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Making Meaning Together: An Autoethnography Study On Our Role In Ethics Education

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MAKING MEANING TOGETHER: AN AUTOETHNOGRAPHY STUDY ON OUR ROLE IN ETHICS EDUCATION

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ABSTRACT

Representation of diverse people's perspectives, cultures, and ideas enriches societies. Equally important for communities to flourish is to have diverse perspectives on what good ethics education is. For 50 years the European Society of Engineering Education (SEFI) has been uniting and supporting engineering educators and researchers from around the globe and particularly from Europe. However, involvement from institutions in Eastern Europe is still very low. To diversify and strengthen the community by bringing perspectives from these countries, we engaged in an autoethnography study to share insights on participation barriers broadly and ethics education, more specifically. We choose autoethnography as this methodology allows researchers not only to share their own experiences but to connect in making meaning of a phenomena and to form a community of practice. The researchers and authors of this paper are representing STEM institutions in three Eastern European countries. Applying an interactionist approach, we engaged in a community of practice group to discuss the current state of the art of ethics education in our own institutions and to talk about the experiences with ethics education, academic integrity, and ethics culture. We collectively selected an appropriate framework and applied that framework to interpret the findings. Transcripts were analysed by all five researchers. The paper and the presentation will be presented together as a narrative story. The goal of this work is to form a community of practice and to create an agenda to engage the newly formed community of practice with the broader SEFI ethics education community.

1 INTRODUCTION

1.1 Motivation

The EU STEM Coalition is an EU-wide network supported by the Erasmus Programme that works to build better STEM (Science, Technology, Engineering, Mathematics) education in Europe. The European Commission (2020) claims that in most EU countries there is a shortage of educators across all fields of study, and particularly in STEM disciplines. Moreover, the report claims that educators need continuous opportunities for professional development, teaching in multilingual and multicultural classrooms, and opportunities for cooperation between higher education institutions [1]. The report further suggests that international mobility of students and educators must become part of educators training to broaden the access to the diversity of quality teaching approaches [1].

The communication report sets an agenda to be reach by 2025 with major focus on objectives such as: 1) *connectivity* among higher education institutions and with their surrounding ecosystems and society; 2) *inclusion* to ensure accessible higher education institutions, open to a diverse student and researcher body; 3) *integration* of learning and training for sustainable development across all disciplines through an

interdisciplinary and challenge-based approach, where innovation is an important component.

At the heart of all the above objectives, representation of diverse people's perspectives and ethics education considering all stakeholders and State Members, are regarded as the essence to build better STEM education in Europe.

Educational innovations, connectivity, inclusion, and integration, including best practices in teaching, as researchers suggest, happens more quickly through direct connections between people rather than dissemination through the literature [2]. In coordinating STEM ethics education community level support efforts to include diverse representation of scholars across Europe, is to develop a Community of Practice (CoP) to foster connections between educators and researchers. Utilising an autoethnography study, this narrative paper aims to synthesise the experiences in teaching ethics of five scholars who are interested in forming a CoP. A CoP can have a variety of structures and it can be formed and run explicitly by members or can have external facilitators. The meetings can vary from explicitly virtual, hybrid or in-person, only a few times a year to multiple times per month, and they can be implemented on any scale, from international to unit-level [3].

While in some CoPs, incentivization for CoP members is formally recognized by an organisation, in our CoP as in many other CoPs, members have an intrinsic motivation to engage in CoP as the opportunity to network, learn from each other, and to engage in professional development [4-7]. Particularly, members in our CoP benefit from the common values of CoP structure, such as having a space for us to come together and collaboratively work on challenges, while also providing safe spaces for members to reflect on their own practices. CoPs allow members to easily access the collective knowledge and expertise of the group and to rely on others for professional or emotional support [7]. Further, to sustain our newly formed CoP, we plan to meaningfully coordinate resources and the accumulation of collections of knowledge and best practices. These benefits position our CoP as a powerful mechanism for supporting and sharing educational innovations, connectivity, inclusion, and integration as set by the European Commission agenda for Achieving the European Education Area.

1.2 Theoretical Framework

The foundation of the CoP framework is based on the Situative perspective on learning where social interaction is essential for our learning and knowledge-gaining [3]. According to Wenger and colleagues, CoPs have three elements: *domain* of interest (knowledge and problem focus) they are centred on, *community* of people that comprise the group, and *practice* that members share and innovate around [3, 4]. Applying an interactionist approach, the authors of this work reflect on the current state of the art of ethics education in our own institutions and chose to engage in a CoP to improve our practice with the support of others by providing a structured group environment that allows for strong connections to form [4].

2 METHODOLOGY

2.1 Autoethnography

Autoethnography is a qualitative method approach that helps researchers to describe and systematically analyse personal experience to understand cultural experience [8]. The researcher blends autobiography and ethnography, engaging in a method that is both the process and the product. To construct the narrative, the facilitator of our CoP developed open-ended reflective prompts with the intention of providing enough scope and context to yield responses that capture different perspectives on similar experiences. As Wenger [4] emphasises the domain of interest, the community, and the practice are the essential elements of a CoP, our prompts progressed through the stages of exploration of the domain of interest of ethics education (why and how to teach ethics); our own lived experience (our role in teaching ethics), and lastly, meaning making through the CoP to develop and maintain the CoP core knowledge.

2.2 Data Analysis

The interactions approach builds upon the co-creation of the narrative. The narrative-inquiry autoethnography approach allowed the researchers, as a group, to examine significant experiences from our own perspectives having lived through them. The narrative inquiry and reflective writing allowed us to write about our own experiences to generate a data set for analysis and meaning making to present our collective views as a community of practice. Qualitative thematic analysis was used to iteratively generate common codes, to then be grouped around common themes as the main areas of interest for this work.

Our autoethnography method involves the following process: firstly, the facilitator posted four prompts on shared space where all authors have secured access to the file. Authors, then independently in the form of narratives addressed the prompts. All authors were able to see each other's responses as the narratives were evolving. Secondly, the facilitator coded through an inductive thematic analysis all narratives for initial emerging themes. Thirdly, the narratives were coded by each author individually. The authors then built consensus and merged their individual code lists and created a unified codebook before conducting a second iteration of individual coding. Key themes (meaning making) were identified from groupings of the final code list to inform the analysis. The final analysis and key themes are presented in this paper.

2.3 Rigour and Trustworthiness

Autoethnography often is criticised by the research community as being self-indulgent and not sufficiently rigorous, however, scholars from multiple disciplines argue that there should be and there is a place for research that links the personal with the cultural. Some researchers suggest that autoethnography can encourage empathy and connection beyond the self of the author and contribute to sociological understandings [9]. In this co-created narrative, we autoethnographically linked personal experiences of implementing ethics education in the STEM curricula and being included in the larger SEFI community with pertinent issues reflective of research culture to contribute to understandings of challenges of participation and

inclusion in the SEFI community. It is up to this larger community and gatekeepers of research to allow the sharing of perspectives and with a variety of research methodologies and styles of representation. The findings of our autoethnography study could be compared with findings from the broader literature on STEM ethics education and Community of Practice. That comparison could be an evaluation criterion of rigour and trustworthiness, of course considering the phenomenon of the lived experiences and cultural backgrounds.

3 RESULTS

The initial key ideas and impressions emerging from the reflections were grouped and organised into thematic sections by the facilitator of the CoP, resulting in twelve emerging themes. Then the narratives were coded by each author individually and consensus to merge their individual code lists was reached. Sixteen key themes (meaning making) were identified from groupings of the final code list to inform the analysis. The final analysis and key themes are presented in Table 1 below, organised in an order of the four prompts: 1) why should we teach ethics; 2) how should ethics be taught; 3) what is an educator's role in teaching ethics; and 4) how do we deepen our understanding of ethics education through community.

Table 1. Key themes from the four prompts and meaning related to CoP

Prompt	Themes	Meaning related to CoP
Why should we teach ethics?	Prepare students for post-graduation success. Allow students to develop critical thinking skills. Help students become better decision-makers. Support students' development of academic, social, and emotional competencies. Introducing students to emerging areas in STEM - AI and robotics that raise new ethical questions are rather different from other engineering disciplines. To make students understand the impact (risks, outcomes etc) of professional activity in a broader, societal context.	Domain and interest of the CoP members

How should ethics be taught?	Theoretical foundations in moral and ethics education. Case studies - a balance between explaining why and demonstrating how. To elicit moral emotions and hence intuitions to see how reliable these are for our shared living within the academic community.	Expertise and practice Learning from each other Identification of best practice examples
What is my role in influencing the adoption of ethics in the curriculum?	Role-modelling. Historical and cultural influences. Identification of emerging issues connected with new technology applications.	Challenges Resources
How do we deepen our understanding of ethics education through community?	Value-added – intrinsic motivation to participate in the CoP. Belonging to a community with similar backgrounds (geographical, historical, and social). Resource sharing. Common activities, seminars, and exchanging experiences.	The benefits of Community of Practice

The largest number of themes (6 themes) emerged from the responses to the first prompt - *Why should we teach ethics?* These themes were linked to the specific STEM domain as well as the professional interest of the CoP members. A couple of quotes, provide a description of the themes in this prompt - *“Teaching Ethics is not about teaching Ethics. It is about teaching how to see your professional activity in a broader context. Engineers, executing their professional tasks, serve society.”* and *“There are many reasons for teaching ethics, ranging from those related to the moral and social development of each student to those related to the wise governance of technology and its implications.”*

There were three key themes emerging from responses to the second and third prompts, respectfully - *How should ethics be taught?* and *“What is my role in influencing the adoption of ethics in the curriculum?”*. The following quotes represent descriptions of the themes in these two prompts: *“What works best is a brief theoretical introduction followed by real life examples related to the theoretical part. Then we apply a problem-based approach when we present a list of problems (in advance)...Of course, with new technologies there will be new questions that will probably need*

different approaches.” and “taking a pensive stance, arguing how to assess its design, affordances and functionalities from a moral and epistemic perspective...the first goal is to elicit moral emotions and hence intuitions in order to see how reliable they are for our shared living within the academic community. Then we proceed to see the intricate relationship between those intuitions, i.e., beliefs, and the moral values, principles and norms that ground our communal existence.” These themes in the second prompt are linked to the expertise and practice of the CoP members, as well as an opportunity to learn from each other and identify best practice pedagogical examples.

The themes in the third prompt were linked to the opportunities of the CoP members to share challenges and resources, including helping students to feel belonging to the larger community of STEM ethical practitioners - *“My role, and that of my colleagues, would be to maintain a strong interest in the field, an interest that stems primarily from the practical nature of ethics in assessing everyday situations and making informed decisions, thus creating a positive social output. I recognise that the professional role of ethics is rather secondary for undergraduate students and is given more attention as an exercise in discovering and growing moral virtues to better situate themselves in the world of technology, not just as users but as creative agents. For students, I prefer a mix of personal exploration and ethics as a tool for professional endeavour.”*

The last prompt in this autoethnography study was *“How do we deepen our understanding of ethics education through community?”*. Addressing this question, the authors of this paper individually identified the benefits of forming and participating in CoP and then collectively agreed on these benefits (meaning making). The following quotes best describe the key themes in this category: *“This sense of belonging can be reinforced with reference to ethical questions within other courses and disciplines. Evidently, increasing interest in research on ethics can also contribute to an increase in the interest and awareness on the subject in our institutions.”* and *“We can also try to identify a call for projects (e.g., in Horizon Europe) that corresponds to these ideas. In addition to the professional part, we should introduce the topic to the broader public.”*

4 SUMMARY

As the initial work for establishing a Community of Practice is completed through the process of writing this conference paper, we plan to sustain the group by creating more networking opportunities starting with monthly meetings in the coming academic year. We plan to expand the group and create a space where we can share teaching resources (videos, assessment rubrics). We further plan to engage with the CoP with invited talks, seminars in each other's universities and at conferences, with the goal of establishing collaborations to complete studies together, publish, and eventually apply for funding to work on joint projects.

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