education; 5) providing teachers with support in developing their professional skills in the field of second chance education; 6) potentials for increasing the quality of second chance education; and 7) the need for changes in second chance education. For further analysis, the seven extracted factors can be reduced to five categories: 1) responding to the labour market's requirements; 2) realisation of dual VET; 3) funding; 4) teachers' professional development; and 5) improving the quality of second chance education. These categories are discussed in more detail in the text below, where the obtained results are explained and compared with the findings by other authors. Also, the calculated correlations between factors confirming the existence of associations are presented, and implications for further research are addressed. At this point, it is important to highlight that there is a limited body of relevant research in the field, and in the available resources, there is no data on the determinants of the realisation of second chance education from the perspective of teachers, which can be considered a limiting factor when interpreting our findings.

# 4-1-Employability and Satisfying Employers' Needs

The learners' future employability is among the most important motivating factors when making a decision to reengage in education. Undoubtedly, it also contributes to higher life satisfaction and well-being associated with higher income. This finding is in line with Nordlund et al. [18], whose study confirmed an immediate as well as a long-term positive income development in adults participating in second chance programmes, and with Bennett et al. [20], who observed a significant increase in young women's annual income after taking part in second chance programmes, which proves that second chance education can change students' life trajectories. Nordlund et al. [18] also claim that second chance education not only improves second chance students' long-term labour market prospects but can also restart their educational trajectories. Moreover, policy makers should keep in mind that, as pointed out by Kiprianos & Mpourgos [6], second chance education programmes represent an efficient tool for fighting against social exclusion. Also, DePryck et al. accentuate expanding opportunities for the most vulnerable and marginalised groups of people [9].

In the present research, the existence of associations between Factor 1 "Satisfying employers' needs in the field of education" and other factors was also tested. Surprisingly, a weak negative association was found between Factor 1 and Factor 5, "The system of dual VET in second chance education" (-0.272), as well as Factor 1 and Factor 4, "Funding schools providing second chance education" (-0.267). These findings suggest that teachers who believe that the offered second chance programmes correspond with the needs of the labour market do not consider dual VET programmes the only option for high-quality second chance programmes, and, alongside that, they are not satisfied with the system of second chance programmes' funding. The correlation between Factor 1 and Factor 4 indicates satisfaction with the realisation of the provided study programme.

On one hand, successful completion of a second chance programme can be considered a motivating factor influenced by individuals' desire to find employment, a better job, or to be promoted, but on the other hand, it should not be forgotten that satisfying employers' needs can create pressure on students and result in experiencing adversity. So, employers should also take certain measures to support their current or future employees' further employability and create conditions for taking part in second chance programmes. In Slovakia, in compliance with the legislation in force (Act No. 5/2004 Coll. on Employment Services as amended), employers are also responsible for their employees' further employability. In this context, increasing employers' awareness about the importance of second chance education for the stability of a (especially lower) qualified workforce should be paid attention to, as should the need for the application of an individualised approach.

#### 4-2-Dual VET in Second Chance Education

VET programmes in general allow second-chance students to obtain a basic qualification and find a way to the labour market by preparing them for a specific profession [24]. They allow students to develop not only their professional skills but also other skills needed to find employment, such as communication skills, problem-solving skills, leadership skills, as well as positive attitudes and behaviours towards the world of work [33, 39]. Dual VET is one of the options, and its application in the system of second chance education is closely related to the requirements of the labour market and its need for a qualified workforce as practical training is carried out at a particular workplace. Dual VET brings several benefits for second-chance students. It helps them overcome certain barriers described by Polidano et al. [13], e.g., monthly income during studies; close collabouration between the school, the employer, and the student; practically oriented curricula; a strong link between training and the needs of the labour market; a high probability of being offered an employment contract by the employer after completing the programme, etc., even though, as pointed out by e.g., te Riele [38] or McGregor et al. [23], they are not suitable for everyone and may discourage more intellectually oriented learners from returning to education. But since the majority of early leavers are not academically oriented, schools with dual VET programmes should be encouraged to open programmes for second-chance students and supported by the state in doing so.

Based on the above, it can be assumed that it is important to create direct links between second chance education programmes and the labour market, especially in the case of practically oriented programmes, which is in line with what Davies et al. [22], Hargreaves [24], or Black et al. [25] claim. Satisfying employers' needs was identified as a determinant of second chance programmes' success. Although, in compliance with the mentioned research findings by other authors, dual VET, which is based on a hands-on approach and allows individualised and personalised forms of education and training, appears to be an appropriate option, the weak negative correlation between Factor 1 and Factor 4 (-0.267) does not confirm this presumption from the aspect of teachers.

# 4-3-Second Chance Schools' Funding

Improving second chance schools' funding is another among the identified factors and is generally considered closely associated with the quality of second chance programmes. There are a variety of sources and patterns of funding for second chance education programmes, including EU funds, funding by the state, local funding, funding from private sources, and other resources [40], but in general, state funding is considered insufficient. Funding received from the state varies across countries, and it is often perceived by stakeholders as a serious issue. As accentuated by the European Parliament [41], in many cases, second chance programmes are funded as temporary initiatives and projects, which is a fact that needs to be changed, as it is important to maintain second chance programmes' sustainability in school contexts, which is only possible by implementing and supporting long-term activities. In this context, the research results obtained are surprising. They show that "funding schools providing second chance education" is not considered by the participants as a priority from the aspect of the success of second chance programmes as it was expected and as it is presented by Rigová et al. [26] based on their research results. Our research sample found satisfying employers' needs and teachers' professional development to be more decisive in terms of the outcomes of second chance programmes.

In Slovakia, the legislative framework for funding schools is given by Act. No. 597/2003 Coll. Financing of Primary Schools, Secondary Schools, and School Facilities. In the country, the system of normative funding is applied, which appears to be insufficient, and increasing school funding is a necessity (not only) in the case of second chance education. In this context, the current situation in providing education in correctional facilities related to the prepared changes in legislation is alarming, as schools providing VET programmes in these institutions will receive increased funding only for students under 26 years of age. It means that they will not be able to cover additional costs, and prisoners' participation in skill enhancement and knowledge acquisition will be reduced. As a consequence, their inclusion in society after leaving correctional facilities can be endangered, and, as emphasised by Stamatiou et al. [42], exclusion from education can lead to a deprivation of opportunities for self-improvement and self-development.

### 4-4- Teachers' Professional Development

It is generally accepted that teachers are among the key determinants of the quality of any educational programme [28], which means that qualified and well-prepared teachers have a big role to play in improving the quality of any provided educational services. To achieve a permanent change, supporting teacher training and responding to learners' and staff's needs is a necessity. This has been confirmed by the present research, since the identified factors 2 ("Promoting the development of teachers' competencies for second chance education") and 3 ("Providing teachers with support in developing their professional skills in the field of second chance education") contain items focused on the need for developing second chance school teachers' skills and competencies. This is in line with Kelly et al. [7], who identified the following principles to be applied to contribute to the efficiency of second chance programmes: i) student-centred approach to learning; ii) socio-emotional development of participants; iii) supportive role of teachers; iv) a supportive learning environment; v) interactive teaching methods; and vi) cooperation with the local environment.

Since teachers' impact on the outputs of second chance programmes is undeniable, they should receive targeted preservice training in the field of teaching second chance students and mixed ability groups as soon as possible during their university studies, but they should also be provided with in-service training opportunities. There is some research evidence that teaching methods in second-chance schools are influenced mostly by the type of in-service training teachers receive [34]. The availability of sufficient lifelong learning opportunities allows teachers to improve their competencies, knowledge, and skills necessary for working with such a specific group of adult learners. Also, support by school leaders in the field of developing teachers' competences contributes to the quality of the provided programmes, which has been confirmed by the present research and the existence of associations between the provided support and the reported need for changes in the system. The results show that the highest degree of correlation can be observed between Factor 2 "Promoting the development of teachers' competencies for second chance education", which is targeted at identifying second chance students' needs, characteristics, and other factors having an impact on the realisation of second chance programmes, and Factor 6 "Potentials for increasing the quality of second chance education", in which the need for a reform in the system of second chance education was investigated. Based on this finding, it can be assumed that teachers who receive sufficient support in developing their competencies in the field of identifying second chance students' educational and social needs-i.e., teachers prepared to tailor the educational programme to students' needs—consider the existing system of education insufficient. This is also supported by the European Association for the Education of Adults [15], which claims that given the characteristics of early leavers returning to the educational system, an emphasis should be placed on developing teachers' competencies in the fields of identifying the learners' individual characteristics, carrying out precise diagnostics, and identifying the occurring social and cultural factors.

Schuchart & Bühler-Niederberger [26] revealed the existence of associations between second-chance students' expectations regarding teacher practice and reality on the one hand and their decision to drop out of their studies on the other. Taking into account the complexity of the problem, it can be assumed that second chance school teachers' lifelong learning activities, their motivation to increase the quality of second chance programmes, and their interest in developing their skills and competencies necessary for teaching adults in mixed ability classes need to be supported by school leaders as well as by the state.

# 4-5-Quality of Second Chance Programmes

The quality of second chance programmes can be improved by providing high-quality content that corresponds with students' needs and takes into account their characteristics, preferences, and abilities. It has also been confirmed by other authors, e.g., Kelly et al. [7], Savelsberg et al. [12], EAEA [15], and is also accentuated by the OECD [8]. The OECD listed seven distinguishing factors between successful and unsuccessful second chance programmes: 1. application of individualised teaching methods; 2. flexible curricula based on students' needs; 3. holistic assessment approaches; 4. working in small classes; 5. providing students with support by multi-professional teams; 6. welcoming and positive learning environments; and 7. partnerships with mainstream education institutions, local communities, and employers [8].

The present research findings confirmed that tailoring second chance programmes to learners' diverse needs and providing them with guidance and assistance in the process of re-engaging in education—which are influenced by second chance teachers' skills, abilities, competencies, and previous training—is important, as it can contribute to increasing the rate of students successfully completing the offered programmes. The above-mentioned correlation between Factor 2 and Factor 6 is interesting in this context, but the negative correlation between Factor 2 and Factor 7 (-0.207) also deserves attention, although it is weak. This finding suggests that teachers who receive sufficient support in the process of developing their competencies in the field of identifying second-chance school students' needs do not consider changes in the system of second-chance education a necessity. It can be assumed that the more prepared or trained the teachers are, the better they can adapt the educational process to the existing context, and so schools can provide educational services of a higher quality.

# 5- Conclusion

Early school leavers' re-engagement in education represents a topical issue within the framework of European education policy and is among the targets of many countries, as early school leavers' involvement in second education programmes has a positive impact on both individuals' lives and learning trajectories, as well as the economies of each country. It is important to recognise the importance of taking measures targeted at pulling adults back into the system of education. Any changes can be introduced only if supported by relevant data, but in the case of changes of such extent and significance as those in the context of second chance education, extensive research is necessary. For conducting research activities, suitable research instruments are needed, and having the opportunity to select the most appropriate one from among a variety of tools contributes to the quality and diversity of research. In this context, developing a research instrument examining the determinants of second chance education from teachers' perspectives—the Second Chance Education Indicators Questionnaire—with confirmed validity and reliability can be considered the present study's main contribution to science as it opens new opportunities to broaden the existing knowledge in the field. The questionnaire is suitable for further research activities within the project but also for the purposes of other research in the field, both in Slovak and international contexts.

In the presented research study, the existence of an internal factorial structure for second chance education indicators was examined. Based on its results, the instruments' validity and reliability were confirmed, and seven factors – "Satisfying employers' needs in the field of education"; "Promoting the development of teachers' competencies for second chance education"; "Providing teachers with support in developing their professional skills in the field of second chance education"; "Funding schools providing second chance education"; "The system of dual VET in second chance education"; and "Potentials for increasing the quality of second chance education" – were identified. Also, the calculated correlations are paid attention to, which are expected to provide initial information for carrying out research within the grant project APVV-18-0018 "Teaching in Schools of Second Chance from the Perspective of a Teacher and an Adult Learner", but also a basis for future research in the field.

The research results show that there is a need for changes in second chance education, and the areas identified as the determinants of second chance education should be paid more attention to in Slovakia, especially because these have been broadly discussed by the professional public not only in the context of second chance education but as issues typical for the entire system of education in the country. Although we are aware of the limits of the study given by the size and composition of the research sample and the fact that these characteristics do not allow us to generalise the findings to the entire population, the obtained findings can be considered significant as second chance education was examined from a new perspective. The gathered data suggest that there is a space for increasing the quality of second chance education in Slovak schools, but there is a need to specify the areas to be improved, which requires carrying out further research activities.

### **6- Declarations**

# 6-1-Author Contributions

Conceptualization, L.P., S.B., and S.K.; methodology, L.P. and M.Z.; writing—original draft preparation, L.P., and S.B.; writing—review and editing, L.P., G.G., M.Z., and S.K. All authors have read and agreed to the published version of the manuscript.

# 6-2-Data Availability Statement

The data presented in this study are available on request from the corresponding author.

# 6-3-Funding

This work was supported by the Slovak Development and Research Agency (grant number APVV-18-0018 Teaching in Schools of Second Chance from the Perspective of a Teacher and an Adult Learner).

# 6-4-Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by The Board for Internal System of Quality Assurance of DTI University, Slovakia, in compliance with the Code of Ethics of DTI University, Slovakia.

# 6-5-Informed Consent Statement

Informed consent was obtained from all individual participants included in the study.

# 6-6-Conflicts of Interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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