**Erasmus Project - Methods For ESD Competences and Curricula (MetESD)**

**Initial External Evaluation Report Following the First International Meeting**

**Friesoythe – February 2016**

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*Sustainability Through Education*

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**1. Introduction**

This report arising from the first international meeting of the Erasmus MetESD Project has two distinct sections. The first is a brief summary of the data collection conducted at the meeting in Friesoythe. The second part of this report contains a proposal for the subsequent evaluation of the MetESD Project based on the requirements set out in the Erasmus application and further informed by the data gathered at the meeting in Friesoythe.

The rationale that underpinned the data collection activity in Friesoythe was determined by the role of external evaluation as described in the Erasmus application and the existing literature on the nature and characteristics of ESD.

**2. Review of teachers’ current perspectives on ESD**

The first international meeting of the MetESD Erasmus project was attended by fourteen practising teachers from four vocational schools in three of the partner countries. The breakdown of these teachers is presented in Table 1. These were the teachers who would be exposed to the training elements of the MetESD Project and they will be expected to promote and implement an ESD pedagogical approach during the three years duration of the Project.

|  |  |  |
| --- | --- | --- |
| **School** | **Country** | **Teachers** |
| Daugavpils Technikum | Latvia | 7 |
| BBS Friesoythe | Germany | 4 |
| Bonnefonten College | The Netherlands | 2 |
| Emma College | The Netherlands | 1 |

**Table 1**

**2.1. Details of the data collection**

The purpose of collecting data on the teachers at the first international meeting was to establish the level of awareness of, and engagement with, ESD among the teachers and the extent to which their current pedagogical practices reflected an ESD approach to teaching and learning. Data was collected using instruments that were based on existing frameworks of ESD (Scott and Vare, 2008; UNECE, 2008; ENSI, 2007; Strachan, 2012 and DCELLS, 2008). Also taken into account was the model prepared by the Project managers and shared with participants (see Figure 1 below).



**Figure 1**

An initial activity conducted with all participants at the meeting was a diamond ranking exercise based on the model of ‘ESD1 and ESD 2’ (Scott and Vare: 2007). ESD 1 involves changing behaviour and implementing practical changes to improve current practices to make them more sustainable, while ESD 2 requires a more fundamental change to an individual’s worldview, and developing the capacity to think critically and systemically. ESD 1 is viewed as easier to engage with and implement, while introducing the changes associated with ESD 2 is seen as a greater challenge. Scott and Vare argue that ESD 2 complements ESD 1 and that to fully implement ESD, both are required. For the diamond ranking exercise the teachers operate in their school/country groups, with the Latvian teachers forming two groups due to their greater numbers. This amounted to four groups of teachers in total.

In order to further assess the extent to which the teachers participating in the Project held a view of education that was conducive to an ESD approach to teaching and learning, all fourteen of the teachers present at the meeting were surveyed. The survey required the teachers to respond to sixteen ESD related statements using a Likert-type scale. The results of the survey are attached as Annex A on page 12.

The survey was backed-up by interviews with a sample of six of the teachers, one male teacher and one female teacher were selected from each of the three partner countries. No additional selection criteria were used. The interviews explored details of the teachers’ professional practice and the extent to which they already used methods in the classroom that reflected an ESD approach to teaching and learning. The question guidelines for the interviews forms Annex B on page 13 of this report.

Finally, the teachers were asked to work in their school groups and complete a grid for the school as a whole. The grid contained seven aspects of the whole-school implementation of ESD. Each aspect had four statements that represented progressive development of the implementation of that aspect of ESD in the school. The teachers had to indicate which statement best represented the situation in their school.

**2.2. Outcomes from the data collection**

The diamond ranking activity engaged all participants at the meeting in a discussion on the nature of ESD. The statements considered most important as a result of the discussions in the four teacher groups were recorded. All the teacher groups showed a bias towards regarding ESD 1 related statements as being more important than ESD 2 related statements. The top three statements considered most important in relation to ESD in each of the four groups were dominated by ESD 1, with only two ESD 2 statements being selected among the twelve statements (top 3 statements x 4 groups). The ESD 1 statements refer to more concrete actions and changes as opposed to the more transformative changes associated with ESD 2. The outcomes from this activity would be consistent with teachers at a comparatively early stage of engagement with ESD.

The results of the survey show a broad consensus among the teachers in terms of holding a view of teaching and learning that can be considered consistent with an ESD approach to education. There is close to unanimous agreement on issues such as recognising that all teaching is value-laden; the teaching environment should reflect the values being taught; students should be active participants in their own learning; teachers are co-learners with their students; and ESD is important for equipping students for life beyond school. The teachers were generally consistent in terms of the principles underpinning what students should be taught including an understanding of the ecosystems which they depend on; the ability to think critically and reflect; issues of equality, justice and democracy; and the need to understand the business case for sustainable development, which relates strongly to the entrepreneurship theme of the MetESD project.

The survey also produced a few interesting anomalies and contradictions, especially where the responses were divided between ‘agree’ and ‘disagree’. There was an even split with regard to whether education should be about transforming the worldview of individuals. Transformative education features as a strong characteristic of ESD in the literature referenced at the end of this report and the teachers were generally in agreement on the importance of students developing a global perspective. The nature of knowledge in the realm of education was an area of disagreement within the group and in relation to ESD. The teachers were divided on the extent to which learning is based on transferring a fixed body of knowledge, and while thirteen of the teachers agreed that knowledge is not fixed and that the answers to complex questions can change over time; thirteen teachers also agreed that students should be given certainty about the view to hold on a controversial issue. This tends to be contrary to the view in ESD literature that knowledge has emergent properties and that uncertainty exists in relation to many complex issues.

There is a split in opinion in respect of the statement ‘ESD is not equally relevant to all subjects’. This is an indication of whether the teachers see ESD as being defined primarily by content or by pedagogical approach. This is an area for further debate in future meetings. Finally in relation to the survey, all the teachers agree (eleven strongly agreed) that teachers in general need to continually develop and evolve their practice. While this should be expected of teachers committed to a project like MetESD, it also suggests that the teachers would be open to incorporating a research approach into their professional practice.

The outcomes from the six interviews supported the picture that emerged from the survey and added additional details in some areas. The broad areas of content associated with ESD were reported as being addressed by all the interviewees through their current curricula. The interviewees were asked to consider the extent to which they employed a range of teaching methods in their professional practice. These methods were participatory, student-centred and relevant to an ESD approach. The interviewees indicated that these methods were in common usage on a regular or occasional basis. There were no significant indications of some methods being more commonly used than others. However, one interviewee reported a strong reluctance among some longer serving colleagues at the school to adopt these methods, which has implications for dissemination of changes promoted by the MetESD Project.

All of the interviewees appeared confident in developing methods and content within the confines of their own classroom practice. However, the biggest differences emerged between countries in terms of the potential to significantly change the structure and content of curricula. Schools in the Netherlands appear to have the greatest flexibility in this respect, while schools in Latvia and Germany have significantly less flexibility.

While the survey indicated that the teachers recognised the importance of their students developing a global perspective, the reality reported by the interviewees was one of the students being either focused on their immediate future or lacking a future perspective altogether. This is another potential area for the MetESD Project to explore.

When asked if they could change something to improve their teaching practice, one theme that emerged from several of the interviewees was the need for more time and larger blocks of time with their students.

The final element of data collection at the international meeting was the completion of the institutional grid by the teachers from each school. The grid provided a snap-shot of where the teachers considered their school to be in terms of implementing ESD. The completed grids indicate that ESD is adopted by some subjects in the schools, but not by others, providing an opportunity for the MetESD Project to develop a more holistic approach to curriculum development with regard to ESD. Another area for significant development relates to the awareness and attitudes of students, which supports the findings of the survey and the interviews. There were very divergent views in relation to ‘Leadership and Decision-Making’ with schools identifying either the first or the last statement in that column. All other areas were broadly in agreement with the schools identifying either the second or third statement as being most appropriate for their institution. This included the statements on ‘Research and Monitoring’, which indicates both some engagement in this area and potential for further development.

**2.3. Summary of the teachers’ perspectives and implications for the evaluation**

The teachers committed to the MetESD Project are, at the very least, partially engaged with the concept of an ESD approach to education and open to further development in terms of their professional practice. The teachers appear to hold a remarkably common perspective on teaching and learning, and it is a perspective that can be considered to be compatible with an ESD approach. However, there are several areas of teaching and learning that could be targeted through the Project in order to impact positively on the experience of students in the partner schools. These include developing a transformative approach to education inherent in ESD (Sterling 2001 and 2011); encouraging students to re-assess their worldview; developing a futures perspective – personal, local and global; and enabling students to cope with complexity and uncertainty with regard to certain issues.

The potential for a more holistic approach to curriculum development may be variable across the partner countries with external factors such as government policy and examination requirements preventing structural change in some contexts, while all partners appear open to innovation and change to the delivery of teaching and learning at course level, including sustainable entrepreneurship.

The openness among the teachers to continuing their professional development is commensurate with an ESD approach and presents an opportunity to develop the research skills of the teachers in relation to the implementation and evaluation of the Project.

The interviews confirmed that the majority of teachers work with annual cohorts of students, although some teach the same group over a two year period. This has implications for the timing of student surveys within the three years duration of the Project.

**3. Proposal for subsequent evaluation of the MetESD Project**

This section sets out the perceived purpose of the external evaluation as presented in the Erasmus application. This is followed by a plan for completing the external evaluation and some key questions to be resolved in discussion with the Project Coordinator and the Project Management Team at the University of Vechta.

**3.1. Role and purpose of external evaluation in the MetESD Project**

The role of external evaluation as presented in the Erasmus application document relates to assessing pedagogical changes to the professional practice of the teachers involved in the MetESD Project, which result from the ESD training programme. The evaluation is also concerned with the impact of these pedagogical changes on the learning experiences of the students in the vocational schools. The aim of the external evaluation is presented in the application as follows.

*“The aim of the external evaluation is a quantitative and qualitative survey on the implementation of the modules in the subject curricula of schools.*

*Firstly it shall demonstrate, which effects the lessons have on the attitudes and performance of students. And secondly the impact on the teaching skills of the school's staff shall be tested.”* (Erasmus Application: page 46)

Furthermore the role of the ‘critical friends’ is seen as part of the external evaluation process and can be used as a vehicle for assessing the impact of the Project on institutional change in the participating vocational schools.

*“An external evaluation and self-evaluation by a peer review of so-called "critical friends" shall assess the possibilities and difficulties of implementation, in order to secure the quality of curriculum development.*

*The implementation of modules in the subjects with a focus on students with learning disabilities is to make a contribution to the motivation and entrepreneurship concerning the above-mentioned clientele.”* (Erasmus Application: page 42)

The application also indicates that the University of Vechta will carry out research activities as part of the Project. Collaboration between the University and the external evaluation will be beneficial for the evaluation and the Project generally. However, it will be important for the final external evaluation report to be written from a partially detached perspective.

It would seem logical that if it is the impact of the Project on the teaching and learning in the schools that is being evaluated, it will be necessary to compare the experience and attitudes of a cohort of students prior to any curricula or pedagogical changes taking place, with the experience and attitudes of a subsequent cohort after the changes have been implemented. Given the current timing of the Project from now until summer 2018 the following evaluation proposal suggests surveying the current cohort of students at the end of the current academic year (May/June 2016); implementing changes during the next academic year (2016/17); and surveying the 2016/17 cohort of students in May 2017.

ESD is a broad concept open to differing interpretations. The data collected at the first international meeting indicates a broad consensus among the participating teachers in terms of their views on ESD. Additionally the view was clarified by the presentation from Detlev at the meeting, with the focus on sustainable entrepreneurship in the vocational context. However, the data collected at the meeting does highlight aspects relating to ESD that were particularly less developed among the participating teachers. These were identified in section 2.3 above and they could be seen as areas where there is potential for the greatest impact in terms of developing teaching and learning practices. The areas are: a transformative approach to education; encouraging students to re-assess their worldview; developing a futures perspective – personal, local and global; and enabling students to cope with complexity and uncertainty with regard to certain issues.

The Project management has already produced a grid of ‘Dimensions’ and ‘Competences’ which form a framework of competences for the Project. Table 2 has expanded on the grid in order to explore in a little more detail what might be targeted in the evaluation process in respect of this framework.

|  |  |  |  |
| --- | --- | --- | --- |
| **Dimensions**  **Competences** | **Knowledge** | **Skills** | **Attitude** |
| **Issue competence**  *(Caring for the natural and built environment that relates to the vocational context)* | About vocational fields related to ESD  *Awareness of sustainable development issues relating to their vocational area* | Working with methods and instruments  *Selecting and applying methods and knowledge in relation to sustainable development in the vocational context* | Global learning  Green economy saving environment  *Adopting the values for prioritising the sustainable option* |
| **Social competence**  *(Caring for others)* | Communication, teamwork  *Understanding the networks associated with the vocational area e.g. supply chains* | Solving conflicts  Steering dialogues  *Leadership skills and advocacy in regard to sustainable development options* | Open-mindedness  Empathy  Solidarity  *Open to changing ideas, empathy with others in the networks* |
| **Self competence**  *(Caring for yourself)* | Personality, emotion  Behaviour  *Understanding own abilities, ambitions and limitations* | Designing own life- and career curriculum  *Future visioning and action-planning* | Courage and heart  Authenticity  *Re-assessing individual worldview* |
| **Design competence**  *(Taking action on the above)* | About process designing structure building  *Understanding the consequences of your actions* | Designing processes and products  *Moving from planning to action and applying systems thinking* | Dealing with variety and difference  *Adopting a systems perspective* |

**Table 2**

**3.2. Proposed external evaluation plan for the MetESD Project**

Table 3 is an outline action plan for the external evaluation. The quantitative questionnaire will collect basic data on the competences by assessing knowledge and skills from the students perspective. It can also test attitudes through ranking exercises and Likert scales, however, it will need to be kept reasonably simple in order to aid translation and administration. Developing the teachers as researchers should allow for significantly more in-depth data to be collected, particularly in relation to teaching and learning methods and changes in students’ attitudes.

|  |  |
| --- | --- |
| **Action** | **Timing** |
| Draft and pilot first quantitative questionnaire for students | April to early May 2016 |
| Circulate first quantitative questionnaire for students to schools for translation and administration. Return results to Glenn Strachan | May to mid-June 2016 |
| Develop ‘teacher as researcher’ training input with University of Vechta; to cover in-classroom research and critical friend research. Training to Teacher as “empowerer”. | Sept to Oct 2016 |
| Before we collect tools and decide which we will choose. Tools to measure the shift of teacher in their teaching behavior from usual teaching to teach as a researcher and empowerer.  Deliver the training to the teachers, and share or introduce to the tools we choose. at the second international meeting. Brief them on the research tasks. | Nov 2016 |
| Teachers conduct their own classroom research in their own school. Teacher reflect on their teaching. | Dec 2016 to June 2017 |
| Evaluation interim report to the Project management to be included in the Interim Project Report. (This will include feedback on the first student survey and an update on the ongoing teacher research. | Spring 2017 |
| Critical friend research in partner schools. Critical friends investigate whole-institution ESD implementation with a focus on curriculum development, sustainable entrepreneurship and equality. | April 2017 to Oct 2017 |
| Circulate second quantitative questionnaire for students to schools for translation and administration. Return results to Glenn Strachan | May 2017 |
| Feedback from teachers on classroom research to Glenn Strachan. | By end of June 2017 |
| Feedback on critical friend research to Glenn Strachan either by email or possibly at the third international meeting. | Nov 2017 |
| Draft evaluation report complete and presented at the fourth international meeting. | May 2018 |
| Final evaluation report including any amendments to the draft report. | June 2018 |

**Table 3**

**3.3 Points for discussion with the Project Management Team at the University of Vechta**

Are we correct in measuring the difference between two annual cohorts of students? Yes, but not only differences. No, if it is meant the development of competencies.

Is there anything missing in terms of the focus of the evaluation?

Is the grid in Table 2 a good framework to evaluate against?

Yes, but we should add the teaching perspevctive. Detlev will do it until September.

Can we ask Claudia Kruhl to pilot the first student survey with one class at BBS Friesoythe?

Yes.

Who should be responsible for translation? Can the supporting organisations help with this and the administration?

Do the timings for evaluation fit with other activities you have planned for the Project?

Yes

How does research fit in with the intended role of ‘critical friends’?

Now, very good ;)

**4. References**

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**Annex 1 - Results of the Teacher Survey**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Learning is based on transferring a fixed body of knowledge.  Values and attitudes are always present in teaching.  All students need to be aware of their dependence on natural ecosystems.  Critical thinking and reflection are important skills for all students.  Education is not about transforming the worldview of individuals.  The teaching approach and the learning environment should reflect the values being taught.  All teachers need to continually develop and evolve their practice.  ESD is not equally relevant to all subjects.  Students should know that knowledge is not fixed and that the answers to complex questions can change over time.  Students only learn if they are active participants in their own learning.  Students should be more concerned about their future career than about global issues.  ESD is important for equipping students for life beyond school.  Students need to be given certainty about the view to hold on a controversial issue.  All students need to explore issues of equity, justice and democracy as part of their curriculum.  The business case for sustainable development should be part of the curriculum.  Teachers should adopt a co-learning approach with students while providing guidance and showing leadership. | **Strongly Agree** | **Agree** | **Disagree** | **Strongly Disagree** |
| **9**  **5**  **10**  **5**  **11**  **1**  **7**  **6**  **1**  **5**  **3**  **5**  **2**  **7** | **6**  **5**  **9**  **4**  **7**  **9**  **3**  **7**  **6**  **8**  **1**  **9**  **10**  **9**  **11**  **7** | **6**  **5**  **4**  **1**  **10**  **1**  **1** | **2**  **2**  **2**  **2** |

**Annex 2**

**Baseline semi-structured interview guide for vocational school teachers**

**Freisoythe – February 2016**

Name: School/College:

How large is the school/college?

What is your role/what subject(s) do you teach?

What age groups do you teach?

Will you be teaching any students for the full duration of the Erasmus project or do your students change each year?

How long have you been teaching?

To what extent, if at all, has ESD been introduced into the school/college?

What are the main factors that are responsible for the curriculum that you teach?

How would you describe the pedagogical approaches that you use?

What are the dominant pedagogical approaches in the school/college?

(Explore approaches such as didactic, participatory, out of classroom learning, problem solving, group work, independent learning, project work, etc.)

Is there any collaboration between subjects?

What would you say are the biggest challenges for your students?

If you asked them what would they say were their biggest concerns for the future?

Where do your students go/what do they do, when they leave the school/college?

Can you give any examples of how the way the school/college is managed supports or conflicts with what is taught in the classroom? (E.g. valuing diversity, managing school grounds, energy use, recycling.)

Do any of the following areas feature in your teaching?

* Environmental issues e.g.
  + Climate change
  + Ecosystems
  + Species loss/biodiversity
* Social issues e.g.
  + Equality
  + Cultural diversity
  + Democracy/decision-making
* Economic issues e.g.
  + Wealth and poverty
  + Employment
  + Consumption

How often does your teaching engage students to:

* Engage in debates and decision-making
* Work both independently and collaboratively
* Challenge existing assumptions and reassess their values
* Develop their thinking skills (systems thinking, critical thinking, creative thinking and reflection).
* Link actions to consequences.
* Develop strategies for coping with complex open-ended questions.
* Develop alternative visions for the future
* Take part in assessments that are formative and cover attitudes as well as knowledge and skills.

(Never; Occasionally; On a regular basis e.g. every 2 weeks; Every lesson)

If you could change anything about your teaching environment, your curriculum or your teaching approach, what would it be?

Are there any opportunities to share ideas with other staff through meetings, training sessions or team teaching?

Is there anything else that you would like to say about ESD in your school/college?