

## Article

# Roots and Shoots: Building Bridges between Schools and Their Communities

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**Abstract:** The study analyses the benefits and challenges emerging from students' interactions with community, teachers, and other students in the place-based education program Roots and Shoots, in the Slovak Republic. The study is based on qualitative analyses of data obtained from eight teachers and 56 students interviewed in eight focus groups, and on quantitative data obtained from 53 students. Both the students and the teachers perceived the Roots and Shoots program as highly successful. The implementation of the program was challenged by the necessity of dealing with different levels of the students' participation in decision-making, tensions between the involved and uninvolved students, and the complex nature of local sustainability issues. This study discusses the importance of engaging students in the participative process of solving real-world issues, reflecting the challenges of this educational approach.

**Keywords:** place-based education; education for environmental citizenship; empowerment; participative approach



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## 1. Introduction

Linking schools with their communities and local environment is a key concept and principle in environmental and sustainability education [1–3]. Additionally, linking schools with their communities is a core idea in place-based education, and it has been strongly promoted in the newly defined area of education for environmental citizenship [4–8]. However, the process of linking schools with their communities may bring specific challenges, potentially compromising the educational effects. The aim of the study is to analyse both the benefits and challenges connected with the implementation of an international program, Roots and Shoots, based on linking schools with their communities.

### 1.1. Place-Based Education as an Educational Approach

One of the educational approaches highlighting the importance of linking schools with their community is place-based education [3–5]. While the concept allows several interpretations, it is based on the goal of increasing students' academic achievement and the relationships among schools and their communities by linking school curricula with various community aspects and issues. Place-based education should be multidisciplinary and cross-curricular, and it is practiced through experiential and reflective learning [2]. Furthermore, it should be rooted in collaboration with local institutions, companies, or non-for-profit organizations [9].

The process of linking school curricula with the local community may present specific challenges. Some of these relate to the teachers, some to the students and some reflect logistical barriers. Place-based education requires a mixture of pedagogical practices, including

participative approaches, community-based projects or inquiry-based learning with the aim of promoting students' connection to place and civic engagement [10]. Therefore, the implementation of place-based education calls for particular competences, cooperation with other teachers and the school management, and for a lot of available time [11]. Additionally, leaving the school premises so that learning be conducted in authentic settings often presents logistical barriers, such as transportation-related factors or concern for children's health and safety [12,13].

Another challenge often associated with implementing place-based education is that students' interest in conducting meaningful community-based projects may involve them in ongoing debates on various local issues that are at odds with the interests of certain stakeholders and the underlying power structures in their community. According to Gruenewald [2], involving students in such a process of socio-critical reflection, analysing the social and environmental problems in the community and developing the competences needed to solve them are essential components of place-based education. However, such an approach may lead students and schools into confrontations with members of local power structures, which could undermine the success of student initiatives [14,15]. Centralized educational systems do not exist in a political vacuum, and studies with teachers from different countries indicate hesitance about teaching controversial issues [15–17]. To avoid these confrontations, teachers sometimes adopt manipulative strategies to lead students to take on projects with a high level of community acceptance, even at the cost of diminishing the project's real benefit for the community [5,15,16]. Such a strategy then contrasts with the principles of place-based education which calls for an open, participatory and critical approach [2,17].

### *1.2. The Benefits of the Place-Based Education*

It is assumed that when effectively implemented, place-based education has a wide variety of positive educational impacts on students, schools, and involved communities. According to some authors, place-based education programs may promote students' sense of place, particularly by promoting their understanding of the community needs and place attachment [18–20]. Duffin et al. [18] found a relationship between students' involvement in the program and their motivation to spend time outdoors or to participate in actions to help their community.

One major justification for place-based education is that it enables and empowers students with the competencies for active participation in democratic processes [2]. This aligns with goals of education for environmental citizenship [6]. The immense environmental-social challenges confronting societies in a post-modern, neoliberal, technological and increasingly multicultural world underscore the importance of place-based education in cultivating civic agency [21,22].

Other authors highlight the impacts on students' competencies such as their critical thinking [23] or on their cooperation and problem-solving skills [24–27]. Place-based education programs also may promote students' empowerment to engage in pro-environmental behaviour [28]. From a more general educational perspective, linking schools with their communities is likely to have a positive impact on students' motivation to study and their learning achievement [29], on parents' involvement in schools, and on teachers' enthusiasm for their work [11,19]. Powers [30] argues that these programs are very suitable for students with special learning needs, as they promote their motivation for learning.

In addition, place-based education programs may be beneficial for promoting cooperation among teachers, involving of students' parents in school projects, or supporting teachers' enthusiasm for their work or further professional growth [11,19].

Finally, place-based education programs may be instrumental in improving the local environment or solving sustainability issues. According to Johnson, Duffin and Murphy [31], half of the 190 investigated place-based education programs led to the adoption of policies targeting air pollution in the local environment

In light of this, place-based education is acknowledged an important pedagogy for the field of environmental and sustainability education, as well as for related fields such as education for environmental citizenship. In this article, we present a case study of the implementation of a place-based education program in the Slovak Republic. While the regional approach is not new in the Slovak Republic, this is the first in-depth analysis of the implementation of such an approach.

### 1.3. Program Roots and Shoots

Roots and Shoots (RaS) is an educational program based on the concept of linking schools with their communities, and the program's network has now spread around the world. RaS was founded by the British scientist Jane Goodall in 1991. The program's goal is to promote respect and compassion toward life and inspire people to take action to make the world a better place for humans, animals, and the environment. In particular, the program motivates young people to become leaders actively involved in various community-based projects. Nowadays, the program operates 130 countries and it has more than 150,000 participants [32,33].

In the Slovak Republic, RaS is aimed at students in the upper years of primary schools and in secondary schools (students 12–19 years old). The program uses a flexible, participative approach, which guides interested students to start by mapping the needs of their community before deciding on the project focus and proceeding to plan their project. In the first year of participation in the program, the students plan, conduct, and evaluate their project. They can also receive financial support from the program coordinator for realizing the project. In the next year, they may decide to undertake a new project and organize a fundraising campaign for its support [34–36].

The RaS program has been evaluated in China, Tanzania, and the Slovak Republic. In China, the evaluation found the program had a positive impact on the students' belief in their ability to improve the state of the local environment. Furthermore, the evaluation results indicated a possible impact on students' pro-environmental attitudes and behaviour [37]. The Tanzanian evaluation study suggested the program's possible impact on the students' environmental knowledge, awareness of problems in their community, cognitive and social competence, and self-efficacy [38]. The internal evaluation of RaS in Slovakia showed a high level of enthusiasm in the students and teachers involved. However, the evaluation also revealed a lack of the teacher competence for leading the program and students' inadequate experience with the participative approach [34–36]. These findings were in parallel with the reported experience with place-based education programs in a culturally similar environment in the Czech Republic, where using the participative approach and allowing students to control their own projects emerged as one of the biggest challenges [17,39]. The lack of students' and teachers' competence likely corresponds with the low level of student participation in Slovak schools [40]. As Čavojská reported [41], student participation in school decision-making is usually limited to the less important part of school activities, like school journals or school clubs.

This study presents the findings of a study of the RaS program in the Slovak Republic. While it is based on previously mentioned program evaluations, it provides in-depth analyses of the learning processes, which were not included in the previous studies. The research was conducted in 2018–2019, in cooperation with the national program coordinator, the non-profit organization the Green Foundation, and researchers from Czech and Slovak universities. In this study, we focus on the following questions:

- What are the benefits of the RaS program for the participating students? Specifically, how (from both students' and teachers' perspective) did the program develop the students' empowerment?
- How did the students' cooperation with the other project partners work? Specifically, what challenges emerged from students' interaction with community, teachers, and other students in the program?

## 2. Materials and Methods

### 2.1. Research Approach

The research design was prepared in close cooperation between the national program coordinator and the researchers. Together, the two sides formed a team and discussed the process, the findings, and the interpretation. This approach reflects the principles of utilization-focused evaluation, which highlights the importance of involving program stakeholders to increase the usefulness of the findings in practice [42].

The original research plan assumed a mixture of qualitative and quantitative data would be obtained. However, this plan had to be modified, as we were unable to collect quantitative data in an amount that would allow for reliable statistical analysis. Therefore, the study focuses mainly on the qualitative findings, and the findings based on quantitative data are provided only on a limited scale.

### 2.2. Participants

For the evaluation, we asked for the cooperation of all the groups of students in the 7th grades that participated in the program in Slovakia in 2018/9. Altogether, eight schools who participated in the RaS program in 2018/2019 were involved in the research.

For the quantitative part of the research, we planned to collect data from all of the involved students. However, due to the logistical constraints regarding data collection at the end of the school year, we were unable to collect the expected number of questionnaires from the participating students. Altogether, we were able to collect data from 53 students participating in the program (23 boys, 30 girls, average age = 12.8).

To obtain qualitative data, we cooperated with the participating teachers whom we asked to identify the active students and form gender-balanced focus groups of 6–8 students [43,44]. Altogether, we interviewed 56 students (36 girls, 20 boys) aged 12–13 in eight focus groups (coded as A–H). As we assumed, the focus groups allowed students to discuss the program and, in doing so, enrich our findings. In addition, we interviewed all of the teachers involved in the program ( $N = 8$ ).

### 2.3. Instruments and Data Collection

To obtain quantitative data, we collected questionnaires from students one week before starting the program (October) and one week after the implementation of the students' projects (June). In the questionnaires, we focused on the level of students' perceived participation in the program and on their ability to identify a local sustainability issue and provide its possible solution.

To analyse the students' perceived participation, we used an instrument, Perceived participation, consisting of 7 items scored with a 1 (the lowest) to 5 (the highest) Likert scale (for the list of items, see Appendix A). The reliability of this scale was Cronbach alpha = 0.86.

For the identification of a local issue and its solution, we used two simple semi-open questions, asking students to identify one thing in their community they would like to change and to describe what they could do to help achieve such a change. To assess students' belief in their capacity to solve the identified issue, we used a one-item scale with values of 1 (strongly no) to 5 (strongly yes) (see Appendix B).

In the teacher interviews, and student focus groups, the teachers and students were asked about their motivation to participate in the RaS program, the process of the program's implementation at their school, the challenges that emerged, the program's perceived benefits, and their recommendations for the future. Both the interviews and focus groups were approximately 30–40 min long and were conducted in schools.

### 2.4. Data Analyses

Because of the limited amount of quantitative data, we used only basic statistical methods for our analyses. The differences between girls and boys in their perceived participation after the program were analysed by a Mann–Whitney test, the differences between students' perceived ability to solve an identified issue before and after the program

were analysed by a Wilcoxon paired test, and the differences between the number of students who were or were not able to identify a local issue by were analysed using the chi square test. In addition, we conducted a Spearman's correlation between students' perceived participation and their ability to solve an identified issue. The level of significance was set on  $\alpha = 0.05$ .

All of the interviews were recorded, transcribed, and coded in Atlas.ti to elicit themes related to the above-mentioned questions [45]. Based on this process, the study focuses on four types of interactions: among students, among teachers, student–teacher interactions, and student–community interactions. The perceived benefits of the program were classified as student empowerment, interpersonal competences, intrapersonal competences, normative competences, strategic competence, sense of community, and other. These categories were derived partly from the concept of key competencies in sustainability as defined by Wiek, Withycombe and Redman [46].

### 3. Results

The findings are organized in three parts. First, we briefly summarize the way students' projects were implemented and students' and teachers' overall satisfaction with the program. In the second part, we focus on the analyses of the students' cooperation with other stakeholders: the community, teachers, and other, un-involved students. For analyses of student-teacher interactions, we use both the quantitative (perceived participation) and qualitative data collected in the research. In the last part, we analyse the benefits of the program for developing students' empowerment. Here, we analyse the quantitative and qualitative data collected in the research.

#### 3.1. Program Implementation

All of the observed groups implemented their project. Three of the groups renovated (decorated) an abandoned bus or train stop in their villages (groups D, F, H), two groups improved the quality of a local park (A, E), and the other groups designed a new interpretive trail (B), reconstructed a natural viewpoint (G), or proposed a new crosswalk (C).

Both the teachers and the students were highly satisfied with their projects and with the RaS program. The teachers appreciated the clarity of the program and its benefits. All of the groups also declared their interest in continuing with the RaS program and provided ideas for follow-up projects that they would like to work on in the future.

The project is very well organized and structured. It has a potential to attract many schools and smart groups of students. It is an opportunity to influence our surrounding environment by a small change. (Teacher, group E)

In all of the groups, the students were allowed to make their own decisions about the role they would like to play in the project. While the students dealt with most of the obstacles constructively, several types of issues emerged. Not all of the students were willing to provide their full participation in the project, particularly if it meant devoting their free time. As a result, in most of the groups, only the most dedicated students finished the projects. In some of the groups, the school was attended by students from different villages. After the project was selected, some of the students in these groups were dissatisfied that the problem from their own village was selected and lost their motivation to get involved.

#### 3.2. Students' Cooperation with the Other Stakeholders

##### 3.2.1. Student-Community Interaction

Based on students' reflection, most of the community members involved supported and appreciated the students' projects: "( . . . ) people told us 'thank you'. They waved at us from the bus when they got out. Even the bus driver." (Student 1, group H)

Most of the parents were very supportive, and some of the teachers even provided financial help for the project. In most cases, students were supported by representatives of their municipality.

The highest level of interaction with the community was reported by group F, which selected their project on the basis of a poll organized among the community residents. In the other groups, members of the local community provided various kinds of help, including searching for relevant information, cleaning up a locality, or mending a roof. The following citation indicates that when local citizens became aware of the project, they expressed a supportive approach and offered ideas about local issues the group could work on: “Some of them (local citizens) were surprised ( . . . ), they came to us and told us about a problem in X (name of the village).” (Student 1, group C)

Groups E and F were confronted with unexpected challenges. The students in group E decided to clean up the local park, which had been ruined by homeless and drug-addicted people. However, a few days after the students finished their clean up, the park was vandalized again, and painted with a swastika. In the focus group, the students expressed a mixture of empathy and prejudice toward the homeless people by questioning the effectiveness of any possible help. Some of them expressed their wish to force these people to leave the area. Following are selected responses voiced by different students:

“It is sad, they (the homeless people) have it sad . . . ” (student 4); “And some of them did it to themselves . . . ” (student 3); “And if you give them accommodation, they will destroy it . . . ”; “They (the municipality) should build something for them. To have somewhere to stay—but there, further away from us.” (Student 1)

Group F wanted to clean up and decorate a train stop in their village. However, the railway company did not pay their project enough attention, and due to this lack of interest, the company prevented the group from finishing their project in the given time. This lack of interest on the part of the railway company prevented the group from finishing their project on time because it influenced the approach of the local municipality, who did not provide the support necessary to fully conduct the project. The teacher voiced her disappointment in the uncooperative approach taken by relevant community stakeholders:

“Well, the mayor, I do not want to say that he disappointed us, but I will speak honestly ( . . . ). He promised his help, that if we need to hire some workers or a car, it would be available, but he has not met with us up to this moment. We invited him to our presentation but—not that he refused—but he said at the very last moment that he had other obligations, so he has not been in touch with the children.” (Teacher, group F).

### 3.2.2. Student-Teacher Interaction

Overall, the students evaluated the RaS program as highly participative ( $M = 4.36$ ,  $SD = 0.62$ ). The girls ( $M = 4.45$ ,  $SD = 0.63$ ) perceived the program as more participative than the boys ( $M = 4.23$ ,  $SD = 0.60$ ,  $z = 2.09$ ,  $p = 0.03$ ).

Both the students and the teachers reported that the teachers enabled the students the freedom of real choice, and rather than controlling the students, they offered guidance and facilitation. However, differences were found in the ways the students’ projects were implemented. In five of the eight schools, the teachers provided the students with the opportunity to participate in decision-making. For example, the idea to renovate the dilapidated park was launched by the students, and the teacher only facilitated the process of the group’s decision-making:

“No one suggested it to us, it was us who wanted to renovate the park. When we were walking there, we could see that there were not really good people there, there were drugs on the ground and such ( . . . ). The teachers asked us who wanted to help with the project and who did not, and there were some of us who wanted to and some who did not.” (Student 1, group E)

In the other three groups, the teachers seemed to keep a higher level of control over the students’ decision-making and work. Two of the teachers had their own vision of what should be conducted and how, and led the students toward accepting it. When the students’ vision differed, the teacher promoted her own version:



Student 1 (school A): “And our teacher told us that the bench would be around a tree and would have no backrests, but most of us wanted to have it with backrests, so as not to have to lean on the tree.”

Interviewer: “And how did it go? How was the selection of the bench worked out?”

Student 1: “Well, according to our teacher . . . The boys were angry but then they accepted it.”

At two of the schools with a less participative approach (groups A and B), the teachers selected the students who would participate in the project. At these schools, the main motivation for the students seemed to be a chance to get out of their compulsory classes, which stood in contrast with the motivation to help their community as reported in the other groups. In group G, the teacher applied a top-down and hierarchical model of decision-making by appointing one student to whom he gave his instructions and who was responsible for the organization of the work of the other students. However, the students liked this model and appreciated the role of their teacher, whom they admired.

### 3.2.3. Interaction with Un-Involved Students and Teachers

Usually, the relationship between the core of the involved students and the other students in their class was difficult. At some of the schools, the students who were in the same class but were not involved in the program questioned the meaningfulness of the projects, expressed jealousy, or ignored the active students.

“Those from our class who were not in the team told us it definitely would not succeed.” (student 1, group A)

“We ignored them, we knew it would be good.” (Student 3, group A)

While most of the involved teachers felt supported by their colleagues or school management, some teachers perceived an absence of their colleagues’ and supervisors’ interest or their concern about introducing new learning methods in their school. The teachers at schools F and G reported that their colleagues expressed concern or even irritation when they heard about projects such as this one grounding their position in the high work demands connected with the project’s implementation:

“they see how incredibly busy we are at times, that we organize things, we make phone calls, and whatever else is needed—and everyone has a natural preference to have holy peace . . . ” (Teacher, group F)

## 3.3. The Benefits of the Program

### 3.3.1. Developing Students’ Empowerment

The expected impact of the program on student empowerment remained rather unsupported by quantitative data. The majority of students (except for six students before the program and two students after the program’s implementation) were able to identify an issue they wanted to change in their community. A majority of them (31 of 54 after the program) identified a social issue (e.g., the need for a new swimming pool or increased security), and a minority identified an environmental issue (e.g., cleaning up garbage in a nature area).

Among the suggested solutions, students mostly mentioned indirect collective actions, such as negotiating with the mayor or the local stakeholders. A third of the students (18 of 54) did not provide any solutions. Overall, the difference in the number of students who were able to suggest a possible solution before and after the program remained insignificant ( $\chi^2 = 1.20$ ,  $p = 0.27$ ).

While the students’ belief in their capacity to solve the identified issue increased slightly after the program, the difference remained insignificant ( $M_{\text{before}} = 2.90$ ,  $SD = 1.28$ ,  $M_{\text{after}} = 3.01$ ,  $SD = 1.07$ ,  $z = -0.36$ ,  $p = 0.71$ ). The perceived level of students’ participation

in decision-making positively and significantly correlated with their belief in their capacity to solve the identified local issue ( $r = 0.33$ ).

The qualitative findings proved to be more sensitive in detecting the positive effects of the program on students' empowerment. This was reflected in the focus groups. Some of the students reported that they learned more about their community or how to communicate with the representatives of their community. Most of the students also reported their belief that it is good to do something for their community and that the problems "would not solve themselves."

Students in four of the groups (A, B, C, D) expressed pride in their success and shared their belief that they could make a change.

"They taught us to trust in our goal and prove to other people that we can manage our ideas." (Student 1, group A)

"( . . . ) that we can improve our environment and that we can be proud of this." (Student 2, group D)

Students felt empowered mainly if they felt that they were accepted and respected by the adults. A highly positive acceptance by the local politicians was reported for example by group E which was planning to renovate a dilapidated city park:

Interviewer: "When you met with the local representatives, how did they respond to your proposals?"

Student 1, group E: "We were talking about this serious thing really as adults."

Student 5, group E: "They were sitting ( . . . ), and we were standing and presenting. And they supported us."

The responses of some of the students exemplify the connection between the environmental and social aspects of sustainability. In the interview, students of group E realized the local park could not be regenerated without solving the social roots of its deterioration. However, they were unable to grasp the issue's complexity, as they wished the homeless people, whom they identified as the source of the deteriorating condition of the park, were removed "away from us." Such a situation provides a fruitful and relevant opportunity for further learning. However, it may also support the students' initial preconceptions and prejudices.

### 3.3.2. Other Benefits for Students' Competence for Sustainability

Students and teachers expressed that they found additional benefits from the program, such as promoting cooperation in the group or changes of perspective in their perceptions of other people and professions (interpersonal competence), self-confidence and personal responsibility or endurance (intrapersonal competence). Teachers also mentioned positive impacts on students' strategic competence, particularly through the development of students' skills in information management (e.g., information retrieval, writing letters, presentation skills), project management or financial literacy).

"Speaking with fire fighters, defending their project against unfamiliar people, so I believe they increased their self-confidence, that they are able to manage something." (Teacher H)

"I guess we learned how it works in the adults' world, that we cannot do whatever we want ( . . . ) we had to learn write letters, address people, and raise money. One of the most important things we learned was to communicate with authorities." (Student 1, school C)

"(We learned) that it is important not to resign, even if someone tell us that we fail or if someone destroys our work, so we must go on and try to re-decorate what was destroyed." (Student 3, group D)



## 4. Discussion

Based on our findings, overall, the RaS program functions well, promoting students' empowerment and sense of community. These findings resemble the evaluation results of other similar programs [17,25]. However, some questions have appeared that indicate certain problems with the RaS program's implementation that are worth noting here. In the first part, we discuss some of the aspects connected with the challenges connected with the participative approach applied in the program. In the second part, we discuss some implications connected with efforts to involve students in dealing with controversial local sustainability issues. In the last part, we discuss the methodological limitations of the study.

### 4.1. The Limits and Challenges of the Participative Approach

Regardless of the importance that the program places on the participative approach, we could see that, at some schools, the students' opportunity to shape their project was rather limited. This issue was also reported in evaluations of similar programs in the Czech Republic [17,39] and in the previous internal evaluation of the RaS program in the Slovak Republic [36]. There are several possible explanations for this. Firstly, the participative approach is still a relatively new phenomenon in this geo-cultural area. As a result, some of the teachers may interpret even a limited amount of student autonomy as a major change for the better, thus leading them to limit the extent of the autonomy the students are allowed. It is also likely that the lack of an established participative tradition makes bigger changes unattainable at some schools at this time.

It should also be pointed out that lack of active participation may not necessarily mean lack of motivation on the part of the students involved. As we could see in group G, students can be satisfied with an instrumental model of teaching, provided they like and respect their teacher. However, it may be questioned whether the effectiveness of such an approach is the same as at schools with a more participative approach.

Secondly, the RaS program assumes some level of free-time work, which is the basis of students' involvement. However, the program's connection with school curricula brings in some tensions among the students participating in the program and their other classmates. This is analogous with what was found regarding the positions of some of the student teams involved in the GLOBE or the EcoSchool programs [39,47], thus supporting the importance of carefully facilitating the dynamics of the relationship between the students who are involved in these kinds of programs and their peers who are not involved in the program.

### 4.2. Linking Schools with the Real Local Issues

The findings open the question of how to involve students in complex and not-easy-to-solve issues in their community so as to develop their environmental citizenship [7,8,14]. As we could see, most of the finished projects, whether significantly or less centrally based on community needs, were rather straightforward, and did not generate much controversy.

There is no doubt that these kinds of projects positively influenced the students. The feeling of empowerment and the reported positive impact on students' cooperative skills correspond with the findings of other similar studies [23–28,47]. By implementing these projects, the students could experience success and see that their effort brought something new to their community [48–51].

However, the relatively non-confrontational nature of most of the implemented projects might have prevented the students from encountering real-world obstacles often embedded with conflicting interests, offering limited their opportunity to develop their citizenship competence [49,51]. As some authors have argued, while avoiding controversy in educational projects provides safety and has some educational benefits, it also fails to offer an opportunity for the students to learn some important lessons [48–51].

Nevertheless, some of the projects initiated by the students exposed them to the complexity of promoting change in their community. As we could see, group E was

confronted with a situation in which an easy solution, cleaning up the local park, failed, and only a more complex, politically-focused activity might bring about a possible long-term solution. At the same time, the experience provided the students with an opportunity to analyse a real sustainability issue and to see that social and environmental dimensions are interconnected and must be dealt with together. This opportunity emerged, but its potential was not further utilized and developed. While some of the respondents expressed empathy toward the homeless people, the underlying feeling was that the homeless people were in their situation due to addiction—their own personal failure—and that the best solution would be to move them to a remote area. This indicates that the students were unable to grasp this socially-oriented issue in its full complexity and that the project did not challenge their initial simplistic concepts of poverty. It also shows that the teacher was unable to facilitate the process of challenging the students' perspectives to take advantage of the situation as an opportunity to investigate the interconnections between the economic, social, and environmental issues in their community, and to transfer this local example into a broader understanding of sustainability issues in the world.

Clearly, if teachers were to attempt to do this, it would require implementing highly developed teacher competences in dealing with the discourses of place-based education, education for environmental citizenship, or education for sustainability [10,11]. The lack of such competences may indicate the need to change the curricula, not only for primary-school teacher education but also for pre-service teacher training, to better align them with the needs and issues of the contemporary world.

#### *4.3. Limitations*

The main limitation of the study was the small sample of students in relation to the number who were involved in the project. It is possible that a richer and more complex picture of the program would have emerged by collecting data from a larger cohort of students. In light of the findings, collecting data from students who were in the same class or who attended the same school but were not involved in the program may have contributed an interesting perspective. This study was conducted as part of an international initiative involving authors from both the academic environment and a non-profit organization. While this diversity is beneficial and reflects, in itself, a participatory approach, it may also be a source of misunderstandings caused by different languages of the contributors involved.

#### **5. Conclusions**

The RaS program seems to successfully get students engaged in dealing with their community's problems, and it develops the students' sense of empowerment. At the same time, the program raises certain questions that need to be discussed so that this program and other similar programs could be run even more effectively and enhance the achievement of their goals of contributing to the cultivation of students' capacities for civic engagement and environmental citizenship. While the participative approach is a crucial element of the RaS program, it is obvious that the level of its implementation varies. Finding a way to enhance the implementation of the participative approach, particularly at schools where it is not common, is one of the main challenges of the RaS program. Furthermore, the semi-voluntary character of the program can create tensions between the students involved in the program and those who are not. From the perspective of long-term sustainability, it seems important to find a way to make this program a whole-school program. Moreover, the effort to meet real community needs may confront the students with complex issues that do not have easy solutions. At the same time, these situations may potentially be the most beneficial for developing students' environmental citizenship skills [6]. Based on this, a better understanding of this phenomenon and the provision of guidelines for teachers dealing with controversial issues in their place-based education programs seems to be highly important.

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### Appendix A. Perceived Participation

- Whenever I wanted, I could suggest in our project what we should do and what problem to solve in our project.
- As students, we could promote our ideas in our project, even if our teacher did not initially like them.
- Every student could openly say his/her opinion in the project even if our teacher disagreed much with it.
- Every student might suggest in the project how we should best implement our planned tasks.
- Every student could in the project evaluate what we did well and what not.
- Together with all of the students in our class, we decided if our work was good or not.
- Anytime in the project I could decide to what part of the project I would be involved.

### Appendix B. Students’ Ability to Identify and Solve Local Sustainability Issue

If you could change something connected with the place where you live, what would it be? I would like to change (identify one thing connected with the place where you live you would like to change):

1. What could you do for such a change?
2. How much can you influence this change to happen? (1–5).

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