

## Article

# Extended Learning through After-School Programs: Supporting Disadvantaged Students and Promoting Social Sustainability

Monica Claudia Grigoroiu, Bianca Tescașiu \* , Cristinel Petrișor Constantin , Cristina Țurcanu and Alina Simona Tecău

Faculty of Economic Sciences and Business Administration, Transilvania University of Brașov, 500068 Brașov, Romania; monica.grigoroiu@unitbv.ro (M.C.G.); cristinel.constantin@unitbv.ro (C.P.C.); cristina.turcanu@unitbv.ro (C.Ț.); alina\_tecau@unitbv.ro (A.S.T.)

\* Correspondence: bianca.tescasiu@unitbv.ro

**Abstract:** After-school programs in Romania are not mandatory, and most of the time, they are funded by parents. In Romania, over 41.5% of students come from disadvantaged families that cannot afford to finance after-school activities. In recent years, there have been only a few free after-school programs for disadvantaged students. Our study aimed to measure the impact of such an after-school program, which mostly uses alternative teaching methods, on several aspects of learning improvement at the level of disadvantaged students in primary and secondary education. The research results revealed a significant improvement in the education of children after they participated in after-school programs for a large range of learning results. Among the intervention actions, mathematical competencies, basic competencies in science and technology, and digital competencies were identified as the main predictors of high learning performance. The results also revealed that a longer length of such programs had a positive effect on educational performance and the socio-emotional development of disadvantaged students. It was also shown that the impact of intervention is more pronounced in the case of young students and adults who followed the “Second Chance” programs. The results support the effectiveness and importance of such projects in promoting holistic and sustainable education and in providing valuable information to decision-makers regarding the impact of after-school programs on the education of disadvantaged people to improve social sustainability.

**Keywords:** social sustainability; sustainable education; disadvantaged students; educational programs; after-school program; second chance education program; extended learning; learning improvement



**Citation:** Grigoroiu, M.C.; Tescașiu, B.; Constantin, C.P.; Țurcanu, C.; Tecău, A.S. Extended Learning through After-School Programs: Supporting Disadvantaged Students and Promoting Social Sustainability. *Sustainability* **2024**, *16*, 7828. <https://doi.org/10.3390/su16177828>

Academic Editor: Dian-Fu Chang

Received: 29 July 2024

Revised: 22 August 2024

Accepted: 24 August 2024

Published: 8 September 2024



**Copyright:** © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Education is recognized as an important factor that contributes to the improvement of living standards by having an important mission in the process of training and development of skills and integration into the labor market, as well as in the reduction and prevention of various phenomena that can negatively affect children and young people (skipping school, corruption, delinquency). It is considered to be essential for human dignity and development [1]. Also, education offers possible alternatives for solving specific situations, such as discrimination, poverty, social exclusion, limited access to information, etc., by being decisive for personal destiny and the destiny of a nation; it is well known that the lack of education determines serious consequences for human wellbeing [2]. Existing studies provide clear evidence of the causal relationship between education and various dimensions of poverty [3] by highlighting the importance of investment in education to improve the economic and social conditions of disadvantaged communities and the health of students [4].

Education is linked to the concept of sustainable development through Agenda 21, an outcome of the 1992 United Nations Conference for Environment and Development [5]. Subsequently, the concerns of the international community for sustainable education have

been reflected by a large number of international initiatives: the period 2005–2014 was declared the Decade of Education for Sustainable Development by the United Nations General Assembly in 2002 [6]; in 2014, UNESCO organized the World Conference for Sustainable Development [7]; in 2015, UNESCO, by cooperating with a series of partners, organized the World Education Forum, with the result being “2030 Education”—a declaration that recognizes the important role of education as the main factor for the development and achievement of other objectives by establishing a new vision of education consisting of “transforming lives through education” and “ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all” [8]. Social sustainability indicators are related to basic human needs and quality of life. Education is among the indicators that measure sustainability [9].

Currently, formal education is considered insufficient for preparing people to face the challenges of economic, social, technological, and environmental opportunities [10], with a special emphasis on ensuring that a sustainable education will contribute to social inequality reduction. A series of approaches can explain a reduction in social inequalities. One of the most popular theories is that of Bourdieu’s culture [11]. It highlights the link between social inequality and several aspects of the education system. Bourdieu argues that our cultural tastes, aesthetic preferences, and even our educational choices depend on a set of statuses and habits that we acquire through life experiences, especially during childhood and adolescence, depending on social class and environment, named “habitus” [12]. Education represents one of the fundamental instruments for sustainable development [13]; this theory highlights the importance of education, both early and lifelong, as an essential factor in the sustainable development of societies.

The European Union places great importance on education, particularly education for disadvantaged children; for that purpose, implicitly, it needs to measure the impact of financing educational projects implemented in disadvantaged schools. Official reports by the European Union (EU) [14] present worrying data regarding specific aspects of disadvantaged schools. According to these, there are children, mostly from poor communities, who are at risk of dropping out or have left school before completing compulsory education [15–18]. The research and analysis show that effective education policies are essential for reducing inequality [19]. Some of the important measures of the European educational policy that aim to achieve equity in education are: increasing public spending for education, especially in primary education; increasing the involvement of disadvantaged children in high-quality early education and care; assigning students to different educational programs or a more advanced stage; eliminating school differences and admission regulations; and reducing the number of students who repeat years of study [14].

### *1.1. Social Sustainability and the Education of Disadvantaged Children—An Imperative for the Future*

The existing literature highlights multiple critical aspects related to social sustainability for disadvantaged children.

Social sustainability refers to social, cultural, and political issues that affect people’s lives within and between nations [20]; it can be described as the sum of formal and informal processes, systems, and networks of relationships that work together to build healthy and viable communities [21]. In general, social sustainability involves “equitable access to learning opportunities and jobs, social mobility, social cohesion and justice, quality of life, participation, empowerment, and cultural identity based on self-confidence and a balance between innovation and tradition” [22]. The concept of social sustainability encompasses topics such as equity, community, diversity, human rights, social justice, and social responsibility [23]. The social aspect of sustainability requires a conscious effort to improve the quality of life for all children [24] by creating equal opportunities and providing long-term solutions to societal challenges such as educational inequalities and disadvantaged areas [25]. Social innovation initiatives through educational processes are

considered solutions for a sustainable future to help reduce regional disparities and increase territorial competitiveness [26].

Schools in disadvantaged areas do not offer students enough possibilities for personal development. Most of the time, families with socio-economic problems collaborate only formally and passively with the school [4]. Also, family involvement after student graduation is low [27]. Family socio-economic status represents the main factor that influences academic performance, but the relationships between status and performance may be different in different sociocultural contexts [28].

Also, although in recent years, the educational inequality caused by gender has decreased [29], in some countries, the phenomenon persists, with studies confirming that higher levels of discrimination are associated with girls' education [30–32].

Despite their importance in the global educational ecosystem, rural schools remain less visible [33]. Different studies have revealed that a continuous consolidation of schools' efforts to ensure the improvement of student wellbeing in rural areas is necessary [34]. Educational systems must be well structured. They need clear objectives and qualified management [35]. The educational environment must be safe, healthy, and stimulating. It must provide proper conditions for a learning process [36] to ensure complete development for students [37]. The didactic service quality is essential for involving students in school activities [38]. Existing research reveals that 50–70% of educational benefits gained from movement in a more favorable area represent the results of attending better schools [39].

Intervention programs, especially those designed according to the characteristics and needs of the target population, are considered a viable and successful strategy for reducing educational inequities in rural areas [40].

Work practices must be focused on local needs [41]. Recent research has shown that a more supportive environment and more opportunities for structured interactions are associated with improved test scores for children from low-income families [42]. It also found that a USD 1000 increase in per-pupil spending in United States public schools (over a four-year period) increased test scores, college access rate, and high-school graduation rate [43]. Governments and international organizations must find effective and measurable interventions to close educational gaps and ensure equal access to education for all children.

### *1.2. Extending Learning Time*

The effect of time spent in class on student performance represents an important topic for educational research. The existing literature reveals that there is a positive association between time spent in educational activities and academic achievement [36]. It has been found that students from families with higher incomes spend more time at school (on average) than students from disadvantaged backgrounds [44]. Another important aspect is the positive impact on student wellbeing of the effective use of time for other activities outside the classroom [45,46]. Also, the existing literature reveals the positive impact of reading—both at school as well as at home—on the comprehension capacity of children from low-income families [47]. It has been shown that students with low educational achievement disproportionately replaced learning time with harmful activities such as watching TV or playing computer games rather than other beneficial activities with an impact on their development. Neither parents nor schools have been able to find solutions to support underperforming students [48]. Some studies show that increasing the time for learning and doing homework after school, as well as other extracurricular educational activities, can support the development of cognitive skills and can improve the students' academic performance while reducing absenteeism among low-performing students [49]. At the same time, research supports the fact that learning style has a statistically significant effect on student performance [50]. Such findings highlight the need to adopt educational strategies that support both the extension of study time as well as the active involvement of students from disadvantaged environments in educational activities.

### 1.3. After-School Programs

Educational interventions in the form of extended after-school programs are considered appropriate to diminish student performance gaps, as they can offer supplementary educational opportunities after regular classes [51]. This aspect highlights the need to develop and implement educational programs that meet the diverse needs of students and can contribute to equity and inclusion.

In recent decades, after-school programs for students have experienced a significant expansion [52], supported by an increase in government and private funding. The existing literature has explored both the effectiveness of these programs as well as their effects on various dimensions of health, socio-emotional wellbeing, and the development of young generations [53]. Most of the time, children from disadvantaged areas face a lack of supervision. In these circumstances, after-school programs are a viable solution and also a valuable resource for improving the quality of life and satisfaction of young people [45]. Involvement in the extracurricular context is a key factor in predicting youth outcomes [54]. These programs are recognized for their potential impact on the personal and social development of participants [55,56]. Specific activities designed for young people participating in after-school programs help them face similar activities during adulthood [57].

Most after-school programs offer a hot meal to participants. The literature shows that school feeding programs have a significant effect on children's school performance and health [36,58]. In general, children who benefit most from school feeding programs are those coming from disadvantaged, rural, or low- and middle-income families, those with low levels of parental education, or those with migrant parents [59].

School absenteeism is a significant problem that can seriously affect academic performance and personal development among students belonging to vulnerable groups [60]. Identifying solutions to this problem has become a global priority [61]. After-school programs have been proposed as a potential solution to combat absenteeism and support students' school engagement [62,63], thus providing important contexts for the development and wellbeing of disadvantaged youth [64]. The involvement in extracurricular activities, such as those specific to some after-school programs, has caused a decrease in problematic behavior, for instance, in absenteeism, violence, and the use of prohibited substances [62,63]. Students who took part in such programs displayed more positive behavior and fewer risky behaviors [65].

Although the literature suggests that after-school programs have a positive impact on absenteeism by providing a structured and supportive environment, the evidence regarding the effectiveness of these programs is mixed, and the observed effects are often modest [66]. Some studies indicate that although after-school programs can reduce absenteeism and they can influence some behaviors, the effects on school performance and behaviors are not always significant [42]. Therefore, it is crucial to pay attention to the quality of educational programs [67], especially the after-school ones [68]. Also, the context of implementation must be taken into consideration to ensure maximum benefit for students. The quality of after-school programs is crucial to achieving positive outcomes for children who grew up in poverty by providing the right environment for the development of social-emotional skills (such as empathy, stress management and collaboration, self-control, and participant wellbeing) [27,64,67,69].

By recognizing the importance of math education, many after-school programs have developed important additional platforms for improving students' math skills [70]. Many research results have shown that such programs lead to improvements in mathematics and native language skills and they also bring an important contribution to continuing education beyond primary school [71]. Other research shows the implications of participating in arts-based youth programs [72]. In the specialized literature, some findings support the importance of introducing games into extracurricular programs for primary school children [73].

Previous research has provided conclusive evidence that socio-economic status, educational cycle, and the number of days of extracurricular services offered per week are

moderating variables that may influence the effects of an extracurricular program [74]. These findings highlight the need for a continuous investigation of such programs and an ongoing monitoring of their impact to ensure they remain effective and tailored to student needs.

#### *1.4. The Importance of Early Interventions*

An important aspect of social sustainability is early education. Early educational interventions have long-lasting effects on individuals' later development [75,76]. These effects are enhanced by the adoption of pedagogical methods that encourage critical thinking and personal initiative [77], effective interventions that cultivate social-emotional skills [76], and the improvement of lifestyle behaviors among disadvantaged children [78]. Investments in quality early education and the development of effective education policies are essential to reducing poverty and inequality [79,80]. The long-term positive results of such investments in children from disadvantaged families are proven [81].

#### *1.5. The "Second Chance" Education Programs and Their Role in Ensuring Equity and Social Development*

Another perspective that suggests education could be approached in terms of improving social sustainability is represented by the "Second Chance" program. These types of programs have become increasingly relevant in offering young people and adults who have not completed their compulsory education new opportunities for success [82]. Studies carried out in the European Union in 2022 showed that the early school leaving rate was 9.6%. In Romania, the proportion of young people and adults between the ages of 18 and 24 who have not completed compulsory education significantly exceeds the EU average, reaching 15.6%, a slight increase compared to the previous year. This rate is particularly high in rural areas (24.5%) and among vulnerable groups, especially Roma groups (75%) [83].

Adults who have not completed compulsory education programs and young school leavers are affected by a range of personal, social, and economic factors [84]. Some phenomena lead to significant negative economic and social consequences [85], which emphasizes the need for their educational integration [61]. Studies in the field reveal the need to revise educational and social policies [84] and to promote reforms that improve the socio-economic integration prospects of participants in these programs [86].

In the last two decades, the European Union has initiated and funded special educational programs known as "Second Chance Schools" (SCSs), with the main aim of combating high-school dropout rates and decreasing social exclusion [87]. Many of the initiatives have had a significant impact on the lives of participants. From achieving tangible educational and employment outcomes to personal and social development, SCS programs have become essential in helping to promote equity and reduce inequalities [88].

Such initiatives can be successful as a result of specialist recommendations for actions that improve the educational experience, such as the development of study programs that stimulate the active involvement of students in the educational process [89], revision of didactic materials [90], and adoption of flexible teaching methods and learning strategies adapted to the needs of young people with certain difficulties [85].

Researchers have demonstrated positive associations between the quality of youth programs and their academic outcomes, suggesting that these programs can drive positive educational paths when youth perceive these programs as meeting their needs [91]. To prevent future educational and professional dropout, it is essential to pay attention to aspects related to the motivation and identity of the people at risk [61,92], as well as the complex interaction between educational, family, and economic factors that influence their decision to return to studies [61]. The relationship between adult learning motivations and their age reflects a strong connection. Existing research has found that for adults, the older they are or the lower their level of education, the lower their motivation to learn [93].

Among the main reasons why young people and adults return to school is the necessity to meet the needs of early school leaving [87], such as gaining qualifications to

become employable and acquiring key knowledge and skills [94]. The literature reveals the importance of analyzing not only the immediate results of the programs but also their influence on long-term access to educational and professional opportunities for disadvantaged groups [95]. Specialists argue that transitions to such programs should be supported by career-guidance specialists from both formal and informal agencies to help young people identify the appropriate educational and career paths [96].

### *1.6. The Problem Statement and Its Significance*

Holistic and sustainable interventions require assessments of a program's impact on reducing educational inequalities [97] and further development [98]. It is believed that programs that prove their effectiveness in improving the educational skills of participants can serve as a model for future education policies [99].

Continuous and rigorous research and assessment are needed for a better understanding of the way that these issues can be addressed and for a better evaluation of the way that programs can be optimized to support the educational and personal development of disadvantaged people.

Starting from Bourdieu's theory of culture, we consider that it is important to contribute to an in-depth understanding of how changes in habits related to education—through prolonged exposure to an educational environment—may have a favorable impact on the educational development of disadvantaged students. The existing literature analyzes the effects of students' exposure to after-school educational programs from a wide range of perspectives, as previously presented.

Our work brings a significant perspective in relation to previous research by presenting the results obtained through intervention in a group of disadvantaged children, youth, and adults from a rural region in Transylvania, Romania. The research aims to investigate whether a series of variables—intervention time and length of exposure to extended time of education in the context of personalized education methods such as free after-school programs—are moderating variables for improving certain elements of the education of disadvantaged people.

To realize the research aims and by taking into consideration the existing research in the field of sustainable education, particularly the improvement of learning for disadvantaged students, the following objectives were set:

O1. Measuring the impact of disadvantaged students' exposure to a free after-school educational environment on the analyzed components of training.

O2. Measuring the impact of the educational cycle in which the student participated in the after-school program on learning improvement.

O3. Measuring the impact of the length of the intervention on learning improvement;

O4. To identify the components that better predict increased learning performance;

Based on previous research, we found that after-school programs for disadvantaged people can contribute to improving their education if certain requirements are met [49,62–64]. Among these requirements, early intervention [74,76,81] and how resources are allocated [100] can be appreciated as important.

To establish the research hypotheses and the methodology, we started with the official documents issued by the Ministry of Education and Research of Romania for the design and evaluation of the National Curriculum [101] and the graduate training profile for different levels of study [102]. These documents reveal that the evaluation process should be carried out based on a series of items grouped into seven components, namely health and personal hygiene [4,58], communication in the native language [71,81], mathematical competencies and basic competencies in science and technology [70,103], digital competency [104], learning to learn [69], social and civic competencies [46], sense of initiative [27], and cultural awareness and expression.

We considered it to be important to test the existence and the impact of the analyzed educational design on the components specified by the Ministry of Education and Re-

search and to find out whether all the components have a significant effect in predicting performance.

Several studies in the field emphasize the impact of early intervention [76,81] on achieving consistent results if certain conditions are met, and we considered it important to find out whether our sample confirms these results.

Also, the issue of the duration of the support programs is always in the minds of educational management bodies [105], and it has been the subject of several studies with conflicting results [74,103]. Thus, we considered it useful to investigate the intervention period's influence on students' education.

Therefore, we established the following hypotheses:

**H1.** *Exposure of disadvantaged students to an after-school educational environment program has a significant impact on student education;*

**H2.** *The educational cycle influences learning improvement;*

**H3.** *The length of the intervention influences learning improvement;*

**H4.** *All the components of the experimental treatment have a significant effect in predicting high learning performance.*

After the introduction, this paper presents the following sections: research context and the project in which the experimental treatment was applied, as well as the research methodology are presented in Section 2. Section 3 presents the results of the applied statistical tests. Section 4 provides the results of testing the hypothesis. It also includes a series of discussions, and it approaches critically the research results by relating them to other findings from the existing literature. The paper synthesizes the main findings and concludes them in Section 5.

## 2. Research Context and Methodology

According to the 2020 Eurydice Report on Equity in School Education in Europe [105], 37 out of 42 European education systems have adopted important initiatives to promote equity in education and to support disadvantaged students. The duration of compulsory education varies from 8 to 12 years, and the time dedicated to teaching the compulsory curriculum is between 4541 and 11,340 hours. As for public funding per student, it stands between 1940 and 13,430 purchasing-power standards, and private spending on education ranges from less than 1% to 19% of public spending.

Around 50% of European education systems recommend additional free or subsidized activities outside normal school hours. In 30 systems, additional funding is allocated to schools with disadvantaged pupils. Other forms of support exist in Greece, Cyprus, Luxembourg, Hungary, and Montenegro; in seven schemes (Croatia, Malta, Romania, Albania, Bosnia and Herzegovina, Norway, and Turkey), no additional or other support is provided. In just over half of European systems, authorities encourage primary and lower secondary schools to offer additional free or subsidized activities. In most of these systems, the requirements apply to all or most schools. There are exceptions, such as Malta, Austria, and Turkey, where activities are only available in certain schools, and France and the United Kingdom, where certain activities are only offered to specific schools.

In Iceland, the municipal authorities are obliged to offer after-school activities for students in Grades I–IV, with possible fees. In France, schools in disadvantaged areas have to offer extra remedial hours and activities of interest, and in Malta, students with reading and writing difficulties benefit from additional lessons. In Northern Ireland (part of the United Kingdom), schools in disadvantaged areas receive funding for extracurricular activities.

In some countries, such as Germany, Cyprus, Greece, Hungary, Austria, and Portugal, “all-day schools” operate. The Czech Republic, Luxembourg, and Finland provide pedagogical frameworks for additional activities, and in Scotland (part of the United Kingdom),

this framework is underdeveloped. In Finland, additional activities follow a curriculum set by the Finnish National Agency for Education. Luxembourg and England, Wales, and Northern Ireland in the United Kingdom systematically monitor the quality of these activities. In many educational systems, schools may not charge fees for activities in the compulsory curriculum, but they may charge fees for optional additional activities.

In Romania, between 2019 and 2022, the annual number of students in primary and secondary schools has changed slightly due to demographic variations and migration, according to data provided by the National Institute of Statistics [106].

According to the existing data, in primary and secondary schools, an average of 1.6 million students studied annually. A significant part of these—approximately 42.3%—came from rural schools. Thus, more than 680,000 students studied in rural schools—considered to be disadvantaged—which reflects the specific challenges of this environment, i.e., limited access to educational resources and poor infrastructure. In rural areas, the school dropout rate is higher compared to urban areas [107–111], which highlights the need for additional interventions to support education in these communities.

### 2.1. The Research Context

The research was carried out within a project financed by the European Union through the “Human Capital Operational Program 2014–2020” and priority axis “Education and Skills”. The project aimed to provide free after-school educational services to disadvantaged students, with the goal of improving their education and, therefore, contributing to the enhancement of social sustainability.

Various governmental and non-governmental initiatives supported the after-school programs carried out in Romania during the analyzed period. The interventions financed by the European Union, such as the POCU (the Human Capital Operational Program), were intended to support Romania, through its educational system, in achieving its strategic objectives—to grow intelligently, sustainably, and favorably to inclusion [112] and to reduce economic and social disparities [113].

To achieve a deeper understanding of the impact that time spent in an educational environment has on the training of disadvantaged people, the educational evolution of the beneficiaries of a project funded by the EU over a period between 1 and 3 school years (between 2 and 6 semesters) was analyzed. Within this project, free access to after-school educational services, as well as educational methods with a high degree of attractiveness, was offered. The project was implemented in the period 2019–2022 in two schools from a rural, disadvantaged region of Transylvania (Romania), and it addressed primary and secondary school students as well as young people and adults who had not completed their compulsory studies.

Within the project, a set of actions was implemented for 2–4 hours per day after the mandatory school schedule. The activities were designed to ensure a suitable environment for the assimilation and consolidation of knowledge provided in the compulsory school curriculum, but also to form characters and to prepare students for life, promoting values such as non-discrimination, tolerance, social inclusion, and responsibility.

The implemented measures within this project were aimed at improving the infrastructure (refurbishing the spaces and equipping them, including a space dedicated to cultural activities and playgrounds in the schoolyards), the purchase of equipment (laptops, printers, video projectors, and educational computer programs and various teaching materials), and to provide hot meals every day.

The activities carried out during the project consisted of workshops with the purpose of encouraging school desegregation through games, promoting the development of self-esteem, offering certain possibilities of intercultural knowledge, emphasizing the value of equal opportunities and non-discrimination, developing the ecological spirit, improving geographical orientation, and emphasizing the importance of protecting the environment and biodiversity.

To carry out the activities, the experts involved developed a specific methodology regarding activity development. They planned the activities to complete the mandatory teaching program, prepared teaching materials, ensured the performance of teaching activities, provided supervision and guidance in carrying out the activities, evaluated the activities carried out, etc.

The educational program included activities to accomplish the following objectives: writing training and strengthening, reading and communication skills in the native language; mathematical competency and fundamental competency in science and technology; digital skills training; learning skills development; social and civic competency; developing the spirit of initiative and cultural sensitivity and expression; doing homework; and recovery for students with cognitive or emotional difficulties.

The teaching activities had a student-centered and interactive approach. Modern teaching–learning methods such as investigation, debate, role-playing, simulation play, creative and experiential activities, play, theater, and art were used. The local environment and community were used as a resource for learning and engagement, with the aim of encouraging students to explore sustainability questions and issues in contexts relevant to them and their community. For the free and harmonious development of students, the activities were carried out according to their own rhythm and individual needs, supporting autonomous and creative formation. For some activities/actions, either homogeneous groups of children or combined groups were built.

To carry out this activity, the existing specific equipment from the schools was used, and new equipment was purchased, such as school furniture, laptops, multifunctional printers, video projectors, toys, various teaching materials, etc.

As most students came from an environment that could elicit psychological fragility, students sought psychological counseling with a focus on motivational development and improving self-esteem during the project.

This activity was carried out by a psychologist who led specific activities with the students, on an average of 2 hours per week with each class of students.

The following activities were carried out: individual psychological counseling activities; selection, administration, and interpretation of standardized psychological assessment tools; investigation of psychological problems specific to the rural school environment; elaboration and implementation of individualized/group plans with a preventive and/or intervention nature; and providing special counseling, helping in the learning process, and creating conditions for spending time in activities organized jointly with other children. The activities were carried out within the schools, and, if the situation required, the activities took place at the students' homes.

Various methods and validated tools were used to carry out the activities; they were applied in formal and informal situations within the school.

Health and personal hygiene were also taken into consideration as important elements of learning experiences and as the basis of an active and healthy lifestyle. Therefore, improving children's health and personal hygiene was considered part of the project objectives. Thus, weekly thematic activities were carried out under the title "Education for Health", and the children's health statuses were periodically supervised by specialized personnel. This activity was carried out by a doctor and two nurses. Each class benefited from this specialist support for at least two hours a week.

The educational program included different activities to accomplish the following purposes: education and training for children and young people on the hygiene conditions necessary for defending, preserving, and promoting health; and harmonious physical and neuropsychological development and prevention of diseases. Topics such as "Consequences of Alcohol and Tobacco Consumption", "How to Recognize Diseases", "How to Provide First Aid", "The Toothbrush in the Fight against Cavities", "Let's Prepare Healthy Food", "Where Are the Microbes Hiding?", and "Healthy Mind in Healthy Body" were approached. The homework was adapted differently depending on the students' ages and

levels of understanding. Specialists permanently monitored the children's health status through screening and prevention actions.

For the young people who left school and adults who failed to complete their compulsory education, a "Second Chance" support program entitled "It's Not Too Late to Learn" was carried out. Through this program, the participants benefited from a personalized training program consisting of consultations, meditations, and counseling carried out within individuals and groups depending on their needs and the related study program. An IT platform was also implemented in the form of an interactive game of culture, with the role of contributing to the development of skills in the use of online platforms and increasing the degree of attractiveness of learning activities.

The project was selected after thorough documentation of the programs implemented in Romania in underprivileged environments by taking into consideration the main problems faced by most underprivileged schools in Romania. The selected project activities aimed to improve training to reduce the discrepancies between students, ensure equal access to education, prevent school dropouts, and facilitate the educational reintegration of people who have not completed compulsory studies. Also, within the project, various actions were designed to promote values such as non-discrimination, social inclusion, responsibility, and social, religious, and ethnic tolerance, as well as to combat prejudices, components whose intervention in general training we wanted to observe through our research.

## 2.2. Research Methodology

In the context of the described project, the research method applied to achieve the objectives of the study was an experiment based on a one-group pre-test–post-test design  $O1 \times O2$  [114].

The project activities described above were experimental treatments.

To find out what impact the experimental treatment had on the educational development of the participants, we conducted two measurements. The activities offered in this after-school program, as described above, represent experimental treatment. Activities were established to satisfy the needs of disadvantaged students and to increase their learning performance. A large part of the proposed activities has been studied by other researchers, and they have proven their effectiveness. Students from three educational cycles participated in these activities—primary cycle (Grades 0–4), secondary cycle (Grades 5–8), and young people and adults who had returned to the education system within a "Second Chance" program after leaving school.

The students' participation in the after-school activities varied from 2 to 6 semesters. To record the effects of the experimental treatment, the students' learning performances were measured before participating in the after-school activities and after at least two semesters.

### 2.2.1. Data Collection and Sample Members

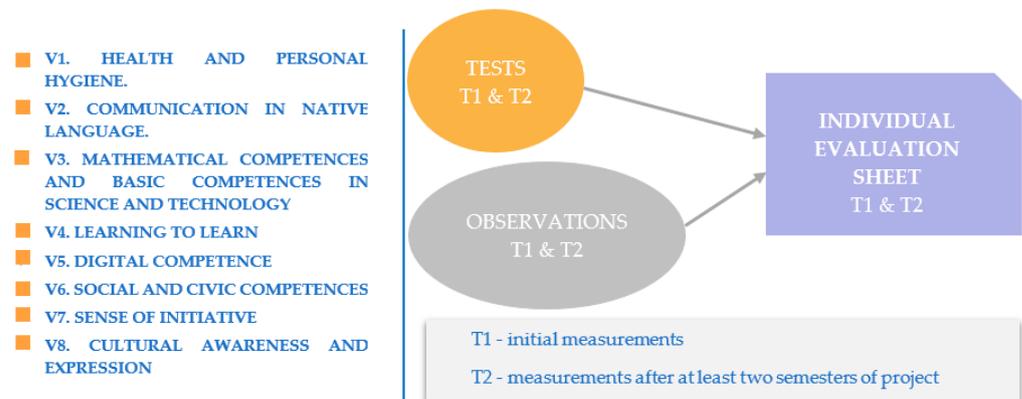
To measure the impact of the intervention through the analyzed project, an evaluation form was designed (Appendix A), which contained 24 items that could measure students' knowledge, skills, and attitudes. The items were adapted from two official documents of the Romanian Education Ministry: "Benchmarks for Designing, Updating, and Evaluating the National Curriculum" [101] and "The Educational Profile of Graduates at Different Levels of Study" [102]. The 24 items were grouped into eight components (key competencies in education): health and personal hygiene (V1), communication in the native language (V2), mathematical competencies and basic competencies in science and technology (V3), digital competencies (V4), learning to learn (V5), social and civic competencies (V6), sense of initiative (V7), and cultural awareness and expression (V8).

Each item was measured on an equally distanced interval scale ranging from 1 point (very low level) to a maximum of 10 points (equivalent to a very high level of learning performance). For each student included in the sample, teachers made an overall appreciation

based on tests, observations, and current evaluations [81]. The results were recorded by teachers in an evaluation sheet containing the 24 items at two different times.

The first measurement took place before the students started participating in the project activities (T1). At the end of the period of implementing the project (T2), the teachers did a new evaluation using the same methods to measure the results.

The data collection methodology for the analyzed variables is presented in Figure 1.



**Figure 1.** The structure of the data collection tool.

For the selection of participants, the total sampling method was used [115,116]. The subjects of the experiment were students who attended courses in the two schools during the 3 years of project implementation (the period in which our research was also carried out). This project was chosen to recruit the participants in the experiment according to the single-case method [117]. This project was selected because the objectives, the implemented activities, and the teaching methods within the project met the needs of our research.

The sample consisted of 161 students, 46.6% from primary school, 28% from secondary school, and 25.5% young people and adults enrolled in the “Second Chance” program, aged between 7 and 58 years, and 42.2% female and 57.8% male.

### 2.2.2. Data Validation

Data analysis included several procedures. First, the database was checked to ensure that there were no incomplete and atypical records. To establish the internal consistency of the set of items used in the measurement process, the Cronbach Alpha coefficient was calculated. The Cronbach Alpha coefficients of all components were higher than 0.7 (Table 1). These values confirmed the reliability of the scale, and they suggested that the designed instrument is adequate for research purposes.

**Table 1.** Cronbach’s Alpha Reliability Test.

Scale	N of Items	T1 Cronbach’s Alpha	T2 Cronbach’s Alpha
V1—Health and personal hygiene	2	0.983	0.981
V2—Communication in the native language	3	0.990	0.988
V3—Mathematical competencies and basic competencies in science and technology	5	0.989	0.988
V4—Digital competencies	3	0.983	0.982
V5—Learning to learn	2	0.990	0.989
V6—Social and civic competencies	3	0.984	0.982
V7—Sense of initiative	3	0.990	0.989
V8—Cultural awareness and expression	3	0.978	0.978

Source: SPSS database.

### 2.2.3. Variable Design and Data Analysis

To create the proposed components (V1 to V8), a mean score was calculated for each individual, taking into account their scores obtained for the items that contribute to these variables. Thus, each component summarizes the results obtained by the students to the analyzed items. The components were calculated for two time points: before (T1) and after (T2) the experiment. The differences between the two measurements (T2–T1) were computed for each component to measure the effect of the experimental treatment on the sample members. The statistical significance of these differences was tested using the Student's *t*-test for paired samples.

To achieve the rest of the research objectives, new dimensions were computed (D1 to D8) as the difference between the values of the initial components recorded at the two time points (T2–T1). New continuous variables were obtained, with data ranging from 0 to 5. These represent the effect of the experimental treatment on each component analyzed. In addition, to measure the overall effect of the experimental treatment, a new variable (OE) was also computed, the values of which are the averages of the dimensions D1 to D8 calculated for each member of the sample. This variable has values between 0 and 4.25. The mean values of these new variables and the value ranges are presented in Table 2.

**Table 2.** The new dimensions expressing the learning improvement.

Component	N	Minimum	Maximum	Mean
D1—Health and personal hygiene	161	0.00	4.00	1.3043
D2—Communication in the native language	161	0.00	4.00	1.3791
D3—Mathematical competencies and basic competencies in science and technology	161	0.00	4.00	1.4435
D4—Digital competencies	161	0.00	4.67	1.3582
D5—Learning to learn	161	0.00	5.00	1.4224
D6—Social and civic competencies	161	0.00	4.00	1.3662
D7—Sense of initiative	161	0.00	4.67	1.3357
D8—Cultural awareness and expression	161	0.00	4.67	1.3436
OE—Overall effect	161	0.00	4.25	1.3692

Source: SPSS database.

To test the hypothesis regarding the influence of the implemented educational cycle on learning improvement (H2), analysis of variance (ANOVA) was used. A one-way ANOVA was computed for each dimension regarding the effect of the experiment (D1 to D8) as the dependent variable, with the educational cycle in which the program was implemented as the independent variable. The independent variable has three categories: primary education, secondary education, and the “Second Chance” program. The influence of the same variable on the overall effect (OE) was also tested using one-way ANOVA.

To test the third hypothesis (H3), the same analyses were computed by considering as independent variables the length of the intervention: short period (1–2 semesters), medium period (3–4 semesters), and long period (5–6 semesters).

The last analysis aimed to identify the dimensions that have the highest influence on student progress after the experiment. In this regard, sample members were divided into two groups: students with results higher than the overall mean of progress (high learning performance) and others with results under the overall mean. A discriminant analysis was computed with these groups as dependent variables and the eight dimensions as independent variables. The discriminant analysis helps to predict the group to which a student belongs using a discriminant function. In our case, the general equation of the discriminant function is:

$$DF = V_1D_1 + V_2D_2 + V_3D_3 + \dots + V_8D_8 + a \quad (1)$$

where DF is the discriminant function,  $V_1, V_2, \dots, V_8$  are the function coefficients,  $D_1, D_2, \dots, D_8$  are the independent variables, and  $a$  is the constant.

The relative importance of the predictors was considered according to the standardized function coefficients and the discriminant loadings presented by the structure matrix. Wilks' Lambda coefficient was also used to test the significance of the discriminant function.

All the above tests and analyses were computed using SPSS v.26. The resulting tables were transformed to obtain a better illustration of the results.

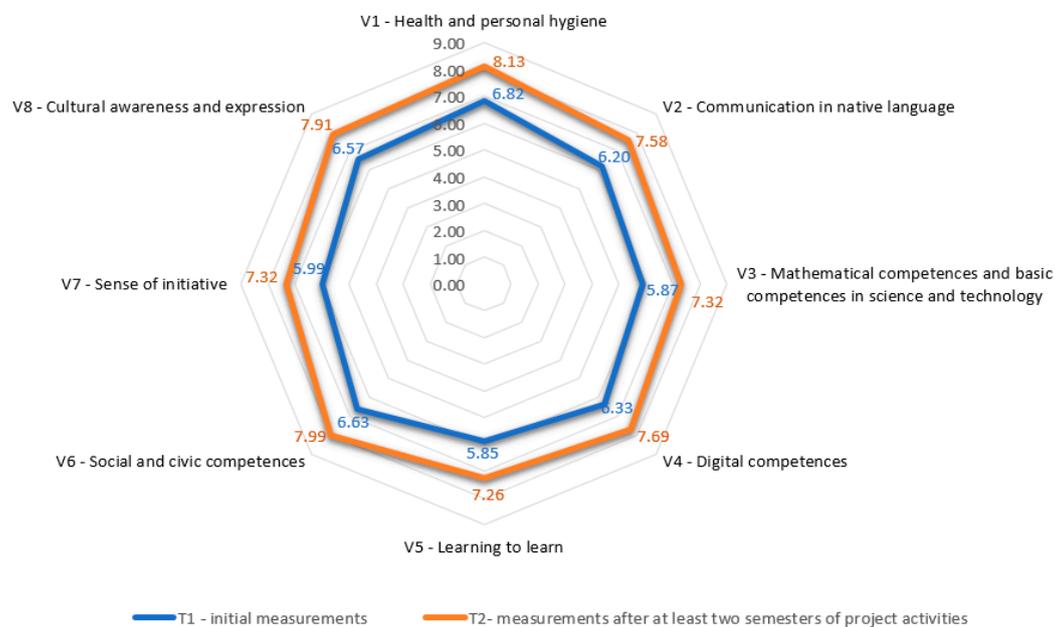
The result validation was carried out by the method of triangulation [118–123], using an analysis of relevant literature and alternative sources of reports provided by different entities about the Human Capital Operational Program 2014–2020, implemented by the European Union in the field of education [124].

### 3. Results

The research results will be presented in this section for each objective.

O1. Measuring the impact of disadvantaged students' exposure to a free after-school educational environment on the analyzed components of training.

The average scores of the variables, calculated before the experiment (T1) and after the experiment (T2), are presented in Figure 2.



**Figure 2.** The mean scores recorded for the analyzed sample at the two time points (T1 and T2). Source: designed by the authors based on the research data.

To test the statistical significance of the differences between the mean scores obtained after and before the experiment (T2–T1), the Student *t*-test for paired samples was used (Table 3).

The results reveal an increase in means after the project was implemented compared to the initial moment for all eight variables. All differences were statistically significant ( $p < 0.05$ ). The biggest difference between the averages recorded at the two time points was recorded for mathematical competencies and basic competencies in science and technology (1.44 points).

The results were between 5.86 points and 6.82 points for the initial testing (T1) and between 7.26 points and 8.13 points for the follow-up testing (T2).

In all the analyzed situations, the values recorded for the T1 moment are lower than the T2 moment; this confirms the positive impact of the project on the following training components.

**Table 3.** The differences between mean scores and the results of the Student’s *t*-test.

Item	T1		T2		Difference	t	p
	Mean	Std. Deviation	Mean	Std. Deviation			
V1—Health and personal hygiene	6.8230	2.1509	8.1273	1.9703	1.3043	21.4687	0.0000
V2—Communication in the native language	6.1988	2.0658	7.5778	1.9771	1.3789	20.7573	0.0000
V3—Mathematical competencies and basic competencies in science and technology	5.8720	2.1072	7.3155	2.0959	1.4435	23.4538	0.0000
V4—Digital competencies	6.3312	2.2283	7.6896	2.1484	1.3584	18.4745	0.0000
V5—Learning to learn	5.8516	2.2697	7.2640	2.3117	1.4224	19.4135	0.0000
V6—Social and civic competencies	6.6272	2.1686	7.9939	2.0601	1.3666	20.2812	0.0000
V7—Sense of initiative	5.9852	2.2747	7.3207	2.2760	1.3356	19.2620	0.0000
V8—Cultural awareness and expression	6.5653	2.1346	7.9089	2.0885	1.3436	19.4459	0.0000

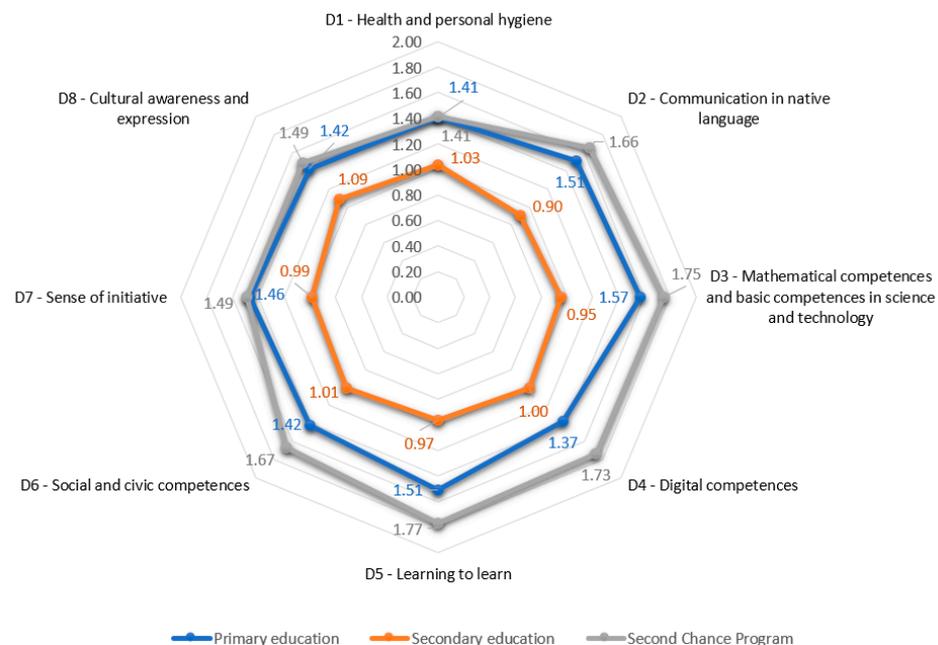
Source: SPSS database.

The results of the Student *t*-test indicate a statistically significant difference between the means for all eight components ( $p < 0.05$ ) (Table 3).

O2. Measuring the influence of the educational cycle in which the student participated in the after-school program on learning improvement.

To achieve the second research objective (O2), the influence of the educational cycle in which the program was implemented on the learning improvement, which is the effect of the experimental treatment (D1 to D8), was tested using the analysis of variance (ANOVA).

The results indicate that there are differences between the means of the student groups from the three educational cycles. The lowest progress rates are recorded among secondary school students, and the highest progress rates are recorded among adult learners in the “Second Chance” program (Figure 3).



**Figure 3.** The differences between the means of the three groups for each dimension Source: designed by the author based on the research data.

If we compare the results of the two groups formed by school-age pupils—primary school and secondary school—the results show that the means recorded by the students from the primary cycle are higher than those of students from secondary school.

The analysis was continued by testing the statistical significance of the differences between the means of the three analyzed groups. ANOVA was performed on the eight analyzed dimensions and the overall effect of the experiment (Table 4). The results indicated that the educational cycle has a significant influence on almost all analyzed dimensions ( $p < 0.05$ ): health and personal hygiene ( $F = 4.006, p = 0.020$ ), communication in the native language ( $F = 11.699, p = 0.000$ ), mathematical competencies and basic competencies in science and technology ( $F = 15.501, p = 0.000$ ), digital competencies ( $F = 7.113, p = 0.001$ ), learning to learn ( $F = 9.457, p = 0.000$ ), social and civic competencies ( $F = 7.156, p = 0.001$ ), and sense of initiative ( $F = 5.223, p = 0.006$ ). The only exception is represented by cultural awareness and expression ( $F = 2.786, p = 0.065$ ). In this case, the influence of the education cycle is not statistically significant.

**Table 4.** ANOVA results in the case of the educational cycle.

		N	Mean	Std. Deviation	F	p
D1—Health and personal hygiene	Primary education	75	1.4067	0.92887	4.006	0.020
	Secondary education	45	1.0333	0.12613		
	Second Chance Program	41	1.4146	0.80547		
D2—Communication in the native language	Primary education	75	1.5113	1.01728	11.699	0.000
	Secondary education	45	0.9040	0.22036		
	Second Chance Program	41	1.6585	0.71324		
D3—Mathematical competencies and basic competencies in science and technology	Primary education	75	1.5707	0.91042	15.501	0.000
	Secondary education	45	0.9511	0.12177		
	Second Chance Program	41	1.7512	0.69969		
D4—Digital competencies	Primary education	75	1.3689	1.08591	7.113	0.001
	Secondary education	45	1.0000	0.00000		
	Second Chance Program	41	1.7317	1.00604		
D5—Learning to learn	Primary education	75	1.5067	1.09203	9.457	0.000
	Secondary education	45	0.9667	0.12613		
	Second Chance Program	41	1.7683	0.92937		
D6—Social and civic competencies	Primary education	75	1.4175	1.03255	7.156	0.001
	Secondary education	45	1.0069	0.25987		
	Second Chance Program	41	1.6668	0.79624		
D7—Sense of initiative	Primary education	75	1.4624	1.12165	5.223	0.006
	Secondary education	45	0.9853	0.06877		
	Second Chance Program	41	1.4883	0.75660		
D8—Cultural awareness and expression	Primary education	75	1.4177	1.13256	2.786	0.065
	Secondary education	45	1.0887	0.25965		
	Second Chance Program	41	1.4878	0.72314		
OE—Overall effect	Primary education	75	1.4578	0.92704	9.470	0.000
	Secondary education	45	0.9921	0.09103		
	Second Chance Program	41	1.6210	0.63303		

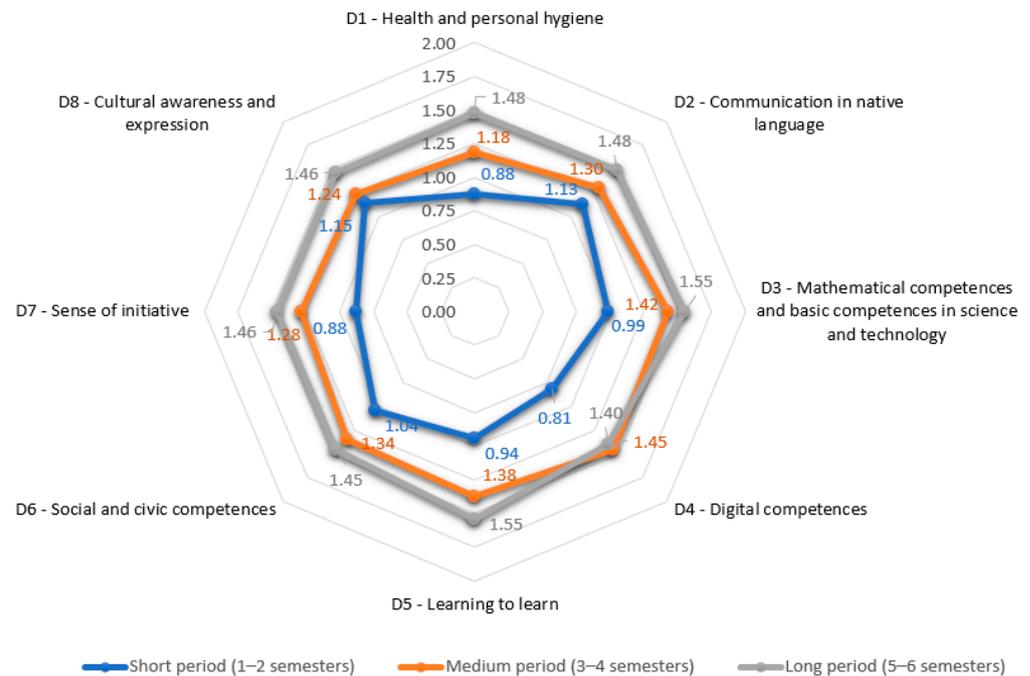
Source: SPSS database.

Regarding the overall effect of the experimental treatment, the results show that there were significant differences between the three subgroups ( $F = 9.470, p = 0.00$ ). The evolution of students in primary school (mean = 1.458) recorded a better learning improvement compared to those in secondary school (mean = 0.992), but young and adult students who followed the “Second Chance” program represented the group with the biggest learning improvement (mean = 1.621).

### O3. Measuring the length of the intervention’s influence on learning improvement

The sample was divided into three groups according to the length of their exposure to the experimental treatment: students who participated in the project activities for a short period (1–2 semesters), a medium period (3–4 semesters), or a long period (5–6 semesters).

The results highlight differences between the means of the analyzed groups for all the dimensions analyzed (Figure 4). It can be seen that the higher the length of exposure, the more progress was obtained.



**Figure 4.** The differences between the means of the three groups for each dimension. Source: designed by the author based on research data.

The analysis of the differences between means obtained by applying ANOVA for all eight analyzed components (Table 5) shows that the length of the intervention influences the following dimensions: health and personal hygiene ( $F = 5.671, p = 0.004$ ), mathematical competencies and basic competencies in science and technology ( $F = 3.573, p = 0.030$ ), digital competencies ( $F = 3.177, p = 0.044$ ), learning to learn ( $F = 3.090, p = 0.048$ ), and sense of initiative ( $F = 3.310, p = 0.039$ ). The only exceptions, for which the differences between the means of the three groups are not statistically significant, are represented by the following dimensions: communication in the native language ( $F = 1.659, p = 0.194$ ), social and civic competencies ( $F = 1.594, p = 0.206$ ), and cultural awareness and expression ( $F = 1.540, p = 0.218$ ).

Regarding the overall effect of the experimental treatment, the results show that there were significant differences between the three subgroups ( $F = 3.309, p = 0.039$ ).

O4. To identify the components that better predict an increased learning performance

To identify the dimensions that better predict the inclusion of a student in the group of students with high learning improvement, a discriminant analysis was performed. The dependent variable contains two categories of subjects: the ones with high learning performance (35.4%) and the rest of the sample members (64.6%). The predictors were the eight dimensions D1 to D8. The Wilks Lambda coefficient has a value of 0.307 (unexplained variance), which means that the variance explained by the predictors is 70%. The discriminant function is statistically significant according to the Wilks Lambda and the results of the Chi-square test ( $p < 0.01$ ). Based on this function, 96.9% of the sample members were correctly classified.

The values presented by the structure matrix (Table 6) reveal that all predictors have a significant influence because all coefficients have values higher than 0.30. The most important predictors, which have the highest correlation with the discriminant function, are D3—mathematical competencies and basic competencies in science and technology (0.875)

and D4—digital competencies (0.710), as also confirmed by the standardized canonical discriminant function coefficients.

**Table 5.** ANOVA results in the case of the intervention period analysis.

		N	Mean	Std. Deviation	F	p
D1—Health and personal hygiene	Short period	16	0.8750	0.34157	5.671	0.004
	Medium period	61	1.1803	0.71317		
	Long period	84	1.4762	0.82471		
D2—Communication in the native language	Short period	16	1.1250	0.78773	1.659	0.194
	Medium period	61	1.3007	0.75948		
	Long period	84	1.4844	0.90166		
D3—Mathematical competencies and basic competencies in science and technology	Short period	16	0.9875	0.11475	3.573	0.030
	Medium period	61	1.4230	0.72489		
	Long period	84	1.5452	0.86169		
D4—Digital competencies	Short period	16	0.8125	0.40311	3.177	0.044
	Medium period	61	1.4482	0.93057		
	Long period	84	1.3968	0.97850		
D5—Learning to learn	Short period	16	0.9375	0.25000	3.090	0.048
	Medium period	61	1.3770	0.89748		
	Long period	84	1.5476	1.00486		
D6—Social and civic competencies	Short period	16	1.0400	0.45191	1.594	0.206
	Medium period	61	1.3389	0.79968		
	Long period	84	1.4482	0.93907		
D7—Sense of initiative	Short period	16	0.8750	0.34157	3.310	0.039
	Medium period	61	1.2792	0.71278		
	Long period	84	1.4644	1.02189		
D8—Cultural awareness and expression	Short period	16	1.1450	0.51620	1.540	0.218
	Medium period	61	1.2403	0.69433		
	Long period	84	1.4564	1.02803		
OE—Overall effect	Short period	16	0.9748	0.23813	3.309	0.039
	Medium period	61	1.3235	0.61978		
	Long period	84	1.4775	0.86484		

Source: SPSS database.

**Table 6.** Results of discriminant analysis.

Component	Structure Matrix	Standardized Canonical	Canonical
	Function 1	Discriminant Function Coefficients	Discriminant Function Coefficients
D3—Mathematical competencies and basic competencies in science and technology	0.875	0.433	0.913
D4—Digital competencies	0.71	0.252	0.394
D2—Communication in the native language	0.665	0.149	0.249
D1—Health and personal hygiene	0.659	0.246	0.447
D8—Cultural awareness and expression	0.651	−0.03	−0.047
D5—Learning to learn	0.639	0.139	0.207
D7—Sense of initiative	0.633	0.114	0.178
D6—Social and civic competencies	0.621	0.064	0.102
Constant			−3.39

Dependent variable: High learning improvement (yes/no); Wilks Lambda = 0.307; Chi-square = 183.2, df = 8,  $p < 0.01$ ; 96.9% of original grouped cases correctly classified. Source: SPSS database.

According to the canonical discriminant function coefficients (Table 6), the equation of the discriminant function is presented below.

$$DF = 0.447D1 + 0.249D2 + 0.913D3 + 0.394D4 + 0.207D5 + 0.102D6 + 0.178D7 - 0.047D8 - 3.39 \quad (2)$$

Someone with a DF score higher than zero will be included in the group with high learning performance. For example, a student who recorded progress of two points for each component will have the  $DF = -0.33$ , being classified in the other group.

#### 4. Discussion

Our research was focused on the evaluation of an intervention program to help disadvantaged students achieve better learning results. There are differences between the needs of students who come from disadvantaged backgrounds compared to those who come from backgrounds with a good socio-economic situation. Thus, the same activities can have different effects depending on the type of students who take part. Consequently, the interventions must be adapted to achieve a satisfactory impact. For this reason, disadvantaged students need special programs to improve their learning performance. Unlike other similar interventions, applied to all the categories of students and whose effects on school performance were not notable [125], our research demonstrates the sensitivity of disadvantaged students to such interventions. We, therefore, confirm the importance of such interventions for disadvantaged students [49,62–64].

In our research, several components of the training were tested. The results confirmed the importance of these components, which were also analyzed in other studies of health and personal hygiene [4,58], communication in the native language [71,81], mathematical competencies and basic competencies in science and technology [70,71,81,103], digital competencies [104], learning to learn [69], social and civic competencies [46], sense of initiative [27], and cultural awareness and expression. As all these components revealed a significant influence on learning improvement, the first hypothesis (H1) of our research was confirmed.

Second, our work provides evidence regarding the need to adapt interventions to the period of the educational cycle containing the targeted persons. The results reveal that early interventions (in the primary cycle) are the most effective and that they lose their efficacy when they are used in the secondary education period. Primary school children who benefited from early education demonstrated a higher level of learning improvement, a more consistent independent learning capacity [76], and improved emotional maturity at the end of the intervention [81]. The results are additional arguments to the previous studies that showed that the educational cycle is one of the moderating variables that act on the effects of the learning improvement of after-school programs [74].

Our research also shows that for the category of young people and adults in “Second Chance” programs, the impact of involvement in such programs is higher if a number of conditions are met. Within the analyzed project, young people and adults benefited from learning activities that involved group activities, which led to an increase in their learning motivation [93] and to achieving good educational performance. These findings add further arguments that suggest how resources are used is often more important than how many resources are used [100]. Considering the results, it can be stated that Hypothesis (H2)—*the educational cycle influences learning improvement*—has been confirmed, with an exception for the intervention in activities related to cultural awareness and expression.

Third, our paper provides additional arguments supporting the importance of the duration of time dedicated to education, complementing those demonstrated by other research [74] and contradicting the results obtained by the existing research that showed that the two-year implementation of an extracurricular project did not bring significant additional benefits compared to a single year of the program [103]. Hypothesis (H3) regarding the influence of the length of the intervention on learning improvement was confirmed, with several exceptions, such as communication in the native language, social and civic competencies, and cultural awareness and expression.

The offered facilities and the flexible working methods that were adapted to the needs of the rural community within this project determined the increase of the educational process and the student motivation attractiveness, which is also confirmed by other studies [40,63,66]. The project contributed to the decreasing inequality [97] and to the sustainable development of the region where it was implemented.

Fourth, using a discriminant analysis, it was confirmed that all the analyzed components of our experimental treatment have a significant effect on predicting high learning performance (H4). These findings confirmed the results of previous studies showing that the main predictors of learning performance as an effect of longer school days are mathematical competencies and basic competencies in science and technology [70,71,81,103] and digital competencies [104].

This study has several theoretical implications, as it enriches the existing literature by bringing additional evidence regarding the effects of exposing disadvantaged students to an after-school educational environment on all the components of the training analyzed, which confirms other researchers [126], who also found a significant positive change in all the dimensions of the holistic development that was analyzed.

Also, the managerial implications of the study are important because our research can contribute to guiding decision-makers from ministries, school boards, schools, and NGOs towards measures that can increase the impact of financial interventions. It can reduce the gaps in the sustainable development of education and also it can improve social sustainability.

#### *Limitations and Future Directions*

The conducted research has a number of limitations, most of which stem from the limitations of the research method. The main limit is determined by the impossibility of extending the results to the entire educational system of disadvantaged students. The sample is not representative of the general population made up of all disadvantaged students in Romania. The results reflect only the situation of the students who participated in this project.

Another limitation arises from the fact that only one project was analyzed. Also, the impact analysis was limited to the effects produced and observable at the time of the research. However, in the case of projects aimed at education, the probability of producing beneficial effects manifests itself in the long term, so it is greater than the effects observed and analyzed during the implementation period. At the same time, the research was limited to capturing aspects related to primary, secondary, and "Second Chance" education.

Another limitation of the research arises because other elements that usually lead to disadvantage and discrimination, such as gender, were not analyzed.

In future research, it will be relevant to explore in more depth the implications of expanding learning time on the community and society as a whole in terms of increasing social sustainability and reducing inequalities. It will also be important to analyze whether the positive results of the after-school programs presented are maintained in different contexts, e.g., with students at other stages of the educational cycle, with students who are not in disadvantaged situations, with students in disadvantaged situations from the urban environment, between female and male students, or with a focus on other activities such as study trips, exchange of experience, or sports, cultural, and art activities. It would also be interesting to explore the potential benefits of the size and dynamics of workgroups and the benefits of using complementary technologies such as educational software with high-quality content. Longitudinal analyses or chronological studies looking at the impact of after-school programs on school performance over extended periods are also recommended. Analysis of the transferability of projects considered "examples of good practice" or "successful" that have been implemented in various regions with various cultural and socio-economic particularities should also be considered.

This type of analysis could provide a complex perspective on programs and policies to support education. The information obtained has significant relevance for decision-makers

who manage educational programs, contributing to increasing the impact of actions on disadvantaged people.

## 5. Conclusions

After-school educational programs are seen as effective ways to close the achievement gap between students facing socio-economic challenges and those who are not [127]. Supporting education has been the objective of numerous European funding programs aimed at increasing the quality of the educational system and ensuring fair access to training [128].

Our findings add further arguments to the importance of programs for disadvantaged people that are considered essential for improving the school performance of this category of students. In the research that was carried out, the impact of the analyzed after-school program on the disadvantaged people subject to the research was significant. The study showed that proficiency in mathematics, development of learning skills, and communication in the native language are important predictors of performance. Also, we demonstrated the need for early interventions in education and their adaptation to different stages of development while showing that youth and adults who followed the “Second Chance” programs can be more motivated and achieve more improvements than disadvantaged students in other educational stages. Finally, we demonstrated the importance of the duration of time dedicated to education and recommend an intervention of at least 5–6 semesters for a consistent improvement of training.

The different concepts associated with extended education—such as after-school programs—need to be adapted to the local context and the specific needs of the beneficiaries. Customized intervention projects and programs, adapted to the specific needs of communities, represent viable solutions for ensuring an inclusive and quality education and for improving the living conditions of disadvantaged children, thus contributing to equality of opportunity.

Our study contributes to the identification of challenges and to the understanding of aspects that can become “learned lessons”, thus providing relevant information for the improvement and optimization of future programs.

**Author Contributions:** Conceptualization, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; methodology, C.P.C. and A.S.T.; validation, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; formal analysis, M.C.G., C.P.C., C.Ț., and A.S.T.; investigation, M.C.G.; resources, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; data curation, M.C.G.; writing—original draft preparation, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; writing—review and editing, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; visualization, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; supervision, B.T., C.P.C., and A.S.T.; project administration, M.C.G., B.T., C.P.C., C.Ț., and A.S.T.; funding acquisition, M.C.G., B.T., C.P.C., C.Ț., and A.S.T. All authors have read and agreed to the published version of the manuscript.

**Funding:** The APC was funded by Transylvania University of Brasov.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Most of the data transformation is contained within the article. The data presented in this study are available on request from the corresponding author.

**Acknowledgments:** The data collection was carried out within the framework of the doctoral studies carried out by the first author at the Interdisciplinary Doctoral School, Faculty of Economic Sciences and Business Administration, Transylvania University of Brasov, with the support of the management team of the project “I learn, I play, I am happy at school” from the Association for Equal Opportunities and Non-Discrimination Brasov, the management teams, teachers and students from the secondary schools Voila and Lisa, the team of specialists from the Municipality of Voila, Brasov, Romania.

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

## Appendix A

Annex 1:	Variables measured in order to determine how the project implemented at school level has influenced the development of the pupils participating in the project
VARIABLE	ASPECTS ASSESSED
Health and personal hygiene	<ul style="list-style-type: none"> <li>○ Showing an interest in personal health and a clean environment <i>(for primary education (PE))</i></li> <li>Showing an interest in healthy living and maintaining a clean environment <i>(for secondary education (SE) and "Second Chance" program (SC))</i></li> <li>○ Application of basic rules of personal hygiene and environmentally responsible behavior <i>(for PE)</i></li> <li>Apply simple rules for maintaining a healthy lifestyle and a clean environment <i>(for SE and SC)</i></li> </ul>
Communication in native language	<ul style="list-style-type: none"> <li>○ Identifying facts, opinions, emotions in spoken or written messages in familiar communicative contexts <i>(for PE)</i></li> <li>Seeking, collecting, processing information and receiving opinions, ideas, feelings in a variety of listened messages/read texts <i>(for SE and SC)</i></li> <li>○ Expressing thoughts, opinions, emotions in simple messages in familiar communicative contexts <i>(for PE)</i></li> <li>Expressing information, opinions, ideas, feelings, in oral or written messages, by adapting to the communicative situation <i>((for SE and SC)</i></li> <li>○ Participating in verbal interactions in familiar contexts to solve school or life problems <i>(for PE)</i></li> <li>Participate in verbal interactions in different school and out-of-school contexts in a pro-active dialog <i>(for SE and SC)</i></li> </ul>
Mathematical competences and basic competences in science and technology	<ul style="list-style-type: none"> <li>○ Showing curiosity to find out the truth and to explore mathematical regularities and relationships in familiar situations <i>(for PE)</i></li> <li>Showing an interest in identifying mathematical regularities and relationships found in school and out-of-school situations and relating them <i>(for SE and SC)</i></li> <li>○ Formulating simple explanations using mathematical terminology <i>(for PE)</i></li> <li>Identifying quantitative or qualitative mathematical features of concrete mathematical situations <i>(for SE and SC)</i></li> <li>○ Solving problems in familiar situations using specific mathematical tools and/or procedures <i>(for PE)</i></li> <li>Problem-solving in concrete situations using specific mathematical algorithms and tools <i>(for SE and SC)</i></li> <li>○ Carrying out a simple investigative step-by-step approach to a goal <i>(for PE)</i></li> <li>Design and carry out an investigative approach to test a working hypothesis <i>(for SE and SC)</i></li> <li>○ Making simple products for everyday needs in own learning activities with adult support <i>(for PE)</i></li> <li>Designing and making useful products for current activities <i>(for SE and SC)</i></li> </ul>

Digital competences	<ul style="list-style-type: none"> <li>○ Use in learning simple functions and applications of digital devices in the immediate environment with adult support <i>(for PE)</i></li> </ul> <p>Using digital devices and applications to search and select digital information and educational resources relevant to learning <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Developing simple digital content in the context of learning activities <i>(for PE)</i></li> </ul> <p>Developing multi-media digital content in the context of learning activities <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Complying with basic safety rules for the safe use of devices, applications, digital and internet content <i>(for PE)</i></li> </ul> <p>Complying with rules and regulations for the development and use of virtual content (intellectual property rights, privacy, internet safety) <i>(for SE and SC)</i></p>
Learning to learn	<ul style="list-style-type: none"> <li>○ Identifying/clarifying the elements involved in the work task before starting a learning activity <i>(for PE)</i></li> </ul> <p>Formulating simple learning objectives and plans for learning to achieve work tasks <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Focusing attention, persevering in working on a task until appropriate completion, and checking own work <i>(for PE)</i></li> </ul> <p>Managing learning time and monitoring progress in completing a work task <i>(for SE and SC)</i></p>
Social and civic competences	<ul style="list-style-type: none"> <li>○ Practicing basic rules of conduct in everyday contexts <i>(for PE)</i></li> </ul> <p>Showing an interest in finding new solutions to routine and/or challenging learning tasks <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Taking on roles and responsibilities by participating in actions in familiar contexts <i>(for PE)</i></li> </ul> <p>Positive relationships with others in school and out-of-school contexts by exercising rights and taking responsibility <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Recognizing and respecting diversity (ethnocultural, linguistic, religious, etc.) <i>(for PE)</i></li> </ul> <p>Demonstrating a willingness to participate in civic participation while respecting group rules and valuing diversity (ethnocultural, linguistic, religious, etc.) <i>(for SE and SC)</i></p>
Sense of initiative	<ul style="list-style-type: none"> <li>○ Displaying curiosity in tackling new and unusual learning tasks without fear of making mistakes <i>(for PE)</i></li> </ul> <p>Show interest in finding new solutions to routine and/or challenging learning tasks <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Undertaking simple work tasks involving determination, commitment to goals, initiative, creativity, and cooperation with others <i>(for PE)</i></li> </ul> <p>Showing initiative in solving problems of the groups to which they belong and in exploring local community problems <i>(for SE and SC)</i></p> <ul style="list-style-type: none"> <li>○ Identifying the usefulness of trades/professions for community members <i>(for PE)</i></li> </ul> <p>Identifying suitable school and career paths for their own interests <i>(for SE and SC)</i></p>

- 
- Recognizing elements of the local cultural context and national and universal heritage (*for PE*)
- Appreciation of defining elements of the local cultural context and of national and universal heritage (*for SE and SC*)
- Expressing the joy of creating by making simple works and exploring different media and forms of expression (*for PE*)
- Making creative work using different media, including digital media, in school and out-of-school contexts (*for SE and SC*)
- Participation in cultural projects (artistic, sports, popularization) organized at school and in the local community (*for PE*)
- Identifying school and career paths appropriate to their own interests (*for SE and SC*)
- 

## References

1. Friboulet, J.-J.; Niamego, A.; Liechti, V.; Dalbera, C.; Meyer-Bisch, P. *Measuring the Right to Education*; UNESCO Institute for Lifelong Learning (NJ3): Hamburg, Germany, 2006; ISBN 92-820-1150-x/978-3-7255-5252-8.
2. Spring, J. *The Universal Right to Education: Justification, Definition, and Guidelines*; Lawrence Erlbaum Associates Publishers: Mahwah, NJ, USA; London, UK, 2000.
3. Hofmarcher, T. The Effect of Education on Poverty: A European Perspective. *Econ. Educ. Rev.* **2021**, *83*, 102124. [[CrossRef](#)]
4. Das, M.; Elsey, H.; Shawon, R.; Hicks, J.; Ferdoush, J.; Huque, R.; Fieroze, F.; Nasreen, S.; Wallace, H.; Mashreky, S. Protocol to Develop Sustainable Day Care for Children Aged 1–4 Years in Disadvantaged Urban Communities in Dhaka, Bangladesh. *BMJ Open* **2018**, *8*, e024101. [[CrossRef](#)] [[PubMed](#)]
5. United Nations. Agenda 21. In *Proceedings of the United Nations Sustainable Development, United Nations Conference on Environment & Development, Rio de Janeiro, Brazil, 3–14 June 1992*; United Nations: New York, NY, USA, 1993. Available online: <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf> (accessed on 12 June 2024).
6. UK Commission for Employment and Skills; UNESCO. UN Decade of Education for Sustainable Development 2005–2014. In *International Implementation Scheme*; UNESCO: Paris, France, 2005; Available online: <https://unesdoc.unesco.org/ark:/48223/pf000148654> (accessed on 12 June 2024).
7. World Conference. *Aichi-Nagoya Declaration on Education for Sustainable Development. United Nations Educational, Scientific and Cultural Organization*; Aichi-Nagoya, Japan, 10–12 November 2014. Available online: [https://sustainabledevelopment.un.org/content/documents/5859AichiNagoya\\_Declaration\\_EN.pdf](https://sustainabledevelopment.un.org/content/documents/5859AichiNagoya_Declaration_EN.pdf) (accessed on 17 June 2024).
8. UNESCO. *Education 2030: Incheon Declaration and Framework for Action for the Implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*; UNESCO: Paris, France, 2015; pp. 5–6.
9. Wolff, L.-A.; Ehrström, P. Social Sustainability and Transformation in Higher Educational Settings: A Utopia or Possibility? *Sustainability* **2020**, *12*, 4176. [[CrossRef](#)]
10. Gorski, A.-T.; Ranf, E.-D.; Badea, D.; Halmaghi, E.-E.; Gorski, H. Education for Sustainability—Some Bibliometric Insights. *Sustainability* **2023**, *15*, 14916. [[CrossRef](#)]
11. Vandenberghe, F.; Peters, G. Bourdieu, Pierre (1930–2002). In *The Blackwell Encyclopedia of Sociology*; Ritzer, G., Ed.; Wiley-Blackwell: Oxford, UK, 2024. [[CrossRef](#)]
12. Ketschau, T.J. Social Justice as a Link between Sustainability and Educational Sciences. *Sustainability* **2015**, *7*, 15754–15771. [[CrossRef](#)]
13. De la Calle, A.M.; Pacheco-Costa, A.; Gómez-Ruiz, M.Á.; Guzmán-Simón, F. Understanding Teacher Digital Competence in the Framework of Social Sustainability: A Systematic Review. *Sustainability* **2021**, *13*, 13283. [[CrossRef](#)]
14. European Commission. Education and Training. Policies. About School Policy. Available online: [https://ec.europa.eu/education/policies/school/about-school-policy\\_en](https://ec.europa.eu/education/policies/school/about-school-policy_en) (accessed on 10 January 2024).
15. Toc, S. Tinerii vulnerabili și inegalitatea socială. O analiză a situației sociale a tinerilor NEET în România. *Rev. Pedagogie* **2020**, *68*, 7–29. Available online: <https://www.ceeol.com/search/article-detail?id=880585> (accessed on 19 June 2024). [[CrossRef](#)]
16. Bonea, G.V. School drop-out. *Qual. Life* **2019**, *30*, 387–403. Available online: <https://www.ceeol.com/search/article-detail?id=852550> (accessed on 7 June 2024).
17. Țăranu, A.M. Low Quality of the Educational Process—Main Cause of the Early School Leaving. *J. Pedagogie* **2020**, *1*, 31–50. [[CrossRef](#)]
18. World Vision România. Analysis Save the Children. Available online: [https://www.salvaticopiii.ro/sites/ro/files/2023-11/ancheta-internationala\\_copiii-romani-cei-mai-saraci-topul.pdf](https://www.salvaticopiii.ro/sites/ro/files/2023-11/ancheta-internationala_copiii-romani-cei-mai-saraci-topul.pdf) (accessed on 10 July 2024).
19. Gortazar, L.; Hupkau, C.; Roldán-Monés, A. Online Tutoring Works: Experimental Evidence from a Program with Vulnerable Children. *J. Public Econ.* **2024**, *232*, 105082. [[CrossRef](#)]

20. Siraj-Blatchford, J. The implications of early understandings of inequality, science and technology for the development of sustainable societies. In *The Contribution of Early Childhood Education to a Sustainable Society*; Pramling Samuelson, I., Kaga, Y., Eds.; UNESCO: Paris, France, 2008; pp. 75–83.
21. McKenzie, S. *Social Sustainability: Towards Some Definitions*; Hawke Research Institute Working Paper Series 27; Hawke Research Institute, University of South Australia: Magill, SA, Australia, 2004; pp. 1–29.
22. Dudziak, E. Information Literacy and Lifelong Learning in Latin America: The challenge to build social sustainability. *Inf. Dev.* **2007**, *23*, 43–47. [[CrossRef](#)]
23. Knif, L.; Kairavuori, S. Student Teachers Building a Sustainable Future Through Constructing Equality in Visual Arts Education. *Discourse Commun. Sustain. Educ.* **2020**, *11*, 74–90. [[CrossRef](#)]
24. Boldermo, S.; Ødegaard, E.E. What about the Migrant Children? The State-Of-The-Art in Research Claiming Social Sustainability. *Sustainability* **2019**, *11*, 459. [[CrossRef](#)]
25. Mihalik-Kucsma, D.; Varga, K. Educationally Equitable Solutions for Social Innovation or the Foundations of Social Sustainability. In *Proceedings of ICRES 2023—International Conference on Research in Education and Science, Nevsehir, Turkey, 18–21 May 2023*; Koc, M., Ozturk, O.T., Ciddi, M.L., Eds.; ISTES Organization: Cappadocia, Turkey, 2023; pp. 1257–1273.
26. von Hauff, M.; Kuhnke, C. (Eds.) *Sustainable Development Policy: A European Perspective*, 1st ed.; Routledge: London, UK, 2017. [[CrossRef](#)]
27. de Oliveira Major, S.; Palos, A.C.; Silva, O. Attending (or Not) After-School Programs during the COVID-19 Pandemic: What Happens to Children’s Social Skills and Behavior Problems? *Child. Youth Serv. Rev.* **2023**, *149*, 106929. [[CrossRef](#)] [[PubMed](#)]
28. Liu, J.; Peng, P.; Luo, L. The Relation Between Family Socioeconomic Status and Academic Achievement in China: A Meta-Analysis. *Educ. Psychol. Rev.* **2020**, *32*, 49–76. [[CrossRef](#)]
29. Banzragch, O.; Mizunoya, S.; Bayarjargal, M. Education inequality in Mongolia: Measurement and causes. *Int. J. Educ. Dev.* **2019**, *68*, 68–79. [[CrossRef](#)]
30. Pasha, H.K. Gender Differences in Education: Are Girls Neglected in Pakistani Society? *J. Knowl. Econ.* **2024**, *15*, 3466–3511. [[CrossRef](#)]
31. Chevalier, A.; Harmon, C.; O’Sullivan, V.; Walker, I. The impact of parental income and education on the schooling of their children. *IZA J. Labor Econ.* **2013**, *2*, 8. [[CrossRef](#)]
32. Björkman-Nyqvist, M. Income shocks and gender gaps in education: Evidence from Uganda. *J. Dev. Econ.* **2013**, *105*, 237–253. [[CrossRef](#)]
33. Carrete-Marín, N.; Domingo-Peñafiel, L.; Simó-Gil, N. Teaching Materials for Rural Schools: Challenges and Practical Considerations from an International Perspective. *Int. J. Educ. Res. Open* **2024**, *7*, 100365. [[CrossRef](#)]
34. Fu, L.; Zhang, Z.; Yang, Y.; McMillen, J.C. Acceptability and Preliminary Impact of a School-Based SEL Program for Rural Children in China: A Quasi-Experimental Study. *Child. Youth Serv. Rev.* **2024**, *160*, 107579. [[CrossRef](#)]
35. Mahoney, J.L.; Vandell, D.L.; Simpkins, S. Afterschool Programs. In *The Child: An Encyclopedic Companion*; Shweder, R., Ed.; University of Chicago Press: Chicago, IL, USA, 2009; pp. 30–31.
36. Cueto, S.; Chinen, M. Educational Impact of a School Breakfast Programme in Rural Peru. *Int. J. Educ. Dev.* **2008**, *28*, 132–148. [[CrossRef](#)]
37. Thijssen, S. More Than a Learning Environment: School Climate as a Protective Factor for Child Neurodevelopment and Mental Health? *Biol. Psychiatry Cogn. Neurosci. Neuroimaging* **2023**, *8*, 6–8. [[CrossRef](#)] [[PubMed](#)]
38. Archambault, I.; Pascal, S.; Tardif-Grenier, K.; Dupéré, V.; Janosz, M.; Parent, S.; Pagani, L.S. The Contribution of Teacher Structure, Involvement, and Autonomy Support on Student Engagement in Low-Income Elementary Schools. *Teach. Teach.* **2020**, *26*, 428–445. [[CrossRef](#)]
39. Laliberté, J.-W. Long-Term Contextual Effects in Education: Schools and Neighborhoods. *Am. Econ. J. Econ. Policy* **2021**, *13*, 336–377. [[CrossRef](#)]
40. Rodríguez, C.; Sánchez, F.; Armenta, A. Do Interventions at School Level Improve Educational Outcomes? Evidence from a Rural Program in Colombia. *World Dev.* **2010**, *38*, 415–428. [[CrossRef](#)]
41. Haglund, B. Pupils’ Development: Policy Enactment in Swedish School-Age Educare. *Nord. J. Stud. Educ. Policy* **2023**, *9*, 221–232. [[CrossRef](#)]
42. eos-Urbel, J. What Works After School? The Relationship Between After-School Program Quality, Program Attendance, and Academic Outcomes. *Youth Soc.* **2015**, *47*, 684–706. [[CrossRef](#)]
43. Jackson, C.K.; Mackevicius, C. *The Distribution of School Spending Impacts*; National Bureau of Economic Research: Cambridge, MA, USA, 2021; NBER Working Paper No. 28517. [[CrossRef](#)]
44. Asanov, I.; Flores, F.; McKenzie, D.; Mensmann, M.; Schulte, M. Remote-Learning, Time-Use, and Mental Health of Ecuadorian High-School Students during the COVID-19 Quarantine. *World Dev.* **2021**, *138*, 105225. [[CrossRef](#)]
45. Ditzel, L.; Casas, F.; Torres-Vallejos, J.; Reyes, F.; Alfaro, J. Children Participating in After-School Programs in Chile: Subjective Well-Being, Satisfaction with Free Time Use and Satisfaction with the Program. *Child. Youth Serv. Rev.* **2022**, *132*, 106338. [[CrossRef](#)]
46. Luter, D.G.; Lester, J.N.; Lochmiller, C.R.; Kronick, R. Participant perceptions of a UACS afterschool program: Extending learning beyond the classroom. *Sch. Community J.* **2017**, *27*, 55–82.
47. Kim, J.S.; Quinn, D.M. The Effects of Summer Reading on Low-Income Children’s Literacy Achievement from Kindergarten to Grade 8: A Meta-Analysis of Classroom and Home Interventions. *Rev. Educ. Res.* **2013**, *83*, 386–431. [[CrossRef](#)]

48. Grewenig, E.; Lergetporer, P.; Werner, K.; Woessmann, L.; Zierow, L. COVID-19 and Educational Inequality: How School Closures Affect Low- and High-Achieving Students. *Eur. Econ. Rev.* **2021**, *140*, 103920. [CrossRef] [PubMed]
49. Kumar, D.; Choudhury, P.K. Do Private Schools Really Produce More Learning than Public Schools in India? Accounting for Student's School Absenteeism and the Time Spent on Homework. *Int. J. Educ. Dev.* **2021**, *83*, 102395. [CrossRef]
50. Ariastuti, M.D.; Wahyudin, A.Y. Exploring Academic Performance and Learning Style of Undergraduate Students in English Education Program. *J. Engl. Lang. Teach. Learn.* **2022**, *3*, 67–73. [CrossRef]
51. Nachbauer, M. How Schools Affect Equity in Education: Teaching Factors and Extended Day Programs Associated with Average Achievement and Socioeconomic Achievement Gaps. *Stud. Educ. Eval.* **2024**, *82*, 101367. [CrossRef]
52. Viselli, C. The Efficacy of Qualitative Techniques Used within After-School Programs. Ph.D. Thesis, Wayne State University, Detroit, MI, USA, 2022. Available online: <https://www.proquest.com/openview/76b8e3f2aea5d354b274459e864f9d88/1?pq-origsite=gscholar&cbl=18750&diss=y> (accessed on 18 June 2024).
53. Dauenhauer, B.; Kulinna, P.; Marttinen, R.; Stellino, M.B. Before- and After-School Physical Activity: Programs and Best Practices. *J. Phys. Educ. Recreat. Dance* **2022**, *93*, 20–26. [CrossRef]
54. Sjogren, A.L.; Zumbrunn, S.; Broda, M.; Bae, C.L.; Deutsch, N.L. Understanding afterschool engagement: Investigating developmental outcomes for adolescents. *Am. J. Community Psychol.* **2022**, *69*, 169–182. [CrossRef]
55. Apsler, R. After-school programs for adolescents: A review of evaluation research. *Adolescence* **2009**, *44*, 1–19. Available online: [https://www.researchgate.net/publication/24420610\\_After-school\\_programs\\_for\\_adolescents\\_A\\_review\\_of\\_evaluation\\_research](https://www.researchgate.net/publication/24420610_After-school_programs_for_adolescents_A_review_of_evaluation_research) (accessed on 20 June 2024).
56. Fisher, A.E.; Johnson, L.R.; Minnes, S.; Miller, E.K.; Riccardi, J.S.; Dimitropoulos, A. Predictors of social emotional learning in after-school programming: The impact of relationships, belonging, and program engagement. *Psychol. Sch.* **2024**, *61*, 1318–1335. [CrossRef]
57. Simpkins, S.D.; Vandell, D.L.; Liu, Y. Participation and enjoyment in Out-of-School activities during adolescence as predictors of activities in adulthood. *J. Res. Adolesc.* **2023**, *33*, 786–802. [CrossRef]
58. Mostert, C.M. The impact of the school feeding programme on the education and health outcomes of South African children. *Child. Youth Serv. Rev.* **2021**, *126*, 106029. [CrossRef]
59. Wang, H.; Cheng, Z. Kids eat free: School feeding and family spending on education. *J. Econ. Behav. Organ.* **2022**, *193*, 196–212. [CrossRef]
60. Ripamonti, E. Risk Factors for Dropping out of High School: A Review of Contemporary, International Empirical Research. *Adolesc. Res. Rev.* **2018**, *3*, 321–338. [CrossRef]
61. Portela Pruaño, A.; Rodríguez Entrena, M.J.; Torres Soto, A.; Nieto Cano, J.M. Why vulnerable early school leavers return to and re-engage with education: Push and pull reasons underlying their decision. *Intercult. Educ.* **2022**, *33*, 156–172. [CrossRef]
62. Kremer, K.P.; Maynard, B.R.; Polanin, J.R.; Vaughn, M.G.; Sarteschi, C.M. Effects of After-School Programs with At-Risk Youth on Attendance and Externalizing Behaviors: A Systematic Review and Meta-Analysis. *J. Youth Adolesc.* **2015**, *44*, 616–636. [CrossRef] [PubMed]
63. Biggart, A.; Kerr, K.; O'Hare, L.; Connolly, P. A Randomised Control Trial Evaluation of a Literacy After-School Programme for Struggling Beginning Readers. *Int. J. Educ. Res.* **2013**, *62*, 129–140. [CrossRef]
64. Cureton, A. "After the School Day, What's Next?": Exploring Refugee Youths' Engagement in After-School Programs. *J. Adolesc. Res.* **2023**, *38*, 1114–1141. [CrossRef]
65. Fredricks, J.A.; Eccles, J.S. Participation in Extracurricular Activities in the Middle School Years: Are There Developmental Benefits for African American and European American Youth? *J. Youth Adolesc.* **2008**, *37*, 1029–1043. [CrossRef]
66. Gottfredson, D.; Cross, A.B.; Wilson, D.; Rorie, M.; Connell, N. Effects of Participation in After-School Programs for Middle School Students: A Randomized Trial. *J. Res. Educ. Eff.* **2010**, *3*, 282–313. [CrossRef]
67. Pierce, K.M.; Bolt, D.M.; Vandell, D.L. Specific Features of After-School Program Quality: Associations with Children's Functioning in Middle Childhood. *Am. J. Community Psychol.* **2010**, *45*, 381–393. [CrossRef] [PubMed]
68. Vandell, D.L.; Simpkins, S.D.; Pierce, K.M.; Brown, B.B.; Bolt, D.; Reisner, E. Afterschool Programs, Extracurricular Activities, and Unsupervised Time: Are Patterns of Participation Linked to Children's Academic and Social Well-Being? *Appl. Dev. Sci.* **2020**, *26*, 426–442. [CrossRef]
69. Durlak, J.A.; Weissberg, R.P.; Pachan, M. A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *Am. J. Community Psychol.* **2010**, *45*, 294–309. [CrossRef]
70. Casing, P.; Casing, L. Fostering Students' Mathematics Achievement Through After-School Program in the 21st Century. *Am. J. Educ. Res.* **2024**, *12*, 118–122. [CrossRef]
71. Seidlitz, A.; Zierow, L.; The Impact of All-Day Schools on Student Achievement—Evidence from Extending School Days in German Primary Schools. CESifo Working Paper No. 8618. Available online: <https://ssrn.com/abstract=3712779> (accessed on 20 June 2024).
72. Ballard, P.J.; Anderson, G.; Moore, D.P.; Daniel, S.S. Youth Experiences in Authoring Action: The Impact of an Arts-Based Youth Program on Youth Development. *J. Adolesc. Res.* **2023**, *38*, 178–210. [CrossRef]
73. Lund, S.; Riiser, K.; Løndal, K. Children's experiences with outdoor, physically active play in after-school programs. *J. Child. Adolesc. Behav.* **2023**, *15*, 35–59.

74. Yao, J.; Yao, J.; Li, P.; Xu, Y.; Wei, L. Effects of After-School Programs on Student Cognitive and Non-Cognitive Abilities: A Meta-Analysis Based on 37 Experimental and Quasi-Experimental Studies. *Sci. Insights Educ. Front.* **2023**, *17*, 2627–2649. [CrossRef]
75. Schwerter, J.; Netz, N.; Hübner, N. Does instructional time at school influence study time at university? Evidence from an instructional time reform. *Econ. Educ. Rev.* **2024**, *100*, 102526. [CrossRef]
76. Chen, A.; Li, Y. Long-term effects of early-life education intervention on children's outcomes: Evidence from school consolidation in rural China. *J. Asian Econ.* **2024**, *93*, 101751. [CrossRef]
77. Samuelsson, I.P.; Park, E. How to Educate Children for Sustainable Learning and for a Sustainable World. *Int. J. Early Child.* **2017**, *49*, 273–285. [CrossRef]
78. Wijtzes, A.I.; van de Gaar, V.M.; van Grieken, A.; de Kroon, M.L.; Mackenbach, J.P.; van Lenthe, F.J.; Jansen, W.; Raat, H. Effectiveness of interventions to improve lifestyle behaviors among socially disadvantaged children in Europe. *Eur. J. Public Health* **2017**, *27*, 240–247. [CrossRef] [PubMed]
79. Siraj-Blatchford, J.; Mogharreban, C.; Park, E. International research on education for sustainable development in early childhood. In *Education for Sustainable Development in Early Childhood*; Springer: Dordrecht, The Netherlands, 2016.
80. Heckman, J.J. Skill formation and the economics of investing in disadvantaged children. *Science* **2006**, *312*, 1900–1902. [CrossRef] [PubMed]
81. Bakken, L.; Brown, N.; Downing, B. Early Childhood Education: The Long-Term Benefits. *J. Res. Child. Educ.* **2017**, *31*, 255–269. [CrossRef]
82. Meo, A.; Tarabini, A. Teachers' identities in second chance schools: A comparative analysis of Buenos Aires and Barcelona. *Teach. Teach. Educ.* **2020**, *88*, 102963. [CrossRef]
83. European Commission, Directorate-General for Education, Youth, Sport and Culture. Education and Training Monitor 2023—Romania. Publications Office of the European Union. 2023. Available online: <https://data.europa.eu/doi/10.2766/306112> (accessed on 8 June 2024).
84. Bademci, H.Ö.; Sakmar-Balkan, E.; Karadayı, E.F.; Cefai, C.; Alkan, C.; Warfa, N. Inclusive education and early school leaving in Bulgaria, Italy, Malta, Romania and Turkey comparative study. *Pastoral Care Educ.* **2020**, *38*, 174–186. [CrossRef]
85. Schmitsek, S. 'Who are you to know who I am?' Comparing the experiences of youth at risk of dropping out in England, Denmark and Hungary. *Comp. A J. Comp. Int. Educ.* **2022**, *52*, 173–191. [CrossRef]
86. Bitsakos, N. Exploring Strategies to Strengthen Re-Engagement Through Second Chance Education for Early School Leavers: A Descriptive Qualitative Study. In *Handbook of Research on Policies and Practices for Assessing Inclusive Teaching and Learning*; Meletiadou, E., Ed.; Metropolitan University: London, UK, 2022. [CrossRef]
87. Kiprianos, P.; Mpourgos, I. Back to school: From dropout to Second Chance Schools. *J. Adult Cont. Educ.* **2022**, *28*, 27–48. [CrossRef]
88. Savelsberg, H.; Pignata, S.; Weckert, P. Second chance education: Barriers, supports and engagement strategies. *Aust. J. Adult Learn.* **2017**, *57*, 36–57.
89. Spiteri, R.; O'Riordan, M.R.; Cefai, C.; Hickey, G.; Smith, S. Early school leaving and trauma-based education: A study in four European countries. *Pastor. Care Educ.* **2022**, *41*, 26–41. [CrossRef]
90. Kotluk, N.; Kocakaya, S. Examining Teachers' Culturally Relevant Education Self-Efficacy Perceptions in Turkey. *Discourse Commun. Sustain. Educ.* **2020**, *11*, 137–158. [CrossRef]
91. Seitz, S.; Khatib, N.; Guessous, O.; Kuperminc, G. Academic outcomes in a national afterschool program: The role of program experiences and youth sustained engagement. *Appl. Dev. Sci.* **2021**, *26*, 766–784. [CrossRef]
92. Gueta, B.; Berkovich, I. The effect of autonomy-supportive climate in a second chance programme for at-risk youth on dropout risk: The mediating role of adolescents' sense of authenticity. *Eur. J. Psychol. Educ.* **2021**, *37*, 85–100. [CrossRef]
93. Chang, D.-F.; Lin, S.-P. Motivation to Learn Among Older Adults in Taiwan. *Educ. Gerontol.* **2011**, *37*, 574–592. [CrossRef]
94. Keita, O.; Lee, Y.H. Transforming adult learners: The experiences of participating in second chance education program in the Gambia. *Aust. J. Adult Learn.* **2022**, *62*, 76–96.
95. Bar-Haim, E.; Blank, C. Second-Chance Alternatives and Maintained Inequality in Access to Higher Education in Israel. *Soc. Inklus.* **2019**, *7*, 28–37. [CrossRef]
96. Bereményi, B.Á. Between choices and "going with the flow". Career guidance and Roma young people in Hungary. *Int. J. Educ. Voc. Guid.* **2023**, *23*, 555–575. [CrossRef]
97. Schmitz, L. *Heterogeneous Effects of After-School Care on Child Development*; DIW Berlin Discussion Paper No. 2006; DIW Berlin: Berlin, Germany, 2006; Volume 2022, 55p, Available online: <https://ssrn.com/abstract=4159452> (accessed on 3 June 2024).
98. Vandell, D.L.; Simpkins, S.D.; Liu, Y. From early care and education to adult problem behaviors: A prevention pathway through after-school organized activities. *Dev. Psychopathol.* **2021**, *33*, 658–669. [CrossRef]
99. Siew-Eng, L.; Mahdi, R.; Mohamadin, M.I.; Manaf, B.H.A. Second Chance Science Education for School Leavers. *Procedia Soc. Behav. Sci.* **2015**, *167*, 288–292. [CrossRef]
100. Hanushek, E.A. Education production functions. In *The Economics of Education*, 2nd ed.; Bradley, S., Green, C., Eds.; Academic Press: London, UK, 2020; pp. 161–170. [CrossRef]

101. Palade, E.; Fartușnic, C.; Teșileanu, A.; Horga, I.; Preoteasa, L.; Moșoiu, O.; Irimia, T.M. Benchmarks for Designing, Updating and Evaluating the National Curriculum. National Curriculum Framework. București. 2020. Available online: <https://isj.vs.edu.ro/download/Repere-pentru-proiectarea-actualizarea-si-evaluarea-curriculumului-national-Cadrul-de-referinta-al-curriculumului-national-ISBN1.pdf> (accessed on 7 June 2024).
102. Ministry of Education and Research. Annex to the Order of the Minister of Education and Research No. 5675/15.10.2020, Benchmarks for the Design, Updating and Evaluation of the National Curriculum, National Curriculum Framework. 2020. Available online: [https://www.ise.ro/wp-content/uploads/2015/12/Profilul-de-formare-al-absolventului\\_final.pdf](https://www.ise.ro/wp-content/uploads/2015/12/Profilul-de-formare-al-absolventului_final.pdf) (accessed on 18 June 2024).
103. Black, A.R.; Somers, M.-A.; Doolittle, F.; Unterman, R.; Grossman, J.B. The Evaluation of Enhanced Academic Instruction in After-School Programs: Final Report. National Center for Education Evaluation and Regional Assistance. 2009. Available online: <http://ies.ed.gov/pubsearch/pubsinfo.asp?pubid=NCEE20094077> (accessed on 2 July 2024).
104. Cino, D.; Brandsen, S.; Bressa, N.; Eriksson, E.; Mascheroni, G.; Zaman, B. Children’s digital skills acquisition in non-formal educational contexts: Pedagogical practices, learning, and inclusion opportunities in coding and robotics workshops. *Ital. J. Educ. Res.* **2023**, *30*, 054–072. [CrossRef]
105. European Commission/EACEA/Eurydice. Equity in School Education in Europe: Structures, Policies and Student Performance. In *Eurydice Report*; Publications Office of the European Union: Luxembourg, 2020. Available online: <https://op.europa.eu/en/publication-detail/-/publication/a18e3a88-1e4d-11eb-b57e-01aa75ed71a1/language-ron/format-PDF/source-170147202> (accessed on 10 June 2024).
106. TEMPO ONLINE. Baza de Date Statistice. Available online: <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table> (accessed on 7 June 2024).
107. Olah, S. Low Education and Its Consequences. A Case Study of Roma Communities in North-West Romania (Romanian Text). *Rev. Univ. Sociol.* **2009**, *69*. Available online: <https://heionline.org/HOL/LandingPage?handle=hein.journals/rvusoclg2009&div=13&id=&page=> (accessed on 13 June 2024).
108. Georgescu, M.A. Romanian education—A pseudopriority of the last decades. In *Literature as Mediator. Intersecting Discourses and Dialogues in a Multicultural World*; The Alpha Institute for Multicultural Studies; Arhipelag XXI Press: Tirgu Mures, România, 2018; pp. 193–198. Available online: <https://asociatia-alpha.ro/ldmd/06-2018/LDMD-06-Socs-a.pdf#page=193> (accessed on 10 June 2024).
109. Uleanya, C. Success Through Leadership Resilience: Qualitative Exploration of a Selected Rural High School. *Res. Educ. Adm. Lead.* **2023**, *8*, 576–598. [CrossRef]
110. Chen, C.C. Practice of leadership competencies by a principal: Case study of a public experimental school in Taiwan. *Asia Pac. Educ. Rev.* **2024**, *25*, 159–170. [CrossRef]
111. Nieuwland, R. Playful Education Builds the Next Generation. *Child. Educ.* **2022**, *98*, 14–21. [CrossRef]
112. European Commission. EUROPE 2020: A Strategy for Smart, Sustainable and Inclusive Growth. 2010. Available online: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:en:PDF> (accessed on 6 June 2024).
113. Ministry of European Funds, Managing Authority for the Human Capital Operational Program. Updated Guide of Indicators for Beneficiaries POCU. 2020. Available online: <http://mfe.gov.ro/pocu/fise/> (accessed on 18 June 2024).
114. Malhotra, N.K. *Marketing Research: An Applied Approach*, 2nd ed.; Pearson Education: London, UK, 2006; Available online: <https://nibmehub.com/opac-service/pdf/read/Marketing%20Research%20An%20Applied%20Approach-%20Malhotra-%20N.K.-%202ed.pdf> (accessed on 8 June 2024).
115. Mujere, N. Sampling in Research. In *Mixed Methods Research for Improved Scientific Study*; IGI Global: Hershey, PA, USA, 2016; pp. 107–121. [CrossRef]
116. Thompson, S.K. *Sampling*; Wiley: Hoboken, NJ, USA, 2012; Volume 755.
117. Yin, R.K. *Case Study Research: Design and Methods*, 4th ed.; Sage: Thousand Oaks, CA, USA, 2009.
118. Bukar, A.B.; Muhammad, A.H. Multi-methods Approach in Entrepreneurship Research: Triangulation in Action. *J. Econ. Financ. Manag. Stud.* **2022**, *5*, 3649–3655. [CrossRef]
119. Leavy, P. *Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches*; Guilford Publications: New York, NY, USA, 2022.
120. Kimberlin, C.L.; Winterstein, A.G. Validity and reliability of measurement instruments used in research. *Am. J. Health-Syst. Pharm.* **2008**, *65*, 2276–2284. [CrossRef] [PubMed]
121. Given, L.M. *The Sage Encyclopedia of Qualitative Research Methods*; Sage Publications: Thousand Oaks, CA, USA, 2008.
122. Corley, K.; Gioia, D. Building theory about theory building: What constitutes a theoretical contribution? *Acad. Manag. Rev.* **2011**, *36*, 12–32. [CrossRef]
123. Gioia, D.A.; Corley, K.G.; Hamilton, A.L. Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organ. Res. Methods* **2013**, *16*, 15–31. [CrossRef]
124. Achidata SRL, Civitta Strategy & Consulting SA, NTSN Conect SRL și Development Advisory Group (DCG) SRL. First Evaluation of POCU 2014–2020 Interventions in the Field of Education. 2021. Available online: <http://www.anc.edu.ro/wp-content/uploads/2021/04/Primul-raport-de-evalua-re-a-interven%C8%9Bilor-POCU-2014-2020-%C3%AEn-domeniul-educa%C8%9Biei-1.pdf> (accessed on 7 June 2024).

125. Drange, N.; Sandsør, A.M.J. The effects of a free universal after-school program on child academic outcomes. *Econ. Educ. Rev.* **2024**, *98*, 102504. [[CrossRef](#)]
126. Thomas, L.; Prakasha, G.S.; Joseph, J. DREAMS After-School Programme for the Holistic Development of Children Amid Covid-19. *Int. J. Virtual Pers. Learn. Environ.* **2022**, *12*, 1–14. [[CrossRef](#)]
127. Soria, M.T. *The Impact of Collaboration in After-School Programs on Student Achievement and School Attendance*; ProQuest Dissertations Publishing: Ann Arbor, MI, USA, 2011. Available online: <https://search-proquest-com.am.e-nformation.ro/docview/889930418?accountid=136549> (accessed on 18 June 2024).
128. Ministry of European Investments and Projects. Human Capital Operational Program. Available online: <https://mfe.gov.ro/programe/autoritati-de-management/am-pocu/> (accessed on 7 June 2024).

**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.