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ESD_SuVi Survey Report on teachers' training needs

Report by IASS- Italian Association for Sustainability Science

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1. Introduction

Within the Erasmus project "ESD Supervision 4.0" a semi-structured questionnaire was administered aimed at providing an overview of the state of the art on the implementation of ESD in the different partner countries. The purpose was also to understand the current situation of the development and integration of ESD in the specific school context, identify main criticalities in implementing a Whole School Approach (WSA) to ESD, point out areas for a more effective implementation, as well as key elements (as training needs) for designing a teacher training course which addresses the identified criticalities. The areas investigated referred to the key dimensions of the WSA: holistic view, organization and practices, professional development, and pedagogical methods and approaches. The instrument was structured in three parts:

- SECTION ONE: related to implementation of the whole school approach to ESD;
- SECTION TWO: aims to measure participants' perception of the effectiveness of the ESD_SuVi Teachers Training Program;
- SECTION THREE: intends to identify possible flaws and further training needs for the development of an ESD whole school approach in the participating schools

Sections two and three were made accessible only to participants in the ESD_SuVI Teachers Training Program. The total sample involved was 109 participants spread across six countries (Figures 1), with different roles within their educational institution (Figures 2) and diverse professional experience (40 percent with less than 5 years of service; slightly more than one in three had experience beyond 10 years) (Figures 3). The sample also showed varying involvement/engagement within the project:

- 47.7 % have participated to the ESD_SuVi Teachers Training Program;
- 26.6% have a coaching/leadership/networking role within the school;
- 25.7% is ESD responsible contact persons in the school;
- 53.2% have already been involved in ESD activities for the school;
- 22% have an evaluation/monitoring task of educational projects/activities in terms of impact on local community.

Country	Frequency	%
Czech Republic	24	22.0 %
Germany	9	8.3 %
Italy	9	8.3 %
Latvia	39	35.8 %
Lithuania	3	2.8 %
Romania	25	22.9 %
TOTAL	**109**	**100%**

Figure 1. Sample

Role within the institution	Frequency	%
Administrative staff	5	4.6 %
ESD Projects Coordinator	6	5.5 %
Headmaster/Principal	7	6.4 %
Others working in ESD activities in the institution (but are not teachers)	10	9.2 %
Teacher	81	74.3 %
TOTAL	**109**	**100%**

Figure 2. Professional role

Number of years of involvement in environmental /ESD education	Frequency	% del Totale
Beginner	44	40.4 %
From 5 to 10 years	25	22.9 %
More than 10 years	40	36.7 %
TOTAL	**109**	**100%**

Figure 3. Working Years

1.1. Methodology

For each of the 5 areas in SECTION 1, the following data processing? were made:
- Frequency distribution related to scoring from 1 to 4 for each item;
- Basic descriptive statistics: mean and standard deviation;
- Identification of training needs of teachers and school staff from the descriptive/narrative summary of the most significant common aspects that resulted from the processing of the open-ended responses for each area.
- Further professional training needs for a more meaningful and effective ESD implementation in school context were then identified (§2.6).

For SECTION 2, the following data processing ? were carried out:
- Frequency distribution related to scoring from 1 to 4 for each item;
- Basic descriptive statistics: mean and standard deviation;
- Participants' perceptions related to the usefulness of the delivered training program (§3.1).

For SECTION 3, the following data processing were carried out:
- Frequency distribution related to scoring from 1 to 4 for each item;
- Basic descriptive statistics: mean and standard deviation;
- Participants' reflections related to the strengths and weaknesses of the implemented course and suggestions for improvement.

In the conclusions we present the elaboration of qualitative data related to participants' reflections on the instrument's ability to self-assess the actions implemented within their organization.

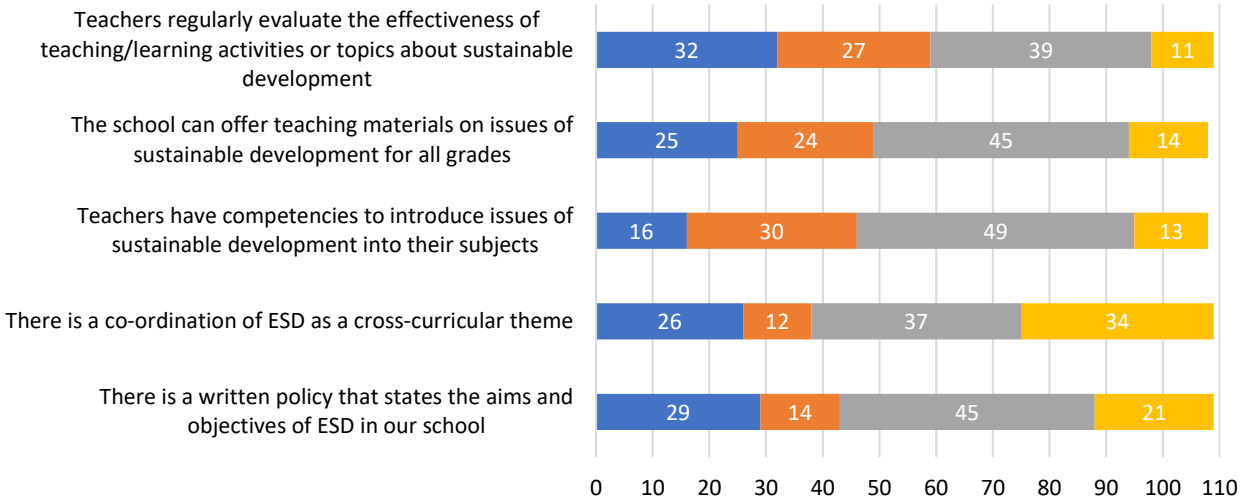
2. SECTION ONE: Assessing ESD implementation in your institution

The first part of the questionnaire aimed to assess the implementation of sustainability education in different partner countries. The areas investigated were:

- ESD implementation into the Formal Curriculum;
- Implementation of socio-political dimension of sustainability;
- Implementation of ecological dimensions of sustainability;
- Implementation of economic dimensions of sustainability within your institution;
- Implementation of cultural/pedagogical dimensions of sustainability.

Each of the 5 areas corresponded to a variable number of items rated on a 1-4 scale (1 Getting started; 2 Fair; 3 Good; 4 Excellent) and an open question for personal reflections and comments. A final question addressed to participants was, "What future professional learning needs regarding ESD implementation do you consider relevant in your institution?"

2.1. ESD implementation into the Formal Curriculum (Figure 4)



	There is a written policy that states the aims and objectives of ESD in our school	There is a co-ordination of ESD as a cross-curricular theme	Teachers have competencies to introduce issues of sustainable development into their subjects	The school can offer teaching materials on issues of sustainable development for all grades	Teachers regularly evaluate the effectiveness of teaching/learning activities or topics about sustainable development
1	29	26	16	25	32
2	14	12	30	24	27
3	45	37	49	45	39
4	21	34	13	14	11

1 2 3 4

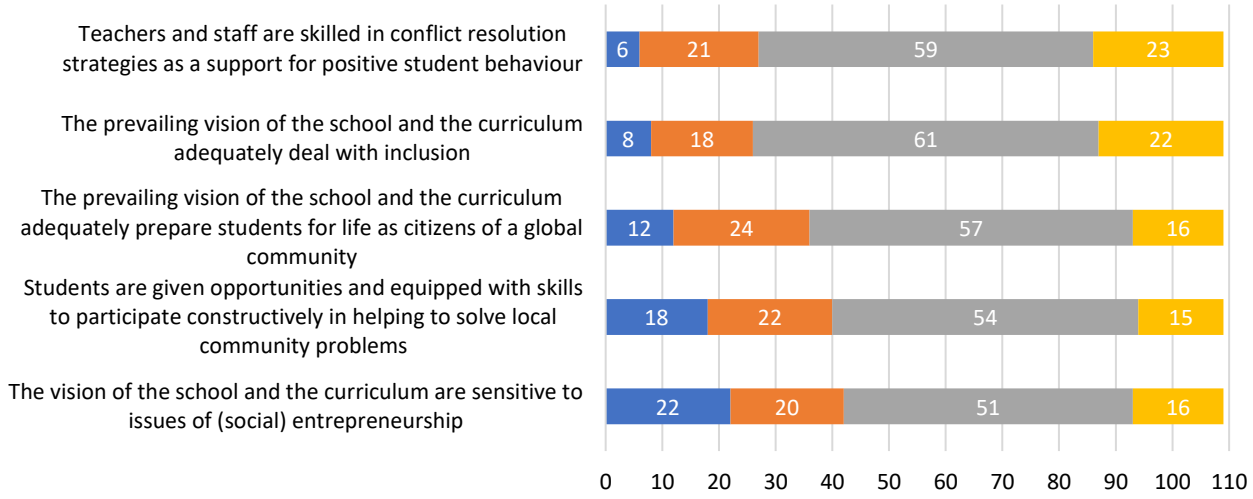
	N	Missing	Media	DS
There is a written policy that states the aims and objectives of ESD in our school	109	0	2.53	1.085
There is a co-ordination of ESD as a cross-curricular theme	109	0	**2.72**	1.146
Teachers have competencies to introduce issues of sustainable development into their subjects	108	1	**2.55**	0.890
The school can offer teaching materials on issues of sustainable development for all grades	108	1	2.44	0.989
Teachers regularly evaluate the effectiveness of teaching/learning activities or topics about sustainable development	109	0	2.27	0.997

Figure 4. ESD implementation into the Formal Curriculum

TRAINING NEEDS

- Design and implement interdisciplinary activities capable of transforming the traditional school curriculum.
- Promote the involvement of all stakeholders in integrated training activities related to sustainability issues.
- Enhance the daily use of targeted teaching materials that are functional for the conduct of activities and the assessment of learning outcomes.
- Promote integration and shared work between educational institutions and local administrative institutions, with facilitation related to procedures and bureaucratic aspects.

2.2. Implementation of socio-political dimension of sustainability (Figure 5)



	The vision of the school and the curriculum are sensitive to issues of (social) entrepreneurship	Students are given opportunities and equipped with skills to participate constructively in helping to solve local community problems	The prevailing vision of the school and the curriculum adequately prepare students for life as citizens of a global community	The prevailing vision of the school and the curriculum adequately deal with inclusion	Teachers and staff are skilled in conflict resolution strategies as a support for positive student behaviour
1	22	18	12	8	6
2	20	22	24	18	21
3	51	54	57	61	59
4	16	15	16	22	23

1 2 3 4

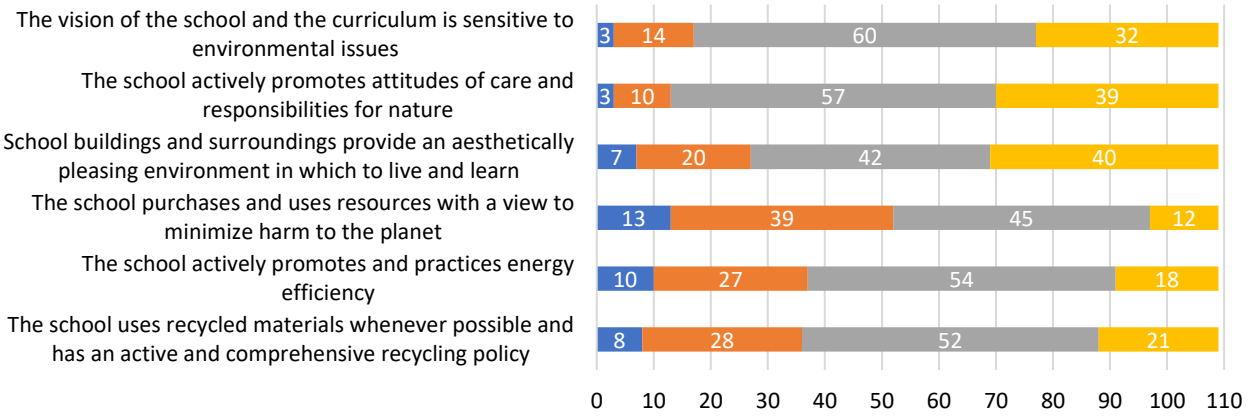
	N	Missing	Media	DS
The vision of the school and the curriculum are sensitive to issues of (social) entrepreneurship	109	0	2.56	0.976
Students are given opportunities and equipped with skills to participate constructively in helping to solve local community problems	109	0	2.61	0.923
The prevailing vision of the school and the curriculum adequately prepare students for life as citizens of a global community	109	0	**2.71**	0.853
The prevailing vision of the school and the curriculum adequately deal with inclusion	109	0	**2.89**	0.809
Teachers and staff are skilled in conflict resolution strategies as a support for positive student behaviour	109	0	**2.91**	0.788

Figure 5. Implementation of socio-political dimension of sustainability

TRAINING NEEDS

- Build experiential learning environments that engage students in real problems.
- Promote students' development of awareness and sense of responsibility.
- Facilitate access to and participation in opportunities already present and offered by the school.
- Strengthen teachers' skills through targeted training courses.
- Foster cooperation between educational institutions and local administrative institutions.

2.3. Implementation of ecological dimensions of sustainability (Figure 6)



	The school uses recycled materials whenever possible and has an active and comprehensive recycling policy	The school actively promotes and practices energy efficiency	The school purchases and uses resources with a view to minimize harm to the planet	School buildings and surroundings provide an aesthetically pleasing environment in which to live and learn	The school actively promotes attitudes of care and responsibilities for nature	The vision of the school and the curriculum is sensitive to environmental issues
1	8	10	13	7	3	3
2	28	27	39	20	10	14
3	52	54	45	42	57	60
4	21	18	12	40	39	32

1 2 3 4

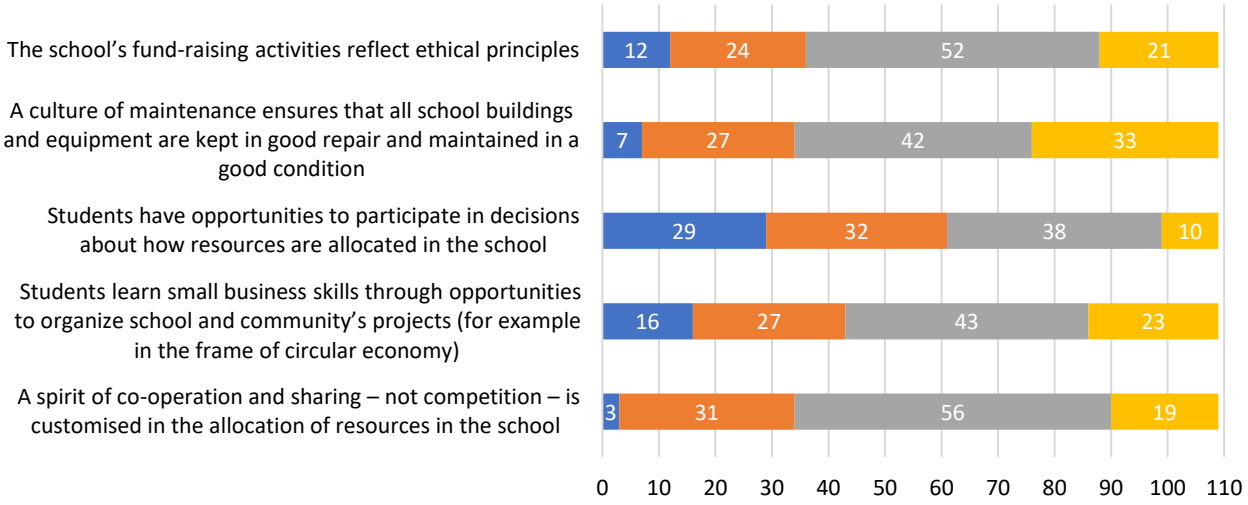
	N	Missing	Media	DS
The school uses recycled materials whenever possible and has an active and comprehensive recycling policy	109	0	2.79	0.840
The school actively promotes and practices energy efficiency	109	0	2.73	0.846
The school purchases and uses resources with a view to minimize harm to the planet	109	0	2.51	0.846
School buildings and surroundings provide an aesthetically pleasing environment in which to live and learn	109	0	**3.06**	0.901
The school actively promotes attitudes of care and responsibilities for nature	109	0	**3.21**	0.721
The vision of the school and the curriculum is sensitive to environmental issues	109	0	**3.11**	0.724

Figure 6. Implementation of ecological dimensions of sustainability

TRAINING NEEDS

- Develop a comprehensive ecological approach with respect to the integration of care/efficiency of school facilities and the environmental impacts, resource use, and energy issues.
- Improve the use of economic resources for the development of sustainable practices (e.g., recycling collection), but also for the energy efficiency of school facilities.
- Promote dialogue with local governments to develop consistent and integrated practices between educational institutions and communities.

2.4. Implementation of economic dimensions of sustainability within your institution (Figure 7)



	A spirit of co-operation and sharing – not competition – is customised in the allocation of resources in the school	Students learn small business skills through opportunities to organize school and community's projects (for example in the frame of circular economy)	Students have opportunities to participate in decisions about how resources are allocated in the school	A culture of maintenance ensures that all school buildings and equipment are kept in good repair and maintained in a good condition	The school's fund-raising activities reflect ethical principles
1	3	16	29	7	12
2	31	27	32	27	24
3	56	43	38	42	52
4	19	23	10	33	21

1 2 3 4

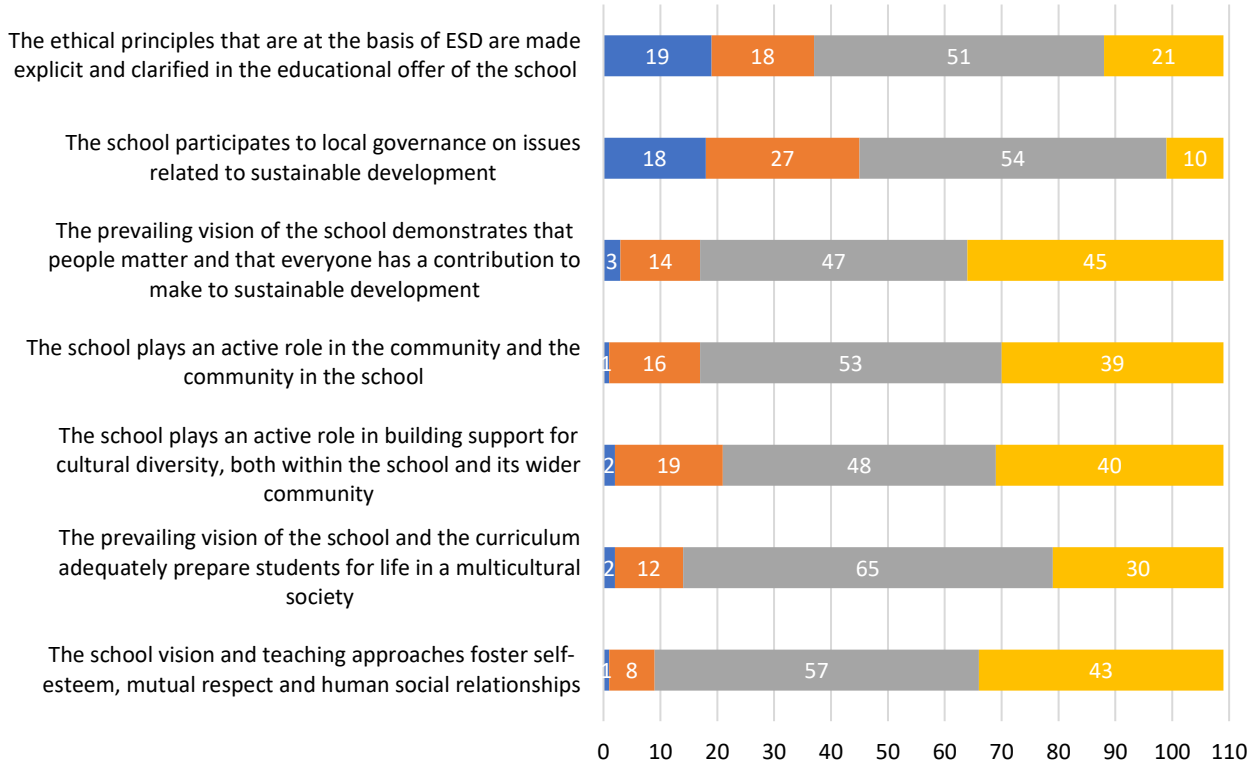
	N	Missing	Media	DS
A spirit of co-operation and sharing – not competition – is customised in the allocation of resources in the school	109	0	**2.83**	0.739
Students learn small business skills through opportunities to organize school and community's projects (for example in the frame of circular economy)	109	0	2.67	0.972
Students have opportunities to participate in decisions about how resources are allocated in the school	109	0	2.27	0.959
A culture of maintenance ensures that all school buildings and equipment are kept in good repair and maintained in a good condition	109	0	**2.93**	0.900
The school's fund-raising activities reflect ethical principles	109	0	2.75	0.894

Figure 7. implementation of economic dimensions of sustainability within your institution

TRAINING NEEDS

- Promote the development of students' awareness regarding the care and economic management of the school facility.
- Involve students within the decision-making processes of the educational institution.
- Promote dialogue with the private sector.
- Building pathways to micro-entrepreneurship.
- Fostering knowledge on certain topics such as the circular economy or the possibility of starting fund-raising activities.

2.5. Implementation of cultural/pedagogical dimensions of sustainability (Figure 8)



	The school vision and teaching approaches foster self-esteem, mutual respect and human social relationships	The prevailing vision of the school and the curriculum adequately prepare students for life in a multicultural society	The school plays an active role in building support for cultural diversity, both within the school and its wider community	The school plays an active role in the community and the community in the school	The prevailing vision of the school demonstrates that people matter and that everyone has a contribution to make to sustainable development	The school participates to local governance on issues related to sustainable development	The ethical principles that are at the basis of ESD are made explicit and clarified in the educational offer of the school
1	1	2	2	1	3	18	19
2	8	12	19	16	14	27	18
3	57	65	48	53	47	54	51
4	43	30	40	39	45	10	21

1 2 3 4

	N	Missing	Media	DS
The school vision and teaching approaches foster self-esteem, mutual respect and human social relationships	109	0	**3.30**	0.646
The prevailing vision of the school and the curriculum adequately prepare students for life in a multicultural society	109	0	3.13	0.668
The school plays an active role in building support for cultural diversity, both within the school and its wider community	109	0	3.16	0.772
The school plays an active role in the community and the community in the school	109	0	3.19	0.713
The prevailing vision of the school demonstrates that people matter and that everyone has a contribution to make to sustainable development	109	0	**3.23**	0.777

The school participates to local governance on issues related to sustainable development	109	0	2.51	0.878
The ethical principles that are at the basis of ESD are made explicit and clarified in the educational offer of the school	109	0	2.68	0.980

Figura 8. Implementation of cultural/pedagogical dimensions of sustainability

TRAINING NEEDS

- Foster the development of teachers' pedagogical skills through targeted trainings.
- Enhance the use of inclusive and differentiated teaching strategies and materials.
- Strengthen the intercultural dimension of sustainability in the school curriculum.
- Promote institutional dialogue between schools and local governments on intercultural issues.

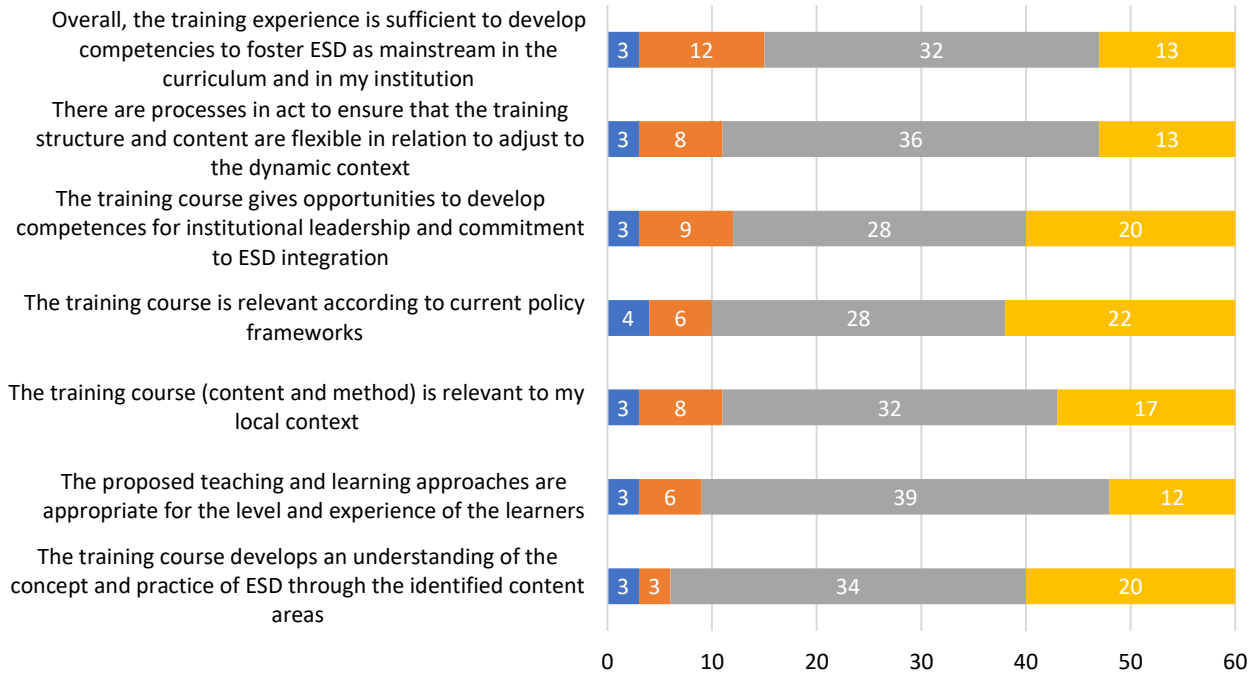
2.6. Areas for improvement related to professional training needs for ESD implementation

From the processing of the responses provided to the question "What future professional learning needs regarding ESD implementation do you consider relevant in your institution?" a number of areas for improvement and development related to a more meaningful and effective implementation of ESD within school settings were identified. The areas for development can be traced to all the dimensions of sustainability investigated in section one of the questionnaire. In particular, 3 aspects emerge as most relevant:

- Construction of cooperative learning environments and activation of self-directed processes in which students can activate empowerment processes, be protagonists, actively participate in the opportunities offered by the school and develop problem solving skills;
- Initial and ongoing training for teachers aimed at the development of interdisciplinary curricula oriented to the dimensions of education for sustainability, including through the study of relevant and replicable practices; training related to methodological-didactic strategies of education for sustainability, including design centered on the definition of coherent learning outcomes,;
- Promotion of learning communities among all stakeholders (school, family, institutions, community, world of work, etc.) including the possibility of activating shared projects that primarily involve students on the different dimensions of ESD and the potential concretization of the SDGs.

3. SECOND SECTION. Assessing ESD_SuVi Teachers Training Program with regard to ESD integration

With the second part of the questionnaire, the aim was to assess, from the participants' perspective, the effectiveness of the teacher training program implemented within ESD_SuVi project. A battery of 7 items rated on a 1-4 scale (1 Getting started; 2 Fair; 3 Good; 4 Excellent) was constructed. At the conclusion of the structured part, respondents could leave a personal comment on the items covered (§3.1).



	The training course develops an understanding of the concept and practice of ESD through the identified content areas	The proposed teaching and learning approaches are appropriate for the level and experience of the learners	The training course (content and method) is relevant to my local context	The training course is relevant according to current policy frameworks	The training course gives opportunities to develop competences for institutional leadership and commitment to ESD integration	There are processes in act to ensure that the training structure and content are flexible in relation to adjust to the dynamic context	Overall, the training experience is sufficient to develop competencies to foster ESD as mainstream in the curriculum and in my institution
1	3	3	3	4	3	3	3
2	3	6	8	6	9	8	12
3	34	39	32	28	28	36	32
4	20	12	17	22	20	13	13

1 2 3 4

	N	Missing	Media	SD
The training course develops an understanding of the concept and practice of ESD through the identified content areas	60	49	**3.18**	0.748
The proposed teaching and learning approaches are appropriate for the level and experience of the learners	60	49	3.00	0.713
The training course (content and method) is relevant to my local context	60	49	3.05	0.790
The training course is relevant according to current policy frameworks	60	49	**3.13**	0.853
The training course gives opportunities to develop competences for	60	49	3.08	0.829

institutional leadership and commitment to ESD integration				
There are processes in act to ensure that the training structure and content are flexible in relation to adjust to the dynamic context	60	49	2.98	0.748
Overall, the training experience is sufficient to develop competencies to foster ESD as mainstream in the curriculum and in my institution	60	49	2.92	0.787

3.1. Usefulness of the training programme

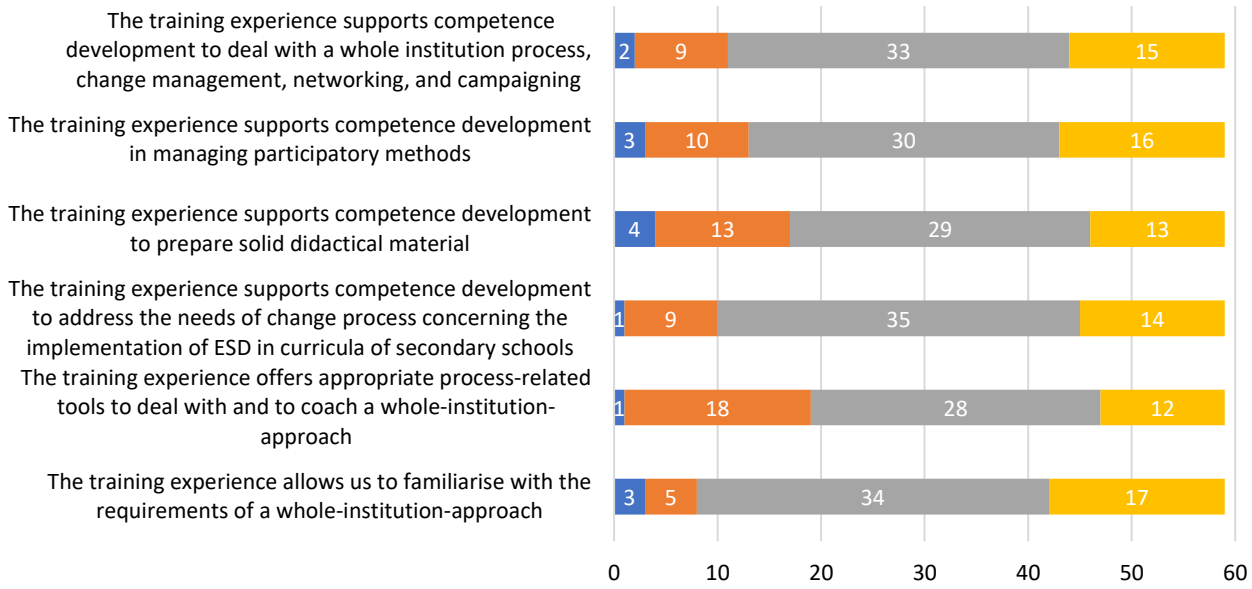
The evaluation of the training program recorded positive comments about the usefulness of the course, going in line with the positive mean values obtained in the structured part of section 2.
In particular, the experience was perceived as an opportunity to:

- learn about experiences in other countries and reflect on sustainability issues;
- bring out potentials and critical issues about what is already being implemented in one's own school context;
- check the adequacy of professional skills already possessed;
- develop new ideas and understand how to adapt them to one's own context, while also managing to overcome any critical issues;
- create a link between school activities and out-of-school experiences;
- develop professional skills useful in the implementation of ESD activities.

4. THIRD SECTION. Highlight further training needs

The third part of the questionnaire sought to map additional emerging training needs related to the development of a whole-school ESD approach within respondents' organizations. A battery of 6 items rated on a 1-4 scale (1 Getting started; 2 Fair; 3 Good; 4 Excellent) was constructed. At the conclusion of the structured part, respondents could leave a comment indicating strengths and weaknesses of the pathway implemented and suggestions for improvement and future development.

Participants' comments indicate that the experience implemented should be more widely disseminated in terms of the number of participants. It represents an opportunity to develop new knowledge and skills useful for the implementation of sustainability education actions, professional development and improvement of their own organizations. This type of course has also been considered important for increasing personal motivation and for experimenting with tangible methods and tools for working on sustainability issues. The course was found to be very challenging and in some cases it is felt that it could have been structured over a longer time. There was a lot of satisfaction, but it was also considered that adequate time for personal reflection and reworking will be needed to be able to put what was learned into practice in one's own work and organization, given also the constraints that each country presents.



	The training experience allows us to familiarise with the requirements of a whole-institution-approach	The training experience offers appropriate process-related tools to deal with and to coach a whole-institution-approach	The training experience supports competence development to address the needs of change process concerning the implementation of ESD in curricula of secondary schools	The training experience supports competence development to prepare solid didactical material	The training experience supports competence development in managing participatory methods	The training experience supports competence development to deal with a whole institution process, change management, networking, and campaigning
1	3	1	1	4	3	2
2	5	18	9	13	10	9
3	34	28	35	29	30	33
4	17	12	14	13	16	15

	N	Missing	Media	SD
The training experience allows us to familiarise with the requirements of a whole-institution-approach	59	50	**3.10**	0.759
The training experience offers appropriate process-related tools to deal with	59	50	2.86	0.753

and to coach a whole-institution-approach				
The training experience supports competence development to address the needs of change process concerning the implementation of ESD in curricula of secondary schools	59	50	**3.05**	0.680
The training experience supports competence development to prepare solid didactical material	59	50	2.86	0.840
The training experience supports competence development in managing participatory methods	59	50	3.00	0.809
The training experience supports competence development to deal with a whole institution process, change management, networking, and campaigning	59	50	3.03	0.742

5. Conclusions: self-evaluation tool

In the concluding part of the questionnaire, participants were asked to leave a comment regarding the tool's ability to self-assess the actions implemented within their organization.

Among the comments that welcomed this moment of self-assessment, it emerges that the tool is considered useful to:

- reflect analytically on the practices already implemented in one's own organization, bringing out strengths and weaknesses;
- gain greater personal and institutional awareness of needs and potentials, starting with what is already being implemented;
- reflect on the sustainability education actions implemented as part of formal education pathways;
- get useful feedback on the implementation of sustainability education actions and understand the current state of the art from which to start new processes and improve results;
- build a global vision on sustainability and have new ideas to share with one's own organization;
- learn more about one's own organization.

In some cases, the questionnaire was not considered useful for self-assessing the actual situation of organizations on the implementation of sustainability education actions. An in-depth qualitative questionnaire was indicated as more effective for better understanding and analyzing the state of the art, highlighting those areas of improvement needed for targeted development of sustainability education actions.