

Experiential Learning for Sustainable Development: Extramural Collaborations in Higher Education's Transformative Approaches

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Abstract

Education for Sustainable Development (ESD) approaches in higher education based on John Dewey's pragmatist education theory enable transformative experiences enhancing students' critical thinking and problem-solving skills. Problem-based learning with extramural partners offers experiential learning for students, whereas it also contains potential for extramural partners to revisit the idea of interdisciplinary dynamics and collaborative work in their daily work routines. This article explores the perspectives of extramural partners engaged in capstone projects at the University of Erfurt. Through in-depth interviews, the study aims to gather insight into the impact of such collaboration on the organisational learning of extramural partners.

Keywords

service-learning; problem-solving; extramural partners; capstone projects; collaboration

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1. Introduction

Integrating Education for Sustainable Development (ESD) into higher education has been a long-standing objective in Germany. The National Action Plan for Germany's differentiated strategy regarding SDG 4 ('quality education') was established in 2017, two years after the UN's adoption of the Sustainable Development Goals (SDGs) in 2015 (United Nations [UN], 2015). This plan delineates 130 goals and 349 actionable recommendations aimed at the structural embedding of ESD in the German education landscape (Bundesministerium für Bildung und Forschung, 2017). The plan addresses formal, non-formal, and informal education, focusing on updating curricula, syllabi, and training regulations. Additionally, it supports the initial, further, and continuing training of educational professionals. It also emphasises enhanced collaboration among ESD stakeholders, sharing good practices, and a holistic transformation of learning institutions towards sustainability (a whole-institution approach). The collaboration among ESD stakeholders and sharing good practices lead to mutual learning processes among all stakeholders. While the National Action Plan addresses all formal, non-formal, and informal educational institutions, our contribution centres on universities as core actors in higher education and academic development. As training grounds for future decision makers, universities are instrumental in the social transformation process towards sustainable development. In

this context, the cooperation among four Thuringian universities as part of the research project 'Climate network for more sustainability in Thuringia' (KLIMA-N), funded by the Federal Ministry for Research and Education (BMBF), pools their respective competencies for mutual enhancement through a division of labour. Adopting a whole-institution approach, each university addresses distinct facets of sustainability: the University of Erfurt's sub-project 'Education for Sustainable Development (ESD)' examines exemplary transformative teaching-learning arrangements,¹ evaluates their effectiveness and develops best-practice guidelines. In addition, other partner universities are also engaged in various initiatives aimed at promoting sustainability. Nordhausen University of Applied Sciences and Erfurt University of Applied Sciences are both working on implementing climate-friendly campuses, respectively focusing on energy and resource management as well as mobility and biodiversity. Furthermore, Ilmenau University of Technology is establishing a sustainability communication centre to facilitate the exchange of project results within the network and the broader region (KLIMA-N 2024). The project started in October 2022, and the first phase will end in January 2026. The research results will be shared throughout the whole network.

This article presents insights from the University of Erfurt's sub-project, which focuses on ESD approaches in higher education. The subsequent section

outlines the theoretical framework that integrates an emancipatory approach in ESD with John Dewey's education theory, which is based on the philosophy of pragmatism. Drawing on these theoretical reflections, we formulate hypotheses regarding the criteria for successful ESD courses in higher education, focusing on problem-solving related to real-world sustainability challenges through collaboration with extramural partner institutions within a framework of service-learning.

In the following section, we present the methodology employed to test our hypotheses. Our empirical case consists of the policy capstone projects in the Master of Public Policy programme at the Willy Brandt School of Public Policy, University of Erfurt, Germany, whose students are mainly international, coming from very diverse countries. Capstone projects² take place at the culmination of the programme and provide students with the opportunity to synthesise and apply their acquired knowledge in an experiential learning environment (Andersen et al., 2025). These projects fill all formal requirements for service-learning ESD courses in a pragmatist framework. The policy capstone is a fundamental component of the MA curriculum and is offered annually over a five-month period, from October to February. In this component final-year students who participate in these projects collaborate with extramural partner institutions.

The findings of our research with these partners are presented in the fourth section, and the fifth section

- 1 The capstone seminar described in this article is one of the exemplary teaching-learning arrangements that were analysed. Further results of the project on ESD are published in Hollstein & Bokhari (2025), Hollstein et al. (2024), and Hollstein (2024).
- 2 A capstone project constitutes a concluding academic assignment in higher education, enabling students to apply their acquired knowledge and skills to address a real-world issue. This project frequently assumes various forms and entails collaboration with extramural partners, thereby demonstrating the students' critical thinking abilities and capacity for independent research.

discusses these findings in light of our theoretical insights. This article ends with a brief conclusion.

2. Theoretical Framework

In this section, we present the theoretical foundations underpinning our study. These foundations are twofold. First, we draw on pragmatist theory, especially as formulated by John Dewey, which emphasises practical problem-solving and provides a basis for service-learning concepts oriented towards addressing problem-solving in real life (2.1). Given that we seek to explore how sustainability can be effectively integrated into higher education, our second theoretical basis is ESD (2.2).

2.1 Dewey's pragmatist theory of education

In 1916, the pragmatist philosopher John Dewey published *Democracy and Education* (Dewey, 1916/1980), a work that remains highly relevant more than a century after its publication. One of Dewey's main innovations is his definition of democracy: „A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience“ (Dewey, 1916/1980, p. 93). According to Dewey, the aim of democracy is to realise common goals rather than individual interests while long-term consequences are taken into considera-

tion (Dewey, 1927/2012). Nevertheless, this raises the question: How can such values be taught? The pragmatist response lies in Deweyan concepts oriented to action that generates common experiences we can learn from (Hollstein, 2025, with additional references). *Service-learning* is one example: it demonstrates how to teach and learn responsibility by providing courses that expose students to the practical. Addressing real-world problems, students work in teams with extramural partners.

Living in a shared world means that our actions affect others, and we need to use empathetic imagination and effective communication to understand how others perceive the world. (English, 2017, p. 106) Therefore, the use of communication, participation, and engagement with the world is crucial for creating shared emotional experiences, understanding others, and creating solidarity.

Service-learning courses are designed to confront students with a real-world problem posed by an extramural partner whom they can address collaboratively in groups. In *Service-learning* courses, students can learn to communicate, participate, and engage with extramural partners. By offering a service to society, they acquire practical experiences and develop competencies such as the ability to reflect, communicate, make decisions, work in teams, cooperate, and create shared visions. As David Hansen states in his foreword to the Centennial Handbook to Dewey's *Democracy and Education*: „[T]o become educated, for Dewey, just is to become more open and engaged

with the world, which is precisely his notion of what it is to become a democratic citizen.“ (Hansen, 2017, p. XX) In summary, the pragmatist theory of education, which argues for teaching democratic values as a way of life, may help students to become democratic citizens who take responsibility for their social and natural lifeworld. Key aspects of pragmatist theory that facilitate experiential learning therefore include:

- Exposure to the practical (reality)
- Experimental problem-solving
- Experiences and emotions (self-efficacy)
- Sociality (interacting with others).

2.2 Education for sustainable development

Within the framework of Sustainable Development Goals (SDGs) that officially came into force on 1 January 2016, the fourth goal, 'quality education', includes the sub-goal 4.7: „By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development“ (United Nations [UN], 2015). This positions universities at the forefront of enabling the SDGs because Education for Sustainable Development (ESD) is not only a goal but also a means to achieve the other SDGs.

This definition of ESD addresses not just the information or knowledge people might acquire in learning

processes to resolve environmental problems but also the fact that information alone is insufficient to change how we act in relation to our social and natural environment. Such transformative action also requires motivation, a commitment to common societal values, and institutions that channel our habits and routines towards sustainability. Achieving changes in human lifestyles, dominant production and consumption patterns, and decision-making processes requires a mental shift (de Haan, 2006, p. 20). Therefore, ESD aims to cultivate competencies such as critical thinking, problem-solving strategies, and decision making that demand a more comprehensive understanding of education which addresses the whole person, including emotions and volition.

The concept of competencies can refer to different approaches. The first can be summarised as counting, informing, and knowing (Vare et al., 2022, p. 4, with reference to Klieme et al., 2008). This approach can be called instrumental and aims to provide skills for individuals to take sustainable actions. The second approach „aims to bridge the divide between the tradition of Bildung, an open term encompassing the formation of one’s personality, and the notion of qualification as applied to vocational learning“ and includes both motives and attitudes (Vare et al., 2002, p. 4f. with reference to Heinrich Roth (Rieckmann, 2012) and Gerhard de Haan’s Gestaltungskompetenz (‘shaping competence’) (de Haan, 2006)). This approach can be described as critical and emancipatory, intended to teach people to reflect on con-

troversies and problems in a participatory way. The second approach is central to our understanding of ESD and aligns well with the pragmatist insights of reciprocal and interrelational learning. Recent research related to ESD reveals the effectiveness of experiential learning and teaching approaches, such as the integration of service-learning with community engagement, in promoting the acquisition of sustainable development competencies (Rodríguez-Zurita et al., 2024).

2.3 Hypotheses

Integrating these two theoretical frameworks, we propose the following hypotheses:

- Cooperation with extramural partners can facilitate experiences of self-efficacy by creating a learning environment in which students resolve real sustainability challenges.
- Collaboration, communication, motivation, and working in teams can be enhanced by partnering with extramural organisations.
- Openness to diversity in students’ groups improves creative problem-solving and critical thinking.
- Extramural partners can benefit from collaboration with students in several ways, including organisational learning,³ enhancing democratic transformation.

In previous research, we evaluated students’ perspectives and identified the conditions for successful ESD related to their learning experiences (Hollstein et al., 2024, with more references relating to our theoretical framework). The present study shifts the focus to the perspective of the extramural collaborating partner institutions.

3. Methodology

3.1 Research Context

This study examines the perspectives of extramural partners engaged in policy capstone projects at the University of Erfurt. The aim is to gather insights into their experiences with interdisciplinary student teams and to evaluate the impact of these collaborations on their organisational learning. Our theoretical framework guided the identification of conditions for successful learning processes for both students and extramural partners. A structured interview guide was developed that involved seven categories: (1) sustainability objectives, (2) general experience with the capstone projects, (3) collaboration and communication dynamics, (4) interactions and engagement, (5) impact on collaborative practices, (6) organisational learning and student development, and (7) future collaboration.

³ Organisational learning refers to the process whereby extramural partners not only acquire the outcomes of the projects they requested but also develop competencies pertinent to sustainable development through their interactions with students. Competencies such as openness to diversity, teamwork, communication with individuals from different backgrounds, and the ability to develop shared goals are essential to achieving a mindset shift towards sustainability.

3.2 Research Setting

The study engaged seven extramural partners from the 2021/22 and 2022/23 capstone projects that were selected based on organisational availability. These partners, primarily based in Germany/Europe, include non-profit organisations, and government agencies that deal with various SDG-related topics such as leadership, digitalisation, climate financing, peacebuilding, anti-discrimination strategies, and online education. Given their demanding schedules, interviews averaged 30-35 minutes, with a focus on the aforementioned categories to ensure depth within the time constraints. The capstone projects involved two successive cohorts totalling 100 graduate students from the Master of Public Policy programme (55 students in 2021/22; 45 in 2022/23), representing over 30 nationalities and interdisciplinary backgrounds in political science, public administration, economics, development studies, law, and development economics. The diverse student body allowed the partners to engage with global perspectives through three key interaction phases: initial project scoping sessions, midpoint progress reviews, and final presentations. These structured touchpoints, which included university visits, virtual meetings, and on-site deliverables, provided the partners with multifaceted exposure. While the study does not utilise comparative analysis, its design specifically captures the partners' perceptions of how student diver-

sity influenced organisational learning and dynamics of intercultural collaboration.

3.3 Structured Interviews

Seven structured interviews were conducted with extramural partners who served as clients and mentors in the capstone projects. The interview questions, rooted in the theoretical framework described in Section 2, centred on the categories outlined in Section 3.1 to evaluate the hypotheses developed through our theoretical framework in Section 2.3. The questions were intended to assess the added value for the extramural partners, particularly regarding organisational learning. These interviews took place in July 2024 and were conducted via telephone or internet-based calls in either German or English. All interviews were recorded with the participants' consent, and each interview lasted roughly 30 to 35 minutes and was transcribed verbatim. The responses were subsequently categorised under various themes to validate our hypotheses.

The interview data analysis employed a deductive thematic approach (Braun & Clarke, 2006, 2013), with codes developed a priori that were informed by the theoretical framework (Section 2). Following verbatim transcription, systematic coding was implemented by utilising MAXQDA software. Segments of the transcript were categorised according to predetermined themes, thereby facilitating efficient data

management and retrieval. During the initial coding phase, we identified text segments associated with specific themes. To improve validity, we conducted a second review of all coded segments to ensure themes were consistently applied across transcripts. The analysis included both explicit statements and underlying content relevant to each theme, highlighting in particular evidence that supported or contradicted our hypotheses. This approach effectively balanced a thorough analytical perspective with a deeper understanding of the experiences of extramural partners.

3.4 Ethical Considerations

Although no partners requested anonymity, the identities of participants and project details are confidential. All participants were informed about the research context and provided consent via email to participate in the interviews. Recordings and transcripts are accessible solely to the lead authors and will be anonymised for the University of Erfurt's data repository. To minimise potential biases, careful attention was paid to maintain the structured nature of the interviews.

4. Findings

This section presents insights gathered from structured interviews with extramural partners engaged

in the policy capstone projects. The feedback from seven respondents offers a rich tapestry of experiences that illuminate both the strengths and challenges inherent in these collaborative endeavours.

4.1 Overview of Respondent Demographics

The respondents represented a diverse spectrum of organisations that included governmental bodies, non-profits, and intergovernmental entities, each with a vested interest in sustainability and development. Their roles ranged from project managers to senior officials, providing a comprehensive perspective on interactions with capstone students. This diversity in organisational affiliation and professional experience enriched a multifaceted understanding of the capstone projects' impact on educational practices, organisational learning, and students' experiential learning.

4.2 Categories

4.2.1 Sustainability Goals

Respondents were queried initially about their engagement in integrating sustainability practices within their organisation and projects. Most underscored the importance of sustainability within their work. For instance, a respondent from the German federal ministry articulated a commitment to climate-

neutral goals that align with economic growth. Similarly, a representative from a nonprofit organisation noted their commitment to sustainable practices through impact assessment and measurement. The alignment with the Sustainable Development Goals (SDGs) was also a common thread, with organisations actively integrating these goals into their workflows and project evaluations.

4.2.2 General Experience with the Capstone Projects

Overall, the feedback regarding the experience with the capstone students and their project results was positive. Respondents expressed appreciation for the diversity and international composition of the student body, which produced fresh perspectives and innovative ideas. For example, one respondent noted that the students' passion for sustainability set them apart from typical business school cohorts, cultivating a collaborative environment that encouraged meaningful contributions. Some respondents, however, also highlighted challenges associated with time constraints and the complexity of project goals, which occasionally hindered the depth of engagement.

4.2.3 Collaboration and Communication Dynamics

Respondents frequently cited the interdisciplinary nature of student groups as a key advantage in collaboration. Many noted that the diverse academic and

cultural backgrounds of the students contributed to a more holistic approach to problem-solving, allowing teams to draw from a wide range of perspectives, methodologies, and experiences. For instance, a respondent from a governmental organisation emphasised that students' varied expertise enabled the group to address complex sustainability issues from multiple angles, which led to innovative solutions that might not have surfaced in a more homogenous setting. Respondents underscored the importance of acknowledging different perspectives for effective collaboration. While some respondents recognised potential challenges, such as misunderstandings or differing communication styles, most concurred that the benefits outweighed these challenges. One respondent succinctly stated: „[N]avigating different viewpoints can be difficult, but it ultimately leads to a richer discussion and healthy outcomes.“ This sentiment was also echoed by other respondents who valued the depth of analysis stemming from the students' varied backgrounds.

4.2.4 Interactions and Engagement

The dynamics of interactions between students and clients varied significantly across capstone projects. While many respondents reported high levels of motivation and engagement among the students, it was noted that students could have been more proactive in seeking clarification and feedback. For example, one respondent expressed a desire for increased

student inquiry during meetings, suggesting that a more vibrant exchange could have facilitated deeper insights and enriched the collaborative process. Another reflected on the traditional client role in the capstone activity, where expectations were high despite the absence of financial compensation for the students' work. The importance of personal interactions was also emphasised, with one respondent noting that initial meetings were instrumental in establishing rapport and clarifying project expectations. Yet another pointed out that the students' proactive approach in refining project scopes was indicative of their growing confidence and initiative. This observation also underscores the importance of agency in student engagement. Conversely, one respondent felt that the inclusion of a designated team representative from the beginning could have further optimised communication for effective collaboration.

4.2.5 The Impact on Collaborative Practices

The capstone projects often yielded new insights for both students and the extramural partner, nurturing a reciprocal learning environment. Respondents noted that students introduced innovative approaches and data-driven methodologies that inspired organisational learning. For instance, one respondent noted that the project focused on hydrogen and leadership models became integral to their organisational strategy due to the students' contributions. Some respondents, however, felt that the fast-paced nature of

these projects constrained opportunities for deeper collaborative practices, suggesting that more time for reflection and feedback could enhance future collaboration. Conversely, one respondent felt that students' research provided valuable findings for their broader professional network. In contrast, another respondent felt that the specific nature of their capstone project tasks limited the potential for new insights. Despite these challenges, one respondent highlighted that the students' proactive engagement in refining project scopes served as a testament to their enhanced self-efficacy. Moreover, varying levels of student engagement led to disparities in learning experiences, with some students thriving in the collaborative environment while others remained more reserved.

4.2.6 Organisational Learning and Student Development

Organisational learning emerged as a key theme, with many respondents acknowledging the dual learning experience facilitated by the capstone projects. Respondents gained valuable insight into their practices, while students honed essential skills in project management, collaboration, and problem-solving. One respondent noted a significant learning curve among students: they became more confident and capable as the project progressed. Another respondent emphasised the need to adjust project goals to accommodate the diverse backgrounds of

the student team. Furthermore, one respondent remarked that working with students provided them an opportunity to reflect on their organisational practices and methodologies. The hands-on experience enabled students to translate theoretical knowledge into practical settings, enhancing their preparedness for future employment. One respondent noted the transformation of students from hesitant participants to proactive contributors, thus underscoring the value of experiential learning in developing professional competencies. Some clients, however, expressed concerns about the limited time available for students to fully engage with the project and suggested this constraint could adversely affect their overall learning experience.

4.2.7 Future Collaboration

A pronounced willingness to pursue future collaborations on capstone projects was evident among respondents. Some expressed a desire to refine the collaboration process, emphasising the necessity for clearer communication and well-defined roles from the outset. Suggestions included establishing a lead representative for the student group to facilitate interactions and ensuring that project goals are realistic and achievable within the given timeframe. Additionally, respondents highlighted the importance of aligning project themes with the clients' organisational capacities to maximise the impact of the collaboration.

5. Discussion

If we relate these findings to our hypotheses, several noteworthy aspects emerge.

With respect to the general experience with the capstone projects, the impact on collaborative practices and the interaction and engagement of students in these projects, all respondents saw the process as beneficial (4.2.2). Viewed in terms of nurturing reciprocal learning, the students experienced growing confidence and initiative (4.2.5), which shows agency in the students' engagement (4.2.4), which leads to self-efficacy. From the perspective of extramural partners, the capstone projects created a learning environment that enabled students to experience *self-efficacy by resolving real problems*, thereby supporting our first hypothesis. However, time constraints were identified as a specific challenge in this context, which complicated the feasibility of projects within the limited timeframe of the university term and the capacities of the extramural partners (4.2.5, 4.2.6 and 4.2.7).

Extramural partners reported positive learning experiences by the students with respect to *collaboration, communication, and motivation* for working in teams (4.2.2 and 4.2.6). This supports our second hypothesis. But it is important to acknowledge that teamwork also presents challenges. For example, motivation levels varied across different groups, resulting in disparities in learning experiences (4.2.5). This could stem from the students' diverse backgrounds, which

necessitated adjusting to complex project goals throughout the projects (4.2.2 and 4.2.6). Communication was not always direct; therefore, clearer communication, well-defined roles, and the establishment of a lead representative of the students' group were suggested (4.2.7). In addition, the importance of personal interaction was emphasised (4.2.4).

Several respondents identified openness to *diversity* within student groups as key to the development of new and creative solutions (4.2.2 and 4.2.3), aligning with our third hypothesis. Diversity enables the integration of diverse perspectives and experiences, resulting in innovative solutions. While this diversity can also create problems (such as misunderstandings) most partners stated that these problems were outweighed by the benefits, resulting in a great willingness to pursue future collaboration (4.2.7).

Our last hypothesis stated that extramural partners can benefit from cooperating with students in several ways with respect to *organisational learning*, enhancing democracy, and promoting transformation towards sustainable development, etc. Notably, all partners already showed great commitment to the integration of sustainability into their respective organisations with respect to its goals and practices (4.2.1). Regardless of this high level of engagement, the partners reported organisational learning as a core theme (4.2.5), which offered the opportunity to reflect on organisational practices (4.2.6). In conclusion, our hypotheses were corroborated by the findings derived from the interviews. Discussing

the different categories, the following aspects seem important for the development of ESD in *higher education* with service-learning: agreeing on a common vision of *sustainability objectives* before starting a project is crucial to the success of ESD as there is no time for a negotiation process regarding sustainability concepts. The interviews showed that the extramural partners shared the sustainability objectives with the students, allowing the projects to develop on common ground. This means that, for successful projects with extramural partners, the organisers of the capstone courses have to communicate with the partners and agree on a common basis regarding sustainability objectives.

The *general experience with the capstone projects* was positive. In this regard, our findings provide empirical evidence supporting existing research related to service-learning as a tool for ESD (among others: Rodríguez-Zurita et al., 2024; García-Rico et al., 2021). Research outcomes of Lasen et al. (2015, p. 357) show "service-learning as a potentially effective vehicle to enable a participative and critically reflective human agency, through the promotion of competencies such as problem-solving, project planning, implementation and evaluation, and capacity for cooperation, empathy, motivation of self and others, and reflection. These are competencies that are integral to what the sustainability literature describes as action or shaping competence". (for shaping competence see de Haan, 2006)

With respect to collaboration and communication dynamics, the diversity within student groups was highlighted as a valuable asset for promoting creativity and innovation. However, challenges were also noted, given that diversity necessitates increased communication and moderation in decision-making processes. There seems to be a need to clarify roles within the group (process moderator, public relations officer, team leader, etc.) in order to organise diversity in a fruitful way.

Interactions and engagement play a pivotal role in motivating individual students. Engaging with real-world problems is considered a powerful educational setting for building students' sustainability competences since experiences of self-efficacy foster motivation, but the implementation of such problem-based courses is challenging and requires specific elements, such as incentives for faculty and students or a transacademic interface manager to facilitate collaboration with practitioners (Brundiery & Wiek, 2011, p. 122). The role of personal face-to-face interaction as well as continuity and length of meetings are aspects that proved to be important for the motivation of the group members in our research. Regarding this aspect in the aforementioned category (interaction and engagement), defining roles and responsibilities within the group is crucial for motivation. With respect to this, project management skills should be provided to the students prior to commencing a service-learning course. The category of the *impact on collaborative practices* points to the ef-

fects the project had on students and the extramural partners, not only regarding project results but also regarding forms of collaboration. From previous research, we know that the aspect of cooperation, i.e., enhancing collaborative skills and decision making in groups, is the aspect most valued by the students (Hollstein et al., 2024, p. 17). The extramural partners mention positive effects on their organisational decision making but consider time constraints especially to be a critical factor. It is important to acknowledge that the time patterns of both participating parties are different since the extramural partners organise time management according to the project, while the students have to comply with the time regimes of the university and complete the project within one term. Clarifying such discrepancies before the start of the project is one requirement for the organisers of service-learning courses.

Organisational learning and student development are two sides of the same coin when service-learning is conceptualised as collaborative learning for both parties involved, as pragmatist and ESD theory suggest. Despite this conception, the respondents mostly emphasised the development of students and paid little attention to reflexive processes concerning their own organisation. It is imperative that service-learning courses incorporate additional opportunities for self-reflection for all participants, including extramural partners. In the responses to the category, improvements *collaboration* for projects in the *future* are articulated that take up the aforemen-

tioned aspects. This shows that service-learning is not a fixed concept but must continually be evaluated and reshaped in order to provide good learning experiences for all participants.

As to the *limitations* of our research, we emphasise that ESD via service-learning in higher education requires in-depth preparation, particularly with respect to selecting extramural partners and agreeing on common concepts and tasks for students. In the context of a Master's programme in Public Policy, the possibility of finding such partners may be easier than in other contexts, as stakeholders engaged in public policy issues are typically interested in the common good. For other higher education programmes, such as in management studies, stakeholders like companies may be primarily motivated by profit and may co-opt student engagement in collaborative service-learning projects for 'greenwashing'. Future research will need to be conducted on service-learning with companies and in different programmes. Previous research has pointed to the problem that problem- and project-based courses often fail to fully incorporate sustainability competencies, participatory research education, and experiential learning (Brundiery & Wiek, 2011). Regarding the question of implementation, several aspects were mentioned, including communication, role definition, and time management. More research would be needed to assess whether taking all these aspects into account would improve service-learning experiences for all participants.

Regarding the learning experiences of extramural partners, the interviews reveal that these partners primarily concentrate on the learning experiences of the students while neglecting their own. Further studies incorporating control groups would provide valuable insights into additional forms of ESD in partnership with external collaborators, such as internships or excursions. Such research has the potential to evaluate the importance of problem-solving within the learning experience for all participants. Our results reflect a specific situation for ESD in Europe: sustainability issues for extramural partners in the Global South may require different forms of service-learning. Comparative research for different regional situations is necessary to understand which aspects of ESD via service-learning can be generalised and which ones must be developed very specifically. This requires more preparational work since a one-size-fits-all template for teaching arrangements might not be possible.

6. Conclusion

Despite some limitations stemming from the narrow scope of our research, the interviews with extramural partners in capstone projects largely corroborated our hypotheses derived from our theoretical framework. They thereby provided valuable insights for implementing ESD in higher education through service-

learning. Nonetheless, several key considerations emerged from our partners' feedback:

- Time constraints can complicate the working processes and therefore require a certain flexibility in relation to the project objectives.
- Diversity must be both actively organised and also managed, especially with regard to communication processes, which are more demanding in diverse contexts.
- Roles – such as that of a responsible spokesperson for the students' group – need to be more clearly defined; therefore, students should be better prepared for capstone projects by the university providing them with basic project management skills.
- Concerning organisational learning, the reciprocal learning experiences of students and extramural partners could provide a path towards the implementation of sustainable development not only in the curricula but also in the organisations in society that cooperate with universities.

All these aspects necessitate thorough preparation by all partners, placing significant responsibility on the organisers of service-learning, specifically educators in higher education.

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