

# Navigating role conflicts and responsibilities in higher education for sustainable development.

## Insights from German university teachers

*Higher education for sustainable development can be a challenge for university teachers, as the concept's normativity may contrast with their self-perception as neutral researchers and teachers. Based on an interview study, the authors examine three role conflicts which may occur in higher education for sustainable development and offer perspectives on how these may turn into learning opportunities.*

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#### Abstract

Higher education for sustainable development (HESD) can be challenging for university teachers. The normative core of the concept may be perceived as a contrast to the ideal of objective knowledge production which has dominated Western academia for a long time. As university teachers concurrently fulfil different roles, they can be exposed to sometimes incompatible expectations. In this paper, we present role conflicts university teachers may face when implementing ESD in their courses. For this, we used sociological role theory as a framework to analyse data from a qualitative interview study conducted with university teachers. The results show three typical role conflicts: 1. the “personal stance” conflict, 2. the “practice what you preach” conflict, and 3. the “lethargic institution” conflict. In order to support university teachers in coping with these conflicts, we recommend reflecting on ESD-related values and ambiguities in university classes, reinforcing professional development for university teachers in ESD, especially in the field of emotional competence, and the implementation of Whole Institution Approaches.

#### Keywords

education for sustainable development, higher education, normativity, role conflicts, university teachers

Massive human intervention in eco-systems has, among others, led to increasing global warming and is fuelling the loss of biodiversity (Richardson et al. 2023). The central objective of the United Nations 2030 Agenda (UN 2015) is socio-ecological transformation reached through the 17 Sustainable Development Goals (SDGs). Education for sustainable development (ESD) is considered to be of great importance to achieve the SDGs (UNESCO 2020). The concept embraces not only the idea to include sustainable development topics into teaching, but also applying suitable pedagogical-didactical methods (Bellina et al. 2020).

Higher education institutions are important leverage points for societal change, as the future decision makers and multipliers are trained there (Mader et al. 2014). At the same time, they are embedded in different fields of ambiguities concerning the relation between science and society (objective observation vs. active design of solutions), the mission of universities (scientific excellence vs. social relevance), the understanding of knowledge (pure vs. applied) and the educational approach (humanistic vs. instrumental) (Bien and Klußmann 2023). Questions of ethics of science are closely linked to these fields of ambiguity: Does science have a societal responsibility to contribute to socio-ecological transformation, as advocates of a “transformative science” point out (Schneidewind and Singer-Brodowski 2014)? Or would such an understanding be running the risk to abandon researchers’ original task of searching for knowledge proper instead of practical solutions, possibly even leading to a scientific expertocracy (Strohschneider 2014)? All these ambiguities relate to ethical questions on the goals and practices of both research and teaching. This has consequences for the way in which ESD is envisioned at universities.

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To date, ESD has been increasingly included in university laws, study regulations and curricula, but its practical implementation is often limited to certain subjects and few universities. To anchor ESD structurally, ESD should not only be implemented in university teaching, but also in operations and campus management, governance, communication, networks and capacity building (Holst 2023). Research also shows that especially the qualification of ESD multipliers is highly important (Holst and Singer-Brodowski 2022).

The various roles influence each other, are not free of overlaps and are sometimes very contradictory (Müller-Christ et al. 2018). Secondly, a specificity of universities is their strong differentiation into disciplines, among which epistemological and methodical approaches may vary largely (Becher 1989). (Sub-)Disciplines have a high degree of autonomy both in their organizational structure and in the contents they work on, which is why universities can be described as “loosely coupled systems” (Weick 1976). This can be a challenge when dealing with inter- or transdisciplinary

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ESD implementation is not always an easy task, as sustainability problems often lack simple solutions, include multiple stakeholders and therefore challenge traditional role understandings and values (Cébrian et al. 2013, p. 288). In order to analyse wicked sustainability problems, considering different perspectives and the underlying individual and societal values is of great importance (Miller et al. 2011). For conveying ESD competences to students, university teachers are required not only to transmit sustainability-related fact knowledge to their students, but to create participative learning environments and open rooms for normative discourses, which implies taking different roles like expert, coach and learning companion (Bellina et al. 2020, pp. 69–79).

In this paper, we give empirical examples of which specific role conflicts university teachers may face when putting ESD into practice. For this, we draw on a qualitative interview study conducted with ten teachers in five German universities. In order to analyse the various expectations placed in them in their daily job life, sociological role theory offers a fruitful framework. With the help of this theoretical lens, we identified three different types of role conflicts related to higher education for sustainable development (HESD).

## State of research

The field of higher education presents some specific characteristics which can influence the way university teachers deal with ESD in their courses. Firstly, in Germany (as in many countries), many researchers also have teaching assignments and need to qualify young academics. They often identify more with their role as researchers than with their role as university teachers (Schimank and Winnes 2000). Besides the roles of teacher and researcher, there are multiple other roles they have to cover, for example being an examiner, an administrator etc. (Billot 2010).

ESD topics. Thirdly, another difference between modern Western higher education and other educational fields is that the universities are strongly influenced by the ideal of creating and imparting objective knowledge (Schneider et al. 2019). Through a critical approach to this epistemological ideal, ESD can offer new perspectives and possibilities for academic teachers to address normative questions and to deal with insecurity, complexity, ambiguity and different forms of knowledge (Cébrian et al. 2013), as well as with emotions, which play an important role in transformative learning processes (Grund et al. 2023).

ESD topics often contain complex entanglements of (seemingly) objective facts and ethical aspects (Potthast 2015). Concerning the way how educators include these in their teaching, Öhman and Östman (2019) describe three traditions in environmental and sustainability education in schools. The *fact-based tradition* is related to a knowledge-based approach to sustainability problems. In this tradition, facts are seen as separated from values. In the *normative tradition*, sustainability problems have a moral character, the focus is on sustainable values, norms and lifestyles. The aim is to encourage students to commit to sustainability issues. The *pluralistic tradition* also emphasizes the value dimension of sustainability issues but focuses on different perspectives and interests in sustainability topics. These are seen as political issues (Öhman and Östman 2019, pp. 73–76). The authors stress that it is important for teachers to reflect on their own ESD tradition in order to understand what ideas and strategies implicitly structure their teaching. Focussing especially on the question of teacher neutrality, Heybach (2014) argues that trying to be neutral as a teacher may be a way of ignoring one's own subjectivity and can lead to the reinforcement of existing ideologies. Referring to the example of the Holocaust, she shows that this may be very dangerous.

Especially in higher education, the question of how to relate to objective facts and ethical values arises in a way which differs from other educational contexts. Several qualitative studies

have been conducted in order to show how values can be reflected in HESD (e.g., Anselm et al. 2018). On a more theoretical level, Müller-Christ et al. (2018) elaborate that university teachers find themselves in role conflicts as they have to navigate in two tension fields: on the one hand, they need to convey both objective specialized knowledge and “orientation knowledge” (which includes ethical-moral decision skills); on the other hand, they need to position themselves between freedom of research/ of teaching and societal responsibility.

If academics adopt stances closer to the pole of societal responsibility, this can have far-reaching implications for their roles. Concerning their roles as researchers, Wittmayer and Schöpke (2014) discuss activities and ideal-typical roles in the context of action research related to sustainability transitions. One poten-

tial role conflict concerns the extent to which science and society overlap when researchers address real-world problems, generate knowledge and formulate solutions for a more sustainable future. Other studies show that how academics understand science and their role as researchers in society not only influences the way in which they conduct research, but also how they teach (e.g., van der Rijst et al. 2008).

The overview has shown that the question of how to deal with normativity in the context of ESD may cause role conflicts in university teachers. In this paper, we address the following central research questions: Which role conflicts occur in the field of HESD? Are there any specificities compared to other educational fields? We approach these questions by using sociological role theory to understand expectations on diverse social positions. >

JULIA HOFFMANN 2021

*Unbequeme Wahrheiten | Inconvenient truths*





ERIC MCDERMOTT 2021  
"Love nature?"

## Sociological role theory as a framework for analysing role conflicts

People have different and various positions and roles, for example as researchers, daughters, fathers, friends, club members, citizens, etc. Roles refer to socially pre-formed positions and culturally pre-formed patterns of behaviour. A role does not capture a person's entire personality, but rather one side of it. Actors always carry only certain roles: age, gender and social position are more or less effective in every social situation (Röhl 1987, p. 347). However, social roles shouldn't be understood in a mechanical way. From an interpretive perspective, every individual has possibilities to disown role-expectations as well as possibilities to create their own role (Röhl 1987, p. 345).

A social position is related to several other social positions. Consequently, a position holder has diverse role partners, each of whom directs behavioural expectations towards them and demands different role actions from them to a certain extent (Schulz-

Schaeffer 2018, p. 388). If different reference groups address diverging expectations to an individual, this may cause role conflicts. Almost every situation is overdetermined, individuals are constantly facing the problem of which roles and role expectations to orientate themselves to (Röhl 1987, p. 348). There are inter-role and intra-role conflicts. An *inter-role conflict* exists when a person is exposed to diverging expectations regarding his or her different roles. To give an example, a person might experience conflicting expectations in her roles of being a researcher and a mother. An *intra-role conflict* exists when conflicting expectations are directed to one and the same role by different role partners. This might be the case for a university teacher, for example if the head of department and the students demand different foci in teaching – the first related to the department's specific research programmes, the latter related to their personal interests or future professions. Intra-role conflicts are more difficult to manage than inter-role conflicts because individual segments of the same role are more difficult to separate than different roles.

## Methods

The overall aim of the interview study is to examine how university teachers deal with normativity in the context of ESD. Special attention is paid to the challenges they meet when teaching controversial sustainability issues, and to their understanding of their role as university teachers in this context. The study is based on Constructivist Grounded Theory (Charmaz 2014). This approach was chosen as it is especially useful for research in relatively new fields and to date, only few studies on university teachers and normativity in the context of ESD exist (e.g., Anselm et al. 2018, Müller-Christ et al. 2018; see above, *State of research*). A reconstructive research design seemed most appropriate, as the method is suitable for analysing implicit structures of meaning, which we found important to gain insights into the university teachers' normative assumptions concerning ESD and university teaching in general. The research process is iterative, interviews and analyses are conducted alternatively. Ten interviews were carried out. In order to allow the interviewees to deploy their own meaning of and relevant questions concerning normativity in HESD, but to be also able to ask critical questions, problem-centred interviews (Witzel 1985) were chosen as interview type. The interview guidelines can be found in the supplementary material.<sup>1</sup> The coding procedure was inductive and started from the phenomena which occurred in the material. Empirical findings, as, for instance, the role conflicts, and preliminary theoretical conceptualisations were elaborated and redefined during the entire research process.

We assumed that basic knowledge of the concept of ESD was an important prerequisite for ensuring an adequate depth of the interviews. Therefore, we recruited the interview participants in an ESD course programme carried out in German universities by a research team from Heidelberg University of Education.

The interview participants are university teachers from five different universities throughout Germany. The universities were chosen in order to represent a broad range of higher education institutions that exist in Germany: half of the interviews were conducted in small universities with around 3,000 students, half in middle size (10,000 to 15,000 students) or big universities (more than 25,000 students). Four of the universities offer a broad spectrum of academic disciplines, one is specialized in teacher education. The interviewees are affiliated to various disciplines: mechanical engineering, regional sciences, business studies, and pedagogy, including educational science, didactics and educational psychology. Beyond the above-mentioned ESD course, the teachers' prior experiences regarding ESD in their own teaching vary significantly: some have implemented ESD for many years already, others are new to the field.

## Results: University teachers' role conflicts in the context of education for sustainable development

In our analysis, we identified three types of role conflicts that seem particularly significant for the field of HESD.

### The "personal stance" conflict

One conflict university teachers can face when implementing ESD is related to the fact that sustainability challenges often consist of intricate socio-economic problems and it is often impossible to find easy and clear solutions. Therefore, *how* academic teachers talk about sustainability topics and the future and which personal stances they take is closely linked to their own emotions, values and world-view, as well as to teaching traditions.

An interview passage with Bob<sup>2</sup> illustrates this. Bob, a 40-year-old junior professor, gave a seminar on global environmental governance. In one class, he was talking about a failed *Conference of the Parties (COP)* to his students, revealing his own pessimistic views:

*[...] and I myself was very, very negative or very pessimistic in that moment, and this is how I delivered my lecture. And then a student put her hand up and said [...], why I was so negative, yes. She said, I should/my true task was to convey hope and to convey a future perspective, yes. And I should see that uhm (...) that students, as it were, want to know which potential ways there are, instead of being told, this and that is all rubbish. And that hit me hard in that moment. [...] Well, there I really realized, right, in that point, my role actually is really different from what I was just doing, from what I was delivering. [...] And uhm (...) yes and (.) I discussed that very openly then, [...]*

<sup>1</sup> <https://doi.org/10.14512/gaia.33.4.7.suppl>

<sup>2</sup> All names are pseudonyms. All translations are by the first author. The number of dots (up to 3) or the digit (from 4) in brackets indicates the length of a pause in seconds. Particularly emphasized words are underlined.



MAX HIRNING 2021  
*Duck with a mission*

*I thus said very clearly: 'I'm in a dilemma, yes. To/on the one hand to convey hope, but on the other hand to remain a realist, and I really can't tell you that I think much of global environmental governance, it doesn't usually work.'*

This excerpt shows an intra-role conflict: Bob doesn't see himself able to teach the topic in the solution-oriented way his students expect. On the one hand, there simply *are* no easy solutions, as multiple actors and interests are entangled in the field of global environmental governance. On the other hand, Bob's own emotions toward this topic make it impossible for him to teach in a solution-oriented way. Dealing with the discordance between the teacher's and his students' content expectations and emotional dispositions (which may also strongly vary among the students) may be especially challenging if teachers and students do not share the same understanding of the teachers' role concerning the relation between facts and values (see above, *State of research*, for the different teaching traditions).

A second quote from Zoe, a 49-year-old lecturer, illustrates that the “personal stance” conflict may entail questions of authenticity. Zoe having mentioned that she sees herself as a role model when implementing ESD in her courses, the interviewer asks if she finds this challenging. Zoe answers:

*Yes. (...) Well, because on the one hand it means being open-minded and for me it also means dealing with things that I didn't know about before or only dealt with in a rudimentary way. (...) And also to try things out for myself. And also dealing with privations [...] And if I can't do it as a person (...), let me put it this way, to take small steps toward change, but I demand it from others, °then° I realise, no, °how° strongly (taking a deep breath) uhm yes, subjectivity influences me there. So, I see a big dispute (...) between subjectivity and objectivity and I have no idea how to eliminate it in that context.*

The quote shows that for Zoe, taking a certain personal stance, namely being a sustainability role model, is an important prerequisite to implementing ESD in her courses. She describes that if she herself is not able to “take small steps towards change”, she cannot expect her students to do so. Interestingly, for her the question of taking a personal stance is closely linked to “a big dispute (...) between subjectivity and objectivity”. Her own struggle to behave sustainably is associated with subjectivity, whereas objectivity seems to be an unattainable goal for her teaching. The quote hints at the fact that Zoe perceives being entangled in contradictions concerning sustainability values and behaviour as a limit to her own teacher authenticity – instead of seeing it as a starting point for critical reflection on her and her students’ personal stances.

### The “practice what you preach” conflict

Another field of tension may occur when there is dissonance between teaching in a public role as university representative and actions in private life. This is especially relevant in the field of ESD, as sustainability challenges occur in all parts of everyday life. When students expect their teachers to “practice what they preach”, conflicts may arise. If academic teachers do not lead a sustainable lifestyle, for example due to other priorities in a certain field of their private or professional life, students might question their authority as academic teachers. A quote from Bob illustrates this:

*[...] when it comes to sustainability values, yes, then (...) you can feel that our students place value on, (...) that a certain degree of sustainability uhm (...) is also practised within the institute. Well, they (...) when somewhere the lights are left on, then sometimes someone says ‘Well, who left this on?’ or ‘Can we not turn that off?’ or uhm. (...) I myself am a vegetarian, but colleagues have been asked on excursions, why they eat meat, (...) yes. [...] Well, you are increasingly confronted with that also in everyday life.*

According to Bob, the students clearly expect that sustainability is put into practice within their university department. University teachers as its embodied representatives are therefore expected to behave in a sustainable way. But the lines between the different roles of university teachers blur: The students expect Bob to behave in a sustainable way not only during his work in his role as higher education teaching professional (e.g., energy saving), but also in his private life (e.g., vegetarian diet). There is no clear distinction between the role of the public person, a representative of university, and the role of the private person, which causes an inter-role conflict: The wording “you are increasingly confronted with that” (authors’ highlighting) hints at the fact that Bob perceives this as a challenge.

A second quote illustrates the blurred boundaries with other examples for teaching and private life. Liz, postdoc, 50 years old, states:

*Uhm or then we're back to learning from the model, [...] that you also have a role model function, so even as a lecturer I think uhm, we're just human beings, uhm. (...) And because you're also uhm a representative of an institution I think, which also has a certain responsibility in this area (4) [...] It's less about eating meat. Maybe it's more about [...] the utilisation of paper or uhm yes, heating and all that sort of thing. // I: Hm, hm (agreeing). // Or whether we all come by car (...) or by bike. (10) Exactly. (4)”*

The quote shows that the students’ expectations addressed to Liz in her public role as university teacher do not only refer to domains of institutional action, but also to her private life. Liz states that her dietary habits are less part of her public role, but utilisation of paper and heating, clearly related to her tasks and the buildings in her institution, are. Interestingly, the choice of the vehicle with which she comes to university is perceived as part of her public role. Where does her role as a public person start and where does it end? Is it at the doors of the university or already when leaving home? How about personal choices which are sometimes visible in public settings as well? The two examples show that the transitions between public and private roles are fluent.

In Liz’ statement, the students are not mentioned at all, but the conflict seems rather to consist of what Liz expects from herself or what she thinks her students expect from her. Generally, it is difficult to discern whether the students *really* expect their teachers to act as sustainability role models, if this rather is the interviewees’ assumption or if it is more a conflict between the teachers’ own expectations toward their role and their limited possibilities to live up to these.

### The “lethargic institution” conflict

In a third type of HESD-related role conflicts, institutional regulations are central. Liz gives two examples how her envisioned sustainable behaviour is limited by the university management’s regulations:

*Uhm yes, the fact we keep bulldozing half a forest every time we have our exams printed on paper and such things. [...] But why can we write exams online during the pandemic, but now that we are all back, we use up (sighing) yes bundles uhm of paper, which are shredded afterwards. Uhm (.) uhm that is something which actually does not correspond to my (slightly laughing) my values and standards in the field of ESD. Uhm. (16) Yes, sometimes how we teach also underlies uhm certain uhm norms I would say. That the requirement is, we (.) well we have this (.) well the sheer fact, these [...] physical room conditions uhm, where one might sometimes want to break out to try different things and to do them in a different way.*

In the quote, Liz conveys a dissonance between her personal values and her possibilities for implementing them in her university courses. According to the values she associates with ESD, paper waste should be reduced, for example by using online instead of paper-pencil formats for written exams. Here, the university's examination office's expectations set limits to Liz' possibilities to enact holistic ESD in her courses, as they do not allow online examinations. This causes an intra-role conflict. Facing the unsustainable structures at her university, Liz feels like a "lone ranger" in front of rigid institutional regulations. As another example, Liz describes that university teachers' possibilities of changing their way of teaching are limited by institutional norms materialized in the "physical room conditions" (see quote above). Some other university teachers also mentioned this, for example stating that controversial discussions and trustful exchange among students are merely possible in frontal lecture theatres.

A second example shows that the institutionally given examination regulations may cause role conflicts. Ann, postdoc, 55 years old, describes it this way:

*Uhm the other thing, the uncertainty, is perhaps really uhm: (.) this (.) somewhat distanced idea of what my role is perhaps. (.) [...] I would like to work much more at eye level. (.) But sometimes I have the feeling that this is a problem institutionally. So that [...] in the exam [...] that I have to keep a distance, which is a problem for my role. So [...] I might appear completely different to the students in the seminar than I do in the exam. And, which is perhaps also normal, but you / I see a certain (.) yes, a (.) yes, conflict is perhaps an exaggeration, but an ambivalence (7) [...] I believe that if we / if I were alone in the exam, it would be completely different. But I'm in a tandem with a colleague and uhm maybe this ambivalence (.) uhm arises from this exam situation that I'm anticipating. (...) Uhm in the exam situation it's / that's really stressful, I think. I [...] find it s/ insanely stressful to have two such different requirements sometimes / so sitting next to each other [...] And then we're in a dynamic that I don't feel comfortable with [...] And that sometimes has an effect on the organisation of the seminars.*

The quote shows that Ann's attempts to adopt a new teacher role corresponding to HESD is limited by the examination requirements of her institution. In line with HESD pedagogy, which proposes teachers to be at eye level with the students and to be a coach rather than a frontal lecturer and omniscient expert (see above, *State of research*), Ann established a new kind of relationship with her students in her seminar. But at the end of the semester, this comes to an abrupt end: the institution requires Liz to be an examiner and therefore puts her in a hierarchical position. The institutional expectations toward this role are incorporated by her colleague with whom she holds the exams. Ann describes herself torn up between her colleague's expectations and the ones of her students, with whom she had collaborated as a learning companion at eye level during the semester. Ann experiences this as "insanely stressful", and mentions that it has effects on how she will organize future seminars, making her go back to more frontal teaching formats, as she explains later.

## Discussion

The interview examples show three different types of role conflicts of university teachers in the context of HESD: one linked to the need of taking personal stances, one linked to the conflict between public and private roles, and a third one linked to institutional constraints.

The conflicts are not exclusively present in higher education. But due to the specific conditions in this educational sector, they may be especially virulent here. As many universities traditionally understand themselves as places of objective research and fact-based knowledge, where emotions have little room, it may be perceived more challenging by university teachers to take personal stances than by educators in other fields. Indeed, the diverse interview excerpts reveal that ambiguities and the emotionality of ESD topics cause insecurities in the university teachers. If university teachers are not clear about their own personal stances and underlying values and emotions, this may cause irritations in students, as especially the excerpt from Bob shows. Of course, the question of authenticity is not just an issue for university teachers, but also for school teachers (Bergmüller and Taube 2023). Nevertheless, dealing with one's own and the students' uncertainty and emotions may be perceived especially challenging by university teachers, as mentioned above.

The conflict raised by unsustainable institutional regulations can also appear especially virulent in universities, as these educational institutions are less centrally regulated than for example schools (cf. Weick 1976, chapter 2). In some (sub-)disciplines, sustainability principles may be widely enacted, whereas in others, they may be totally ignored. If university teachers see themselves as representatives not only of their own faculty or department, but of the whole university, this may create irresolvable conflicts. Furthermore, university teachers may lack the necessary support for implementing ESD, for instance if the univer-



sity does not provide professional training opportunities or sustainable campus management.

In order to tackle these conflicts, university teachers should become aware of and reflect on their own insecurities, values, role understanding and teaching tradition and make these explicit to their students, as Öhman and Östman (2019) describe it for the school context. They can thus better enable students to themselves disclose and question their meaning perspectives, leading them to discover more integrative perspectives on the world (Singer-Brodowski 2019). For HESD, the pluralist tradition can be particularly fruitful, as it allows to critically reflect on complex entanglements of (seemingly) objective facts and ethical aspects (Potthast 2015). If academics recognize their entanglement in ambiguities (Bien and Klußmann 2023), this may also increase their reflexive capacity as researchers (Singer-Brodowski 2023). In this way, university teachers can avoid being seemingly neutral (Heybach 2014). Thus, ESD can open up new perspectives for academic teachers to address normative questions, deal with insecurity, complexity, ambiguity and different forms of knowledge (Cébrian et al. 2013) – offering possibilities for a critical approach to the epistemological ideal of objective science and visions of a socially engaged transformative science (Schneidewind and Singer-Brodowski 2014).

Research on and professional training in how to deal with emotions in the context of sustainability learning can help university teachers and educators in all fields to create emotionally safe spaces (Singer-Brodowski et al. 2022). Conflicts arising on university level may be relieved by realizing Whole Institution Approaches (Holst 2023). If, based on the ethical justice principle of sustainable development, universities aim at sustainable working and learning environments, this would also support university teachers in holistically implementing ESD. In this way, universities can become motors of a socio-ecological transformation (Schneidewind and Singer-Brodowski 2014, Vogt and Weber 2020). This would also help to address that taking seemingly neutral positions is a way of supporting existing unsustainable structures (Heybach 2014) and hence to reflect on the responsibility of university teachers.

The study presents some limitations. Due to the small number of participants and covered disciplines, the results are not generalizable for the whole group of university teachers at German universities. There might be other role conflicts in disciplines which we have not covered here. Moreover, we must assume that the results underly the effects of a certain self-selection bias, as the interviewed university teachers all participated in an ESD course and therefore are likely to have generally positive attitudes towards ESD. Furthermore, the participants' perspectives on ESD might be influenced at least partly by the course. Another important limitation is that the results may underly a certain confirmation bias. In order to reduce this as much as possible, the authors reflected on their own assumptions and beliefs on ESD, roles and normativity both before conducting the interviews and during the analytic process. Finally, the study was limited to a national scope. As the educational systems dif-

fer from country to country, the exact roles of university teachers may differ, too.

For further research activities, it would be interesting to include other disciplines in the sample<sup>3</sup>. Moreover, an international comparison could be endeavoured. Concerning the concrete teaching practice, it could be examined through which pedagogical methods and attitudes university teachers can best create open and safe discourse spaces where ESD-related values and ambiguities can be discussed.

## Conclusion

The aim of the paper was to give empirical examples which specific role conflicts university teachers may face when putting ESD into practice. We have shown that navigating through the described multiple expectations can be challenging for university teachers, touching not only questions of their personal behaviour, emotions and stances, but also the purpose of science in our current unsustainable world.

University teachers can perceive role conflicts as challenging, but not necessarily: if they are aware of their multiple entanglements and deal reflexively with them, this may open up opportunities for learning processes – also for their students. ESD can therefore be a great chance to critically rethink the idea of objective knowledge in academia and to further develop university teaching in order to enhance the students' competencies for dealing with ambiguity, complexity and normativity. These competencies can help them to shape a more sustainable society in future, but also to address other societal challenges that touch norms and values.

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**Informed consent statement:** Informed consent was obtained from all subjects involved in the study.

**Data availability:** As the interviews are part of an ongoing PhD project, the full transcripts are not yet published in a repository. This will be done as soon as the thesis is published.

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<sup>3</sup> We plan to do this in a future loop of our iterative research process.



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