



DOI 10.2478/sbe-2024-0033

SBE no. 19(2) 2024

DEVELOPING A COMMUNITY-BASED PARTICIPATORY RESEARCH PROGRAM. FROM CONCEPT TO OUTCOMES

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Abstract:

The scope of the paper is to describe and interpret the steps and activities that led to the development and implementation of a community-based participatory research program that involved an university, local businesses and community organizations, local authorities and an external funder. Specifically, the paper addresses the following two questions: first, how was this program designed and implemented, and second, what lessons can be learned from this experience that might be extended to the field of community-based research generally? The instrumental case study methodology was applied and the CBPR Program considered is UniverCity Romania.

Key words: community-based participatory research, higher education, community organizations, community partnerships

1. Introduction

Community-Based Participatory Research (CBPR) is defined as a collaborative approach to research that equitably involves community members, organizational representatives, and researchers in all aspects of the research process and recognizes the unique strengths that each of these stakeholders brings (Israel et al., 1998), (Collins et al., 2018). The goal of CBPR is to combine knowledge and action to improve community wellbeing and to eliminate social disparities.

The purpose of this paper is to document a CBPR program, UniverCity Romania project - funded by Erasmus + / Cooperation partnerships in the field of higher education (UniverCity Project 2020-1-BG01-KA203-079271) and implemented by Lucian Blaga University of Sibiu (LBUS), Romania (LBUS, 2024) that involved different community stakeholders. The article contains five sections. The first one states the scope of the paper and presents its structure. The second section provides an insight in the CBPR literature. The third one defines the research objectives and describes the research methodology used for documentation of the case study. The fourth section introduces the CBPR program which is the subject of this case study. It describes its concept and design, implementation and dissemination of results and the overall impact of this CBPR program,

considering both its promising aspects and shortcomings. The fifth section identifies lessons learned, focusing on implications of this case study to the field of CBPR, highlighting the recommendations for different stakeholders (academia, businesses, formal or informal community organizations like non-governmental organizations (NGOs) and informal groups of citizens, local authorities and international donors) as they design their own CBPR programs or projects, and thus, enriching students' academic skills and serving the needs of the local communities.

2. Literature Review

The roots of CBPR can be traced back to the 1940s with the work of Kurt Lewin, who developed the concept of action research for making planned social change (Lewin, 1948). Names for this methodology include terms such as action research, participatory research, participatory action research, community-based research, action science, action inquiry and cooperative inquiry (Holkup, et al., 2004). All these terms refer to collaborative, change-oriented research that engages academics (teachers, researchers and students) and community members in projects addressing community-identified needs (Strand, et al., 2003). CBPR is an important tool in engaging universities with local communities. The increasing recognition of the potential of CBPR to address complex community needs is recognized by the insistence on forming community-based partnerships contained in grant guidelines from different funding sources (Puma, et. Al, 2009).

The principles of CBPR have been defined by researchers as a result of an extensive literature review (Israel, et al., 2003): CBPR recognizes community as a unit of identify; builds on strengths and resources within the community; facilitates a collaborative, equitable partnership in all phases of the research, involving an empowering and power-sharing process that attends to social inequalities; fosters co-learning and capacity building among all partners; integrates and achieves a balance between knowledge generation and intervention for mutual benefit of all partners; focuses on the local relevance of public health problems and ecologic perspectives that recognize and attend to the multiple determinants of health; involves systems development using a cyclical and iterative process; disseminates results to all partners and involves them in the dissemination process; and involves a long-term process and commitment to sustainability.

The benefits and challenges of CBPR projects are defined by Amauchi et al. in their paper (2021): relevance and sustainability over the long term (CBPR is more likely to address the real needs of the community); capacity building (community members gain skills and knowledge that can be used beyond the research project); enhanced validity and reliability of research findings (CBPRs combine local practices and scientific knowledge). CBPR projects face also challenges such as (Israel, et al., 2005): time and resources (CBPRs are time-consuming and resource-intensive), power dynamics (balancing power between researchers and community members can be challenging); sustainability (stakeholders' commitment over the long term can be difficult). Among the practical challenges of designing CBPR programs, literature review reflected factors such as unrealistic goals and timeframes, insufficient resources, methodological challenges in recruiting and involving local participants (Stocking, & Cutforth, 2006), (Strand, et al.,

2003), (Peresie, et al., 2003). All these can make a CBPR project difficult to develop and implement.

Literature review reflects an increased interest among researchers in CBPR topic, with the number of CBPR publications being on the rise since 2005 and the term CBPR being used most frequently across the fields (Lee, J.Y., et al, 2024). While many studies explore the model and effectiveness of CBPR approach in different sectors or population categories, there are few studies focusing on evaluation of CBPR programs implemented in higher education institutions (Biber, et al, 2022), with the examination of multiple stakeholder perspectives to identify strengths and challenges that may serve as models of best practices for other programs (Oridota, et al., 2023).

3. Research Objectives and Research Methodology

The scope of the paper is to describe the steps and activities that led to the development and implementation of a particular CBPR Program: UniverCity Romania. Specifically, the following two questions have been addressed: i/ how was this CBPR Program designed and implemented, and ii/ what lessons can be learned from this CBPR experience that might be extended to the field of CBPR generally? The answers to these questions extend the best practices in the field of CBPR.

In order to in-depth understand the complex processes of the CBPR and to draw conclusions regarding the successes and failures of such projects, the instrumental case study methodology was applied (Yin, 2003). Case studies are best suited for exploratory research (Creswell, 1994), allowing in-depth, multi-faceted explorations of complex issues in their real-life settings (Crowe, et al., 2011), (Zhu, et al., 2018). In this study, the author relied on the following sources of information:

- Interviews conducted with key stakeholders, including students, faculty members and community partners involved in community researches, staff involved in coordination of the program. These interviews explored participants' experiences, perceptions and the perceived impact of the program.
- Project relevant documents, such as project guidelines, community grant applications and project reports, analyzed to gather information on the program's structure, objectives and outcomes. This helped to contextualize and corroborate data obtained from interviews.
- Observations of project activities as they unfolded, such as research workshops, community meetings and project presentations, conducted to gain firsthand insights into the dynamics of the program and the interactions between participants.

These sources of information provided rich, detailed insights into the experiences and outcomes associated with the project. The analysis consisted in processing existing data to extract meaningful information for the case and further on, determining the extent to which the conclusions added value to the literature on CBPR in terms of recommendations for stakeholders.

4. Community-Based Participatory Research Program. UniverCity Romania

4.1. Program Concept, Design and Implementation

The UniverCity project was a 36-month initiative financed by Erasmus + / Cooperation partnerships in the field of higher education (UniverCity Project 2020-1-BG01-KA203-079271), aimed at empowering universities to form strategic partnerships with local communities, thereby building stronger neighborhoods and supporting future employability (The UniverCity Consortium, 2024). The overall scope of the project was to promote innovation and the exchange of experience and know-how, through the cooperation of various local organizations, both at the policy level and at the level of educational practices and applied research (LBUS, 2024). It sought to break down barriers between higher education and local community, through the development of partnerships among universities, businesses, community organizations and local authorities in Bulgaria, Italy, and Romania. The project was run over the period September 2020 – August 2023 by a consortium of organizations: Sofia University St Kliment Ohridski - Bulgaria (coordinator), Lucian Blaga University of Sibiu – Romania (partner), Psiquadro Societa Cooperativa – Italia (partner), Research & Training Point Foundation – Bulgaria (partner), British Council - Bulgaria (collaborator). The project included two annual cycles of Community Research Awards (CRAs) per country, which were competitions for researchers to develop research projects based on community needs.

The concept of CRAs was initially developed by The University of Plymouth – United Kingdom (UK), where they were held annually and were part of an approach to address real-life community problems and strengthen the link between the university and its local communities. Community groups were invited to suggest research topics which would benefit their community. Many of the research areas raised by the community and tackled locally went on to become key research areas at the university, with a global impact. These included environmental problems in city river systems, spotting early signs of dementia and training local people to monitor plastics on the beach. Due to its expertise in the development and implementation of CRAs, University of Plymouth, has been selected by UniverCity consortium to share its knowledge to the management teams of the project partners. The training provided an opportunity to find out about the CRA approach, how it was designed (process and tools) and delivered at The University of Plymouth and the benefits and long-term impact. The UK model was further on adapted to the local context, in order to deliver the maximum benefit for each consortium team member. Special attention was given to the development of rules and procedures for the competitions. These guidelines outlined the eligibility criteria, submission requirements, evaluation process and timelines for the competition. The step was essential to ensure that the competition is structured in a way that encourages a broad range of participation and a fair assessment of research proposals.

In Romania, UniverCity project was set out to find solutions to support the development of local communities in solving small-scale problems in Sibiu County (LBUS, 2024). In concrete terms, local communities (any formal or informal group of organizations or citizens) addressed research challenges to LBUS researchers, on various issues of community interest. In order to find solutions to the problems addressed, LBUS

researches, together with students and representatives from the local environment, formed project teams and submitted applications in two rounds of competitions, organized by the university. A jury composed of experts, representatives of the local business environment, NGOs, public administration and the academic environment selected six CRAs that were implemented over a period of six months and benefited from a funding of 1,330 EUR / project. Throughout the competitions duration (since the date of the launch until the last day of the CRAs implementation), the UniverCity Romania management team provided trainings, mentoring and support to the CRAs project teams on how to write the project application and how to further on implement the selected community research projects.

A short description of these CBPR projects is presented in the following lines, as resulted from the interviews conducted with the each CRAs coordinator.

CRA 1. Study on water quality in Sibiel village, Sibiu County

The quality of water in rural areas is constantly threatened, which is why supervision and hygienic-sanitary control are critical. The objectives of the project were: i/ to investigate the quality of water from the Sibiel River, to trace the influence of natural and anthropogenic factors and ii/ to analyze the quality of well-water, to determine whether it is safe to drink. The project responded to the need of a local rural community (Sibiel village) to improve awareness of water quality in the area.

Researchers and students from Faculty of Agricultural Sciences, Food Industry and Environmental Protection formed the project team. More than 20 families from Sibiel village allowed water samples to be taken from their own wells. The local administration also provided information about the public wells in the village. During the monitoring period, more than 1000 tests were performed from the river and wells. The main physicochemical parameters analyzed were: pH, temperature, turbidity, conductivity, TDS, nitrates, ammonium, phosphates, hardness, DO, CCO-Mn and BOD and microbiological parameters such as: E-coli, enterococci and coliform bacteria. The results were compared with the expected outcome according to the parameters stipulated in national legislation.

Through the actions taken, the project achieved its objective of raising awareness among the community regarding the responsible use of water in the household and the impact of human actions on the environment. The improved use of water resources will have a long-term impact on the environment and the quality of life of the local community.

CRA 2. The relevance of the biodiversity of honey plants in the expansion and efficiency of beekeeping in the area of Sibiel village (Sibiu County)

The beekeeping community of Sibiel village was interested in increasing honey production. The objectives of the project were: i/ to assess the current state of the beekeeping sector in Sibiu County and Sibiel village; ii) to identify flora with possible melliferous potential in the investigated area; iii) to assess the quality of different honey varieties from the investigated area. Local community knowledge of honey resources was important in developing appropriate beekeeping and honey production practices.

The partners involved in the project were: researchers and students from LBUS, Faculty of Agricultural Sciences, Food Industry and Environmental Protection; the

beekeeper community from Sibiel village; Romanian Beekeepers Association – Sibiu branch.

Methods used: 1. Identification of the flora in the area: direct observation in the ecosystem, direct collections of botanical material, determination of the collected specimens; 2. Analysis of the quality of Sibiel honey. Determination of: the acidity index of honey, electrical conductivity of honey, pH, alkalinity, water content, identification of the addition of sugar syrup in honey, making photographic images; 3. Development of a questionnaire for beekeepers in the county.

Immediate results: list of honeybee species, analysis bulletins for several varieties of local honey, roundtable with beekeepers in the area. Longer term, the knowledge and conservation of the honey flora supports beekeeping expansion and the stimulation of beekeeping agritourism. Beekeeping generates jobs and additional income for farmers.

The results of the project were used as research subjects in one Bachelor thesis. They were used to develop educational case studies for the Botany and Entomology classes. The results were disseminated in a webinar with international participation "From Nature into the Pharmacy 2022" and within the event Researchers' Night 2022.

The volunteer students involved in the project developed their critical and independent thinking skills. They understood the biological and ecological role of bees, their economic, scientific and social role, as well as the importance of beekeeping for the health of the population. The students' involvement in the project also aimed to stimulate their entrepreneurial skills.

CRA 3. Yes, for Education!

The aim of the "Yes, for Education!" project was to educate stakeholders in preventing school dropout among children and young people from 3 residential centers in Sibiu County. The project's goals were to: i/ determine the educational situation of children and young people living in residential centers; ii/ identify factors that contribute to school demotivation among children and young people who grew up in residential centers; iii/ assess the educational needs of institutionalized children, both from their perspective and that of the specialists; iv/ identify attitudes of institutionalized children and young people towards education; v/ develop socio-educational activities to support the needs of institutionalized children and young people.

The "Yes, for Education!" project included direct collaboration between LBUS academic staff and 30 students (Faculty of Social Sciences), volunteers from two NGOs, staff and children from three residential centers, representatives of a local authority (Social Work and Child Protection Department, Sibiu) and actors from Gong Theatre.

The study has brought to light the reasons why children and young people in residential centers fail to complete their education. Family-associated traumas (lack of affection) and school-related fears (peer violence, poor school results, insufficient educational resources) cause problems in children's cognitive development and increasing learning difficulties. In the absence of socio-educational interventions, children in institutionalized centers face increasing difficulties in socio-occupational integration.

Involving the students in community research projects helped them to understand the importance of research as part of the applied learning process. It also gave them the

opportunity to use their academic skills and understand the role of translating theory into practice.

CRA 4. Life Story

The “Life Story” project aimed to identify solutions to make the transition of young people from an institutionalized life to an independent life more efficient. The outcome included an Intervention Plan and formative activities which the project team designed for volunteers from three residential centers in Sibiu County, in order to develop their skills in working with institutionalized young people. The project team consisted of trainers, students and educators from Faculty of Social Sciences and volunteers from an NGO providing support and assistance to institutionalized children. Over the project duration, the project team carried out the following activities related to young people transitioning from an institutionalized to an independent life: needs assessment; developing the independent life skills evaluation tool; designing an Intervention Plan; delivering workshops for volunteers and educators; publishing a guide on transition from an institutionalized life to an independent one.

Near term, the project improved the skills and competence of educators working with institutionalized young people. Longer term, the working tool developed within the project will impact the development of independent life skills of young people who leave these institutions and enter social and professional life.

The intervention plan and the guide on transition from an institutionalized life to an independent life published on the website of the Psycho-Pedagogical Research and Analysis Center of LBUS is a useful educational resource for the Master's study program “Educational Interventions for the Inclusive School”. The research conducted within the project is part of the final thesis of a student enrolled in the Master's study program Psycho-pedagogical training module Level II. The knowledge gained will be further on applied by the same student in her professional career (educator).

CRA 5. The agrochemical study of the soils of Sibiel, Sibiu County, with the aim of applying an efficient fertilization and avoiding environmental pollution

Agrochemical mapping assesses the nutrient supply accessible to plants and the evolution of soil fertility. This project included an agrochemical mapping of soil in the village of Sibiel, Sibiu County. The project aimed to identify the current and potential degree of fertility, as well as establish optimal doses of fertilizers and/or amendments, to support appropriate application without increasing risk of environmental pollution, especially of the groundwater in the area.

Researchers and students from Faculty of Agricultural Sciences, Food Industry and Environmental Protection, land owners and members of the local community were directly involved in this activity.

More than 10 soil samples were collected, taking into account land use, soil type and crop location. The main parameters analyzed were: soil temperature and humidity; soil texture; the pH; hydrolytic acidity (Ah), sum of exchangeable bases (SB); the total cation-exchange capacity (T) and (V); the degree of saturation with bases; organic carbon content

and humus; determination of total nitrogen content as well as mineral forms of nitrogen; the plant-accessible forms of phosphorus and potassium.

Community members realized the importance of conducting agrochemical studies and the need for optimal application of fertilizers. The results of the research can make important contributions to the knowledge of soil fertility in the Sibiel area, its improvement and an increase in agricultural production.

The results of the project were used in three Bachelor theses. They were also used as a case study in the disciplines of Agrochemistry and Remediation of polluted soils. The obtained experimental results were disseminated in students' scientific sessions.

Within the project, more than 20 students had the opportunity to deepen their knowledge in the field, which will contribute to their development as future agronomic engineers. They became more aware of the importance of knowing the theoretical foundations and how they can be applied in the field.

CRA 6. The application of the Zero Waste principle to the development of local beekeeping products through utilization of food residues

The project aimed to find an integrated solution to apply the Zero Waste principle and reduce waste by utilizing food residues to create innovative foods with a positive impact on consumers' health. The integrated solution was applied in a pilot unit for beehive product processing and students were involved in identifying, testing and validating the integrated solution, as future food production specialists of an environmentally friendly society.

Researchers and students from Faculty of Agricultural Sciences, Food Industry and Environmental Protection formed the project team. The community partners of this project were beekeepers and honey processors from Săliște, a small town in Sibiu County.

The research aimed to identify the residues directly at the producers and analyze their composition, followed by the design and creation of some innovative foods that incorporate the residues. Technological transfer was made from the laboratory level to the producer level, in compliance with hygiene and food safety norms.

At the university level, the main impact was on the courses "Designing new products" (bachelor's degree) and "Occupational hygiene and health management" (master's degree), both in the field of Food Products Engineering, by improving their content based on knowledge gained. Three students were involved in the project, who completed two dissertations and a diploma project. Students were given the chance to work directly with manufacturers to solve real problems plus the opportunity to work for one of the companies involved in the project.

4.2. Dissemination of Results

The results of the CRAs carried out and the solutions proposed by the project teams were made available to the community organizations that generated the respective research ideas and to other people and organizations interested in the subject under investigation. In addition to the practical aspects of the CRAs, the UniverCity Romania project also engaged in policy analysis and development. The consortium project team, conducted research and gathered insights from the competitions and the broader

community. They analyzed the results and produced policy recommendations. These recommendations were aimed to advocate for the importance of community-driven research and suggest ways in which policymakers can support and integrate such initiatives into their agendas. The knowledge and experiences were compiled into two comprehensive toolkits on CRAs (one for universities and one for local authorities and community organizations). The documents are a valuable resource for other communities or organizations interested in replicating and implementing similar CBPR initiatives. They provide step-by-step guidance on how to organize and manage CRAs, offering insights, best practices and templates that can be customized to suit specific contexts. This knowledge dissemination is a key element of the project's legacy, ensuring that the impact of community research awards extends beyond the project's duration.

The dissemination activities, both online and offline, were designed to reach a wide spectrum of stakeholders, ensuring that the project's outcomes, knowledge, and resources were made readily available and accessible to diverse audiences across partner countries and beyond. They were shared with stakeholders, including university leadership, academic staff (teachers and researchers), students, community organizations, local authorities, businesses and media. The main communication activities within UniverCity Romania Program and their channels included: local media, project website, intranet channels, social media channels and email campaigns. The project results were also showcased during multiplier events (local public events and international week). This format allowed for active engagement, enabling participants to pose questions and interact with the project team. The CRA methodology and the UniverCity project were seamlessly presented into existing academic courses allowing students to engage with CBPR principles, enriching their educational experience and promoting community-driven research as a fundamental aspect of civic education.

Overall, taking into consideration only countable dissemination activities (number of emails sent, number of stakeholders exposed to face to face and online presentations etc.), the UniverCity Romania Program reached 700 LBUS academics (teachers and researchers), 1210 LBUS students (184 PhD Students and 1026 Master and BA Students - last years), 670 researchers from new universities (national and international universities not members of the project consortium), 106 higher education policy makers (LBUS management team, Erasmus national contact points, Ministry of Education, Ministry of Research, educational structures from local level), 370 business representatives, 106 representatives of local authorities (county representatives, mayors, vice-mayors, local counselors) and 370 representatives of community-based organizations.

4.3. Program Impact

Participation in the CRAs initiatives promoted by UniverCity Romania had a profound impact on teachers, researchers and students, enhancing their knowledge, skills, and ability to communicate research with broader society. Overall, within the two rounds of competitions, there were 46 research ideas collected from the local communities, 43 partnerships academia-civil society formed and 32 CBPR applications submitted. In total, the program directly involved: 68 academic staff (teachers and researchers), 80 students

(young researchers or technical supporters), 85 representatives of local businesses and 59 representatives of local community organizations.

For teachers, CRA participation led to enhanced pedagogical skills. They gained a deeper understanding of research methodologies and community engagement strategies, which they can incorporate into their teaching. This fosters a more research-oriented and engaged classroom environment, where students are exposed to real-world research challenges. Furthermore, teachers benefited from improved interdisciplinary understanding. Collaborating across disciplines within CRAs exposed them to diverse perspectives and interdisciplinary approaches, enriching their own teaching practices and research guidance. Importantly, teachers developed expertise in community engagement, allowing them to bridge the gap between classroom learning and real-world issues. They guided students in conducting research that has practical, societal relevance, emphasizing the importance of research in addressing community needs. Additionally, they became better mentors, supporting students in designing and conducting research projects, providing guidance on research ethics, data analysis and effective communication of findings.

"The project has been a tremendous opportunity for me to learn and grow. Together with colleagues from the university, students, representatives of NGOs, children from residential centers and staff from public social welfare institutions and actors from the theater, we embarked on a journey towards knowledge and reality. We took a step closer to each other, to the practice of social work and to the much-needed change in the field of education for institutionalized children and youth. Collaboration between universities and community institutions is very beneficial for both sides. From the experience of the students who participated in the project, we found that their involvement in the project was one of the most valuable learning experiences they had at university. As a teacher, running the project has helped me to be able to give my students the opportunity to practice their acquired skills/competences and demonstrate the relevance of research to social work practice." (teacher, CRA project coordinator, "Yes for Education").

"The results of the project were used as research subjects in two Bachelor theses. They were also used as an educational case study for the discipline Environmental chemistry - water quality analysis. The experimental results were disseminated during students' scientific session. More than 25 students participated in the project and carried out practical work, both in the field and in the laboratory. Within the project, they had the opportunity to deepen their knowledge in the field, which will contribute to their development as future specialists in environmental protection. (teacher, CRA coordinator, "Study on water quality in Sibiel village, Sibiu County")

For researchers, CRA initiatives offered opportunities to enhance their research skills significantly. They gained practical experience in designing, conducting, and analyzing research that directly addresses community needs. This hands-on involvement contributes to their growth as effective researchers. Collaboration within CRAs also broadens researchers' professional networks. They established connections with community members, students, and other stakeholders, which can lead to future research opportunities and partnerships. Moreover, they can have a direct impact on policy decisions by contributing to evidence-based policy recommendations through their

research. Participating in CRA initiatives also enhanced researchers' ability to communicate complex research findings effectively. They learnt to convey their work in accessible ways, ensuring that their research is understandable and relevant to both academic and non-academic audiences.

"Food waste is an ethical and environmental problem. This project was an opportunity for us to diversify food in a modern way by utilizing residues, by combining the principle of Zero Waste with that of eliminating waste". (researcher, CRA coordinator, "The application of the Zero Waste principle to the development of local beekeeping products through utilization of food residues").

"The research topic was proposed for debate in an international conference on inclusive education, with great interest and valuable ideas being gathered on this occasion. The challenge was then to provide the best solutions for the long-term formative activities. The expertise and enthusiastic approach of the volunteers involved in the project, connected our formative expertise to respond to the real needs of institutionalized teenagers". (researcher, CRA coordinator, "Life Story").

For students, CRA participation translated into experiential learning. They gained hands-on experience in conducting research with real-world implications, from formulating research questions to data collection and analysis. This practical exposure enriches their educational journey. Furthermore, CRA initiatives fostered a sense of social responsibility and community engagement among students. They learnt to collaborate with community members, understand their needs and perspectives, and actively engage with local communities. Students also improved their communication skills significantly. They enhanced their ability to convey research findings effectively to various audiences, including academic peers, community members and policymakers. This skill set equips them to communicate complex ideas in accessible ways. Ultimately, CRA participation enhanced students' career readiness. They graduate with valuable skills and experiences that improve their employability, as they possess a practical understanding of research and community engagement. These skills are transferable and applicable in various career paths, making them well-prepared for future endeavors.

"The "Yes for Education!" project was a great opportunity for me as a social work student. Together with an extremely nice project team, I was able to discover a world I didn't know much about. The first meeting with the children involved a lot of emotions, but slowly, slowly, we got closer to each other, and the next meetings were much more relaxed. Besides the chance to get to know the stories of the children, we also had the opportunity to get accustomed with the tools used by a social worker in his/her work! We learned how to develop and apply a questionnaire and how to conduct interviews, but most important, we saw that our lives - the lives of those raised in families - are much easier than those of the children in foster care systems." (undergraduate student, "Yes, for Education")

"I joined the team with the idea of getting involved in designing the foods of the future, and this project gave me this chance. I am happy I had direct contact with production sector and I saw the solutions designed by me to be applied". (master's student, "The application of the Zero Waste principle to the development of local beekeeping products through utilization of food residues").

"I participated as a volunteer in the community research project called "The relevance of the biodiversity of honey plants in the expansion and efficiency of beekeeping in the area of Sibiel village (Sibiu County)". In the spring and summer of 2022, we made several trips to Sibiel village. The teamwork was amazing. We identified 109 plant species from the 4 reliefs, of which 37 species are melliferous. The main botanical families identified are Rosaceae (30%), Fabaceae (24%) and Lamiaceae (13%). We brought all these data to the attention of the honey producers in Sibiel and concluded that the honeybee species in their hives are beneficial for the production of high-quality honey." (undergraduate student).

With regard to the **different organizations**, involvement in the CRA initiatives had a transformative impact, enriching the expertise of businesses, community organizations and local governments. These organizations benefited from the wealth of research insights and community-driven solutions generated by CRA projects. Businesses, in particular, gained inspiration for socially responsible strategies and decision-making. This could lead to more community-oriented business practices, strengthening their relationships with local communities and fostering a positive corporate image. NGOs and community leaders leveraged CRA outcomes to advocate for and implement solutions to pressing local challenges, ensuring that their efforts were well-informed and evidence-based. Moreover, local governments, including mayors and deputy mayors, could further implement findings into local policies and initiatives. This localized impact enhanced the quality of life and well-being of community members, demonstrating the concrete benefits of community-driven research and collaboration with academic institutions.

"The project on water quality was welcomed by the households in Sibiel village. The results received by the local people were a valuable source of information and they raised awareness of the sanitation of wells from where the community members use water for their own consumption as well as for their animals" (representative of local administration, "Study on water quality in Sibiel village, Sibiu County").

"This project not only provided our organization with valuable data which, made available to the community, make us more convincing when we advocate for our cause, but it also allowed the future social services workers, now students, to gather real-world experience." (NGO representative, "Yes, for education").

"We have a long and fruitful collaboration with LBUS and we expect from them an integrated solution for the intelligent utilization of residues from the processing of organic honey, so that we can take the first steps to become a Zero Waste unit and expand the product range". (representative community of beekeepers and honey processors, "The application of the Zero Waste principle to the development of local beekeeping products through utilization of food residues").

"The analysis of the quality of soil in the gardens around the households and in the agricultural field has an important role for knowing the degree of fertility of soil as well as for designing appropriate fertilization schemes." (representative of local administration, "The agrochemical study of the soils of Sibiel, Sibiu County").

4.4. Promising Aspects and Challenges

The UniverCity Romania project was designed to engage and benefit a diverse range of target groups, creating a dynamic and inclusive ecosystem where academia, students, policy makers, businesses, local authorities and community members collaboratively worked towards common goals of community-driven research and positive societal impact.

University Teachers and Researchers brought their academic expertise, research acumen, and innovative ideas to the table. They were the driving force behind the development and execution of community-driven research projects, which aimed to address real-world challenges and foster collaboration between academia and local communities. **Students** were afforded a unique opportunity to engage in hands-on, community-oriented research activities. They gained invaluable practical experience while contributing to the broader goals of the project. **Businesses and Local Authorities** played an active role in community-driven research projects, providing resources, expertise, and support. Their involvement demonstrated the project's commitment to fostering partnerships that transcend traditional academic boundaries. **Community Organizations** collaborated with university researchers, shared their knowledge and experiences, and actively contributed to addressing local challenges. The project's impact on the community members extended beyond research, empowering them to take an active role in shaping the future of their neighborhoods. **Higher Education Policy Makers** held a critical position as stakeholders in the project. Their engagement ensured that the project aligned with overarching higher education policies and priorities. They provided valuable insights and guidance, facilitating the integration of project outcomes into higher education policy frameworks.

The most serious challenge for the implementation of UniverCity Romania Program was the COVID-19 pandemic. The key risks and issues encountered by the project team included: inability to conduct some activities because of lockdowns and social distancing measures, communication challenges (digital communication channels were not always suited to reach or to raise interest with target audience), resource constraints because of increasing inflation, health and safety concerns. To mitigate the pandemic-associated risks, UniverCity Romania team undertook a series of measures among them: hybrid approaches (combining virtual and in-person elements, where possible), enhanced communication strategies (robust online communication strategy, including video lecturing), health and safety protocols, proper resource mobilization and planning. These mitigation measures helped adapt the pilot CRA program to the unique challenges posed by the COVID-19 pandemic, ensuring that its goals and objectives could still be achieved despite the disruptions and uncertainties of the situation.

5. Lessons Learnt

Throughout this article, the author shared the experiences of LBUS in using a CBPR approach and provided recommendations for how to design, develop and conduct a CBPR program. The results from the implementation of UniverCity Romania Project state within the conclusions of other studies found in literature, demonstrating that CBPR

represents a powerful approach to research of complex socio-economic issues, that can lead to more relevant, sustainable and impactful outcomes, by involving the community organizations as equal partners. Within the same framework, the results of the study contribute to the existing literature by offering simultaneous insights with respect to benefits of the major stakeholders involved in the project:

Benefits for Academia (teachers, researchers and students):

- **Enhanced Community Engagement:** CRA projects fosters closer collaboration between academia and local communities, leading to increased community participation in research projects. As a result, academia benefitts from a broader range of research topics and data sources.
- **Practical Research Skills:** CRA initiatives provides academia with opportunities to develop practical research skills among students and faculty. Engaging in real-world community projects allows teachers and researchers to apply theoretical knowledge in meaningful ways, preparing students for future careers and research endeavors.

Benefits for Local Organizations (businesses, community organizations and local authorities):

- **Informed Decision-Making:** CRA-generated research contributes to evidence-based policymaking and decision-making at the central and local levels. Authorities and organizations can draw upon the insights and recommendations from CRA projects to address community challenges effectively.
- **Strengthened Community Relationships:** Supporting CRA programs demonstrates authorities' and organizations' commitment to community well-being. This engagement builds trust and positive relationships with the communities they serve, fostering a sense of partnership and collaboration.

Benefits for Society as a Whole:

- **Empowered Communities:** CRA projects empower communities by giving them a voice in research and decision-making processes. This empowerment leads to increased self-determination, improved community cohesion, and a stronger sense of ownership over local issues.
- **Solutions to local and societal problems:** CRA research focuses on addressing specific challenges and needs of local and social community groups. As a result, society benefits from innovative solutions tailored to the unique circumstances of each community, contributing to improved quality of life and well-being.
- **Increased Social Capital:** collaborative CRA initiatives strengthens social bonds within communities, enhancing social capital. This, in turn, leads to greater resilience, social cohesion, and the ability to tackle future challenges collectively.
- **Knowledge Sharing:** CRA outcomes are shared with the wider public, enabling knowledge dissemination and education. The broader society gains access to valuable research findings, promoting awareness and understanding of community issues.

These results highlight the multifaceted benefits of a CBPR program, demonstrating how it can positively impact academia, authorities, organizations and

society as a whole by fostering collaboration, knowledge exchange, and community empowerment.

6. References

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