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The existential and the instrumental in Environmental and Sustainability Education

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ABSTRACT
In this theoretical paper, we argue that ESE is caught between the existential dimension of its content and the instrumentalisation of the education system in which it operates. We argue that the tension between the existential dimension and instrumentalism manifests in five aspects of ESE, which direct ESE in profoundly different directions. We build our understanding of the existential dimension in ESE on Karl Jaspers' (1883–1969) existential philosophy and prior research on the existential dimension in ESE. Drawing on a theoretical foundation from existential philosophy, we outline what it might mean when ESE teaching content becomes the student's own existential question. Our view of instrumentalism in ESE is informed by recent work within educational philosophy on instrumentalism in education. The five aspects of ESE where the tension between the existential dimension and instrumentalism manifests are: (i) the aim of education, (ii) the role of knowledge, (iii) the role of students' prior experiences, (iv) the role of emotions and (v) the role of time. In our closing discussion, we address the possibilities of making room for the existential dimension of ESE teaching content, given the dominant, and possibly hegemonic, position of instrumentalism in education today.

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1. Introduction

There is undoubtedly a deeply existential dimension to ESE as the content of its educational practices has profound implications for continued human (and non-human) existence (Affifi and Christie 2019; Blenkinsop and Ford 2018; Vandenplas, Van Poeck, and Block 2023; Verlie 2019). ESE involves issues about severe threats to our planet, the extinction of numerous species, and vast global economic and social inequalities. As such, sustainability issues touch upon the very nerve of what it means to grow up in a society where dreadful visions of the future seem to be closing in. Such visions can spark strong moral emotions in students as well as ignite intense political

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discussions about the development of society (Sund and Öhman 2014; Sund and Öhman 2026; Van Poeck, Östman, and Öhman 2019). In short, the educational content of ESE carries profound existential implications for both teachers and students that need to be carefully handled in the classroom (Vandenplas, Van Poeck, and Block 2023).

At the same time, sustainable development is taught within a broader system of schooling characterised by instrumentalism rather than devotion to existential concerns. Many educational systems have moved in a direction of increased teacher accountability and a stronger focus on test results and measurable outcomes (Grek 2020; Lingard 2022). Taken together, the changing institutional conditions of schooling mean that teachers and students today face a harsh educational reality where didactic autonomy is being reduced, and knowledge requirements are to be met. This means there is a risk that schoolwork is presented to students in instrumental terms, encouraging them to pursue good grades for personal benefit rather than as an encounter with teaching content that is inherently important and meaningful.

Put succinctly, teachers and students engaged in ESE are today caught in a tension between teaching content, such as climate change, that actualises an existential dimension and an instrumentalised school system that demands productivity, efficiency, and measurable outcomes.

Placing the existential dimension of ESE teaching content alongside the instrumentalisation of education systems, we see a tension between them where a strong instrumentalism risks leaving little room for the existential dimension. Thus, the risk is that the existential dimension of ESE teaching content gets displaced when teaching and learning revolve around measurable outcomes, accountability and efficiency. When the existential dimension has little place in teaching, it risks becoming an education in which it is difficult for students to engage authentically with the issues they are studying. Therefore, we deem it important to highlight how and where the tension between the existential dimension and instrumentalism is played out in ESE. By outlining where and how the tension between the existential dimension and instrumentalism manifests, we want to create openings for educators, policymakers, and ESE researchers to address the existential dimension in ESE.

Therefore, in this article, we aim to theoretically specify the relationship between the existential dimension of ESE teaching content and the prevailing instrumentalisation of education. We develop an argument that a significant tension exists between the existential dimension of ESE teaching content and instrumentalised education. Our argument draws on Karl Jaspers' (1971) existential philosophy, in which 'the existential', in a broad sense, can be understood as one's unique and authentic relation to oneself, others and the world (see also Grabau 1971; Horn 1993). Additionally, we incorporate educational views on instrumentalism (Säfström 2022; Todd 2022) to clarify its meaning and implications in ESE.

The paper comprises four sections. In the section following this introduction, we clarify what instrumentalism means in education and how we understand the existential dimension of ESE teaching content. We then develop our central argument that a tension exists between the existential dimension and instrumentalism, which can be observed in five aspects of ESE. The paper concludes with a discussion on how our argument advances the ongoing debate and research concerning the existential dimension of ESE.

2. Instrumentalism and the existential dimension of ESE

In this section, we start by theoretically specifying the meaning of instrumentalism in education. Thereafter, we describe the teaching content in ESE and how an existential dimension characterises it.

2.1. Instrumentalism in education

Empirically, the instrumentalisation of educational systems and policy can be described as a (long) trend that is both global and dominant (Ball 2003; Grek 2022; Lingard 2022; Rizvi and Lingard 2010). Instrumentalism can be described as a discourse that conceptualises education as a system constituted by input and output, and where the focus is on the productivity (or lack of productivity) between input and output (Biesta 2022a; Säfström 2022). Input could include policy and regulations, expenditures, teachers' salaries, the length of the school year, etc. (Grek 2022). While the output might be different in instrumentalism, the form of output that dominates education's current instrumentalisation is 'learning outcomes' (Biesta 2016). With this logic of input-output, certain parts of the educational system become paramount, such as comparability between educational systems, measurability of learning outcomes, performativity of teachers, and transparency in the relation between input and output (Ball 2003; Grek 2022; Rizvi and Lingard 2010).

To theoretically outline the instrumentalism in educational systems, we draw on two distinctions: (i) the distinction between strong and weak instrumentalism, and (ii) the distinction between individual and societal instrumentalism.

In exploring instrumentalism in education, Sharon Todd (2022) articulates the distinction between strong and weak instrumentalism. As Todd formulates it: strong instrumentalism 'positions education within a mechanistic framework and operates politically through a marrying of national educational policies with economic interests' (Todd 2022, 335). When education is positioned within a mechanistic framework, where economic interest is key, it is easy to see how education becomes subject to demands of measurable outcomes, the rationales of input-output, and increased productivity demands. In our understanding, different effects of this form of instrumentalism can be seen in current trends in education policy on a global scale (Grek 2022; Rizvi and Lingard 2010). The weak instrumentalism, on the other hand, sees pedagogical 'practices not in terms of social function, but as that which gives form to specifically *educational* (not social or economic) ideas' (Todd 2022, 335). Thus, this form of instrumentalism is internal to education. The aims of education and how education is used to reach specific goals are defined educationally rather than economically (see also Biesta 2022a).

The second distinction we draw upon is between individual and societal aspects of instrumentalism. In short, individual students can use education as their instrument to reach personal goals and achievements. For instance, a student can study for a test in order to get a good grade with the aim of getting employed. In this way, education becomes a means for the individual student. This form of instrumentalism is, however, interwoven with the societal aspect of instrumentalism. From

a societal perspective, education can be used to handle (and reduce) the pluralism of subjectivities rationally. This is what Säfström (2022) refers to as instrumental schooling:

> In referring to 'instrumental schooling,' then, I mean this tendency to understand the role of educational systems to be to *identify* talent and abilities considered to exist already inside the child/student; in such a context, teaching is thus directed at identifying such talents and abilities, at bringing them 'out' and purifying them, so that they can do their work at the right place in the society (p. 354).

Within such an instrumental schooling, Säfström (2022) reminds us that there is no necessary link between education and democracy.

Given these broad strokes of how instrumentalism operates in education, we risk falling into unnuanced dichotomous thinking, where instrumentalism is seen as bad for education, while 'free' education, in contrast to instrumental education, is portrayed as desirable and pure. In problematizing such dichotomous thinking of instrumentalism in education, Ruitenberg (2022) reminds us that even 'free' education can come to practical use. She writes: 'To those who consider themselves scholarly purists and who insist their teaching and research serve, and should serve, no instrumental ends, I say it is inevitable that their teaching and research will be 'tainted' by orientation and translatability' (Ruitenberg 2022, 301). A similar line of thought can be found in Stevenson's (2007a) call to avoid dichotomous thinking when it comes to the contradiction between environmental education and schooling, and instead pay attention to pedagogical activities that open up for students' critical exploration (see also Affifi 2023; Tryggvason, Sund, and Öhman 2022). Without falling into dichotomous thinking, we now turn to the existential dimension in ESE.

2.2. The existential dimension of ESE teaching content

The teaching content in ESE is found in the intersection of ecological, social, and economic development, and where the planet's ecological boundaries must be seen as absolute boundaries for development (Baker 2016). Parts of this wide teaching content are environmental and sustainability problems that threaten the existence of current civilisations as well as human and non-human life, on both individual and species levels, where the current climate crisis is perhaps the most prominent example of such problems (Vandenplas, Van Poeck, and Block 2023). In that sense, the existential dimension of environmental and sustainability problems cannot be reduced to psychological or subjective views on these issues but must be recognised as (brute) facts and fundamental to environmental and sustainability challenges that threaten one's and others' existence.

Empirically, the existential dimension of ESE teaching content appears in different ways in ESE practice (Affifi and Christie 2019; Blenkinsop and Ford 2018; Vandenplas, Van Poeck, and Block 2023). In a study of climate change education, Vandenplas, Van Poeck, and Block (2023) show how the existential dimension can be understood as a tendency in education, parallel to the ethical tendency (Öhman and Östman 2008). Vandenplas, Van Poeck, and Block (2023) identify seven ways the existential dimension is expressed in climate change education. As a starting point for their analysis of

identifying the existential dimension, they synthesise previous research into the following definition of the existential dimension:

> The existential dimension of climate change is about profound questions and choices regarding what life is and what really matters in life – both our personal life and human existence in general – which can involve threats, anxiety, and irreconcilable values (Vandenplas, Van Poeck, and Block 2023, 1733).

Without describing in detail the seven ways the existential dimension is expressed, one could say that Vandenplas, Van Poeck, and Block (2023) identify how the existential dimension stretches from disruptive experiences and life quakes to existential reflection on norms, thus spanning from intense emotional experiences to intellectual reflection and discussion.

To philosophically ground our conceptualisation of the existential dimension of ESE teaching content, we draw inspiration from Karl Jaspers (1883–1969). As a German philosopher writing at the beginning of the last century, Jaspers formulated a distinctly existential philosophy inspired by Kant and Kierkegaard (Jaspers 1971). As such, he developed a conceptual framework for understanding the world and how we as humans (subjects) acquire knowledge about our world (the object).

The reason to choose Jaspers' work as a philosophical ground is that we, as ESE researchers working within the German Didaktik tradition, find it productive for the educational purpose of this article. As Kant heavily influenced Jaspers' philosophy, his existentialism aligns well with the Enlightenment tradition and ideas of Bildung, which undergirds the German Didaktik tradition in educational research (see Klafki 2000). As an active scholar in Germany before, during and after the Second World War, Jaspers was engaged with the question of the university's role in German society. A crucial question was how the university should be regenerated after the Nazi regime, which had imposed a publication ban on him (Östling 2014). In his book *The Idea of the University*, Jaspers (1965) emphasises the university's academic independence and, inspired by humanistic ideals, he sees a risk in universities being fragmented and reduced to the education of technical specialists (Jaspers 1965; see also Östling 2014). The educational thoughts and humanistic ideals he develops in *The Idea of the University* is grounded in his existential philosophy. His existential philosophy can be described in different ways and is sometimes referred to in a derogatory way as belonging 'to a line of subjectivist reflection' within existentialism (Thornhill 2002, 16). However, our understanding of Jaspers' work is not in terms of 'subjectivist reflection'. On the contrary, we find his existential philosophy educationally productive in illuminating the existential dimension when students encounter ESE teaching content. In Jaspers' work, we find a conceptualisation of how we, as humans, make meaning of our encounter with the world and how this involves a recurring movement between ourselves and the world (Jaspers 1971, see also Gustavsson 2019; Thornhill 2002). From an educational perspective, this is appropriate when considering students' encounters with teaching content. Drawing on Kant, Jaspers explains how we cannot attain a complete and absolute understanding of the world in itself. Although achieving an absolute understanding of the world in itself is impossible, we can develop a deeper understanding by engaging in the practice of philosophising (Jaspers 1971, see also Horn 1993). Such philosophising can be seen as a process where the world

we experience shifts from being a distant object to something that raises questions about our existence. Therefore, when our encounter with the world becomes our own existential inquiry, it offers us a deeper understanding of the world itself (cf. Röhr 2016). However, this process cannot be predetermined, as Jaspers writes: 'The last step on the return to reality must be taken *by each person himself* (sic) in ways that cannot be anticipated' (Jaspers 1971, 81, emphasis in original, see also Grabau 1971). It is important to emphasise that when our engagement with the world escalates into an existential question, it is not about subjectivist reflection nor inward therapeutic dwelling, but about gaining a deeper understanding of the world. In the following, we will refer to this as the Jasperian turn.

We draw on this understanding of Jaspers' philosophy to develop our argument that there is a tension between the existential dimension and instrumentalism. We argue that, when the existential dimension is understood through the Jasperian turn, the tension between the existential dimension and instrumentalism manifests in five aspects of ESE. Thus, as educational researchers, this approach is valuable when considering students' interactions with the teaching content. If the content resonates with the student on an existential level, it can lead to a deeper understanding of the teaching content. For instance, when biodiversity loss, as part of the curriculum, becomes the student's personal inquiry about loss, it facilitates a more comprehensive and meaningful grasp of biodiversity loss (cf. Affifi and Christie 2019). Therefore, the existential dimension of ESE teaching content should not be seen merely as a subjective side of the content or as adding 'existential flavour' to topics like biodiversity loss. Instead, the existential dimension is an integral part of the content, and a deeper understanding of this content requires space for it within ESE teaching practices. This way of conceptualising the existential dimension aligns with Affifi's (2025) description of how ESE teaching can open up sublime experiences for students, not as an add-on to the content, but in students' very encounter with the content itself.

In addition, it is important to remember that even if the teaching content addresses questions of existence, it also has a more traditional schooling side to it, which might function smoothly in an instrumentalised school system (cf. Stevenson 2007b; Tryggvason, Sund, and Öhman 2022). For example, students might study the causes of climate change, estimate greenhouse gas emissions, and work on a project outlining sustainable development goals. This knowledge aspect of the teaching content could align with instrumentalised education, where studying climate change enhances the educational system's output of measurable learning outcomes. According to Jaspers (1971), the knowledge produced by science is important for understanding the world. However, it does not offer a full picture. Hermann Horn (1993) describes Jaspers' perspective on scientific knowledge as follows:

> It is concerned with the particular and not with the general. 'Scientific knowledge cannot set goals for life' (p. 45). It proclaims no valid values. 'Science is also unable to give any answer to the question as to its own meaning' (p. 45). Its motives cannot be scientifically proved (Horn 1993, 722).

Given this perspective on scientific knowledge, the traditional schooling side of ESE might work well in an instrumentalised education, but it has limitations if students are to grasp the content more fully, even though a total and absolute understanding

of the world remains unattainable. What is required is a process in which the world (teaching content) becomes the students' own existential question. But rather than lingering as subjective speculation, the process must always return to the world if a richer understanding is to be achieved (Jaspers 1971; see also Röhr 2016; Yip 2007).

3. A Tense relationship

Grounded in our Jasperian understanding of the existential dimension, this section develops the article's main argument: when the existential dimension of ESE is considered in relation to instrumentalism, a tension between the two manifests in five aspects of ESE: (i) the aim of education, (ii) the role of knowledge, (iii) the role of students' prior experiences, (iv) the role of emotions, and (v) the role of time. These five aspects neither stem from empirical analysis nor from Jaspers alone, but are the backbone of the educational-philosophical argument we develop in this article. Thus, the method of developing the argument is difficult to separate from the content of the argument (cf. Ruitenberg 2009, 318). In developing this argument, we have followed two methodological principles: *fair-mindedness* and *transparency* (Rosenquist 2011). In line with Rosenquist (2011), we strive for fair-mindedness by presenting others' theoretical positions and arguments responsibly, without misrepresenting them to advance our own argument. In our pursuit of transparency, we explicitly state at the outset that this article develops an educational-philosophical argument, meaning that we do not conceal the argument's stance nor disguise it as an empirical analysis. Moreover, in developing our argument, we are guided by what Vokey (2009) characterises as the generic virtues of theoretical frameworks in educational philosophy: intelligibility, internal coherence, plausibility, and success in relation to their purpose. This means we aim to develop a clear and coherent argument relevant to the ESE research field that offers insights into the existential dimension of ESE.

We argue that addressing the tension manifesting in these five aspects of ESE is vital for enabling ESE in today's education system to foster deep and meaningful connections between students and the environmental and sustainability challenges they face now and in the future. For policymakers, researchers and teachers to navigate these tensions in ESE, it is essential to understand which tensions exist and where they occur. Such a 'map' can support policymakers, researchers, and teachers in making well-founded judgments when developing policy recommendations, proposing teaching models, or making didactic decisions in ESE practice.

Moreover, we agree with Vare's (2020) argument that by identifying contradictions within an education system, it becomes possible to address them and they can become 'prerequisites of – rather than barriers to – learning' (Vare 2020, 78). With this in mind, we outline our argument that there is a tension between the existential dimension of ESE teaching content and instrumental education, and that this tension manifests in five aspects of ESE.

3.1. The aim of education

The characteristics of strong instrumentalism lie not in its aims themselves, but in how those aims are achieved and by whom they are determined. As described above, strong instrumentalism expects education to function like a well-oiled machine that

can produce the desired outcomes (Todd 2022). Biesta describes the instrumentalisation of education as a 'situation where the school is an instrument and nothing but an instrument for what society wants from it' (Biesta 2022a, 330).

In strong instrumentalism, the aim of education is decided externally, whether it be to produce social outcomes (such as equality) or economic outcomes (such as a capable workforce) (cf. Todd 2022). Paradoxically, if education took the opposite approach and let the aims instead be decided by each individual, instrumentalisation would still prevail, but just on an individual level, where education becomes a tool to meet students' preferences and the customers' needs (Biesta 2022a). Given this, the key feature of instrumentalism is its tendency to keep the aim of education open—not in the sense of becoming an open-ended exploration, but open in the sense that when education is seen as a tool, it can serve any aim. Therefore, it is not surprising to see the vast success instrumentalism has achieved in educational systems around the globe, as it leaves the aim of education open for any hegemonic constellation to decide (cf. Lingard 2022; Rizvi and Lingard 2010).

While the aim of education is open within strong instrumentalism, this means that the aim could be sustainable development. The concept of 'education for sustainable development' (ESD) has been criticised for relying on an instrumental understanding of education, where Bob Jickling's (1992) critique from the early 1990s is perhaps the most famous one. In the often-cited article 'Why I don't want my children to be educated for sustainable development', Jickling (1992) argues that an education that is used as an instrument toward a predefined meaning of sustainable development is not educational and '[t]he very idea is contrary to the spirit of education' (p. 8). Instead, Jickling writes: 'To talk of educating *for* sustainable development is more suggestive of an activity like training or the preparation for the achievement of some instrumental aim' (Jickling 1992, 7). In line with Jickling, we therefore argue that the issue with strong instrumentalism in education does not lie in the objectives, or in them needing to be differently formulated, but in the fundamental principle of utilising education as a tool for particular political, social, or economic aims.

If we consider the aim of education from the vantage point that ESE teaching content has an existential dimension, we see something different. Following the idea of the Jasperian turn outlined above, the aim of education can be understood as attaining a richer understanding of the world, even if absolute understanding is unreachable. However, this does not mean that the aim can be rationally planned and controlled in detail. As Jaspers argues: 'The planning of scientific teaching cannot be decisively determined by science itself or by an understanding of the specific scientific disciplines, but is originally subordinated to an altogether different understanding, i.e. knowledge of the essence of things' (Jaspers cited in Horn 1993, 725). This argument is grounded in his understanding that education revolves around 'helping the individual to come into his own in a spirit of freedom and not like a trained animal' (ibid. p. 727). As we see it, when teaching content, such as the ongoing climate crisis, shifts from being merely an object that produces learning outcomes to an existential question for the student, the aim of education takes on a different meaning from that within instrumentalism. As Blanche Verlie (2019) accurately asks: 'What do we do when environmental education works?' One answer she outlines is that education can serve as a space where students and teachers learn to live with

climate change. It is essential to emphasise that this educational goal is not about preparing students with specific skills to accept climate change passively. As we read it, the emphasis is on live *with*: 'Learning to live-with climate change is an existential and ontological task of composing not just new lifestyles, but new conceptions of what life is, what it means to live, and how to live well' (Verlie 2019, 759).

Therefore, we argue that when the existential dimension is taken into account, the aim of education can not be left open to be filled by any aim, as it is within instrumentalism. Instead, we argue that when the existential dimension of the teaching content is taken seriously, the aim of education becomes an *educative openness.* An educative openness places the process of education in itself as the aim. This idea has been echoed throughout the history of educational thought. John Dewey (1897, 1938) drew on biological terms to describe it as growth, where education is seen as life itself, while the German Didaktik tradition, stemming from the vocabulary of the Enlightenment, describes it in terms of Bildung and places human self-determination and emancipation from authorities as its centrepiece (Hopmann 2007). With educative openness as the aim, education is not merely a means to achieve growth as a learning outcome but a process that aims to support students' growth, where the specific outcome of that growth cannot be predetermined (cf. Todd 2022).

Educative openness is therefore a form of openness directed towards growth. To follow Dewey's biologically inspired vocabulary, one could say that when something grows, it stretches out more densely and richer into the world. With growth comes more sensible and fine-tuned connections to the surroundings. As the branches of a tree stretch out in the world, the specific path a branch will take cannot be decided beforehand but must be developed in tandem with its particular surroundings. Here, a fixated path would hinder the growth itself. For students encountering the existential dimension of environmental issues, such growth would imply richer and more attentive ways to exist with others in a world facing multiple environmental crises (cf. Verlie 2019).

In brief, we argue that when a strong instrumentalism leaves the aim of education open to influence by any social, political, or economic interest, it effectively paves the way for a relativism where anything goes regarding the purpose of education. An ESE that engages with the existential dimension cannot leave the aim of education open to serve any purpose but instead invests it with a specific openness, namely the educative openness of growth and Bildung. From a broader perspective, the differences between instrumentalism and the existential viewpoint relate not only to how aims are conceptualised but can also be seen as fundamentally different views of what education *is* (cf. Jickling 1992).

3.2. The role of knowledge

Following our outline above on instrumentalism in education, the role of knowledge becomes relatively straightforward as something that needs to be helpful in the input-output process. This means that the knowledge that students learn, and are supposed to learn, needs to be a productive part of the well-oiled machinery chain that characterises strong instrumentalism (Todd 2022). Thus, knowledge is helpful in instrumentalism if it contributes to making education 'work'. This can be seen in how knowledge needs to be risk-free. Biesta (2016) explores this in his seminal work *The*

Beautiful Risk of Education, where he describes the persistent tendency to remove risks from education and teaching. Knowledge that is developed in (instrumental) education, Biesta argues (2016), needs to be easy to measure and transparent – in the sense that it should be predictable what students are learning and when they have learned it. This is why, Biesta points out:

> the task of schooling is more and more being constructed as the effective production of pre-defined 'learning outcomes' in a small number of subjects or with regard to a limited set of identities such as that of the good citizen or the effective lifelong learner (Biesta 2016, 1–2).

Biesta's critique of instrumentalism is grounded in the idea that education can interrupt the instrumental processes of reproduction and instead open up for students to come forth as unique subjects among others (Biesta 2022b). When we place these arguments in an ESE context, it becomes clear that ESE is not exempt from the instrumental role of knowledge in terms of pre-defined learning outcomes and efficiency. Somewhat surprisingly, ESD policy might even be considered one of the main drivers in this tendency to instrumentalise education. In an analysis of the policy development of Sustainable Development Goal 4 (Quality education), Grek (2022) shows how the policy works on SDG 4 played a key role in a policy shift from measuring input in schooling, such as 'teachers' salaries, or length of the school year' to measuring students' learning outcomes. SDG 4, Grek shows, 'became a prime site of the production of this radical reconceptualization of educational measurement and policy with implications across the world' (Grek 2022, 446). Thus, in an instrumentalised ESE, knowledge plays a role in the input-output process. To fulfil this role, knowledge must be transparent and easy to measure.

If we instead consider the existential dimension of ESE teaching content, knowledge plays a different role. Following our Jasperian-inspired understanding of the existential dimension in ESE, knowledge has a role as a process or movement. As we described above, for students to gain a deeper understanding of the world, they must turn it back to themselves as an existential question (Jaspers 1971; see also Röhr 2016). This is what we call the Jasperian turn. For example, if students are studying biodiversity loss, it is from this vantage point that it is not enough to understand the scientific facts about species loss and its consequences. To be able to get a richer and fuller understanding of the meaning of biodiversity loss, the teaching content also needs to be addressed as an issue of what it means to exist, and how to exist together with humans and other beings in the world (cf. Affifi and Christie 2019). As Jaspers (1971) describes, the process of philosophising differs from the scientific inquiry, as it 'demands a *different thinking,* a thinking that, in knowing, reminds me, awakens me, brings me to myself, transforms me' (Jaspers 1971, 12, see also Thornhill 2002, 69). This should not be interpreted as a movement that aims to turn teaching content into therapeutic questions on how to cope with the teaching content. Instead, turning the content into an existential question is, ultimately, a direction towards the world and towards a richer understanding of the world. Another word for this process is *Bildung*. Therefore, we argue that knowledge has the role of a Bildung process when considering the existential dimension of ESE.

The existential movement between teaching content and student (object and subject) can, with a Bildung vocabulary, be described as a process that 'opens up a world for the student, thus opening the student for the world', to use the words of the Didaktik theorist Wolfgang Klafki (quoted in Hopmann 2007, 115). As we see it, there is a clear existential vein in the German/Nordic Didaktik understanding of Bildung. Writing on Didaktik and Bildung, Uljens (2023) reminds us that education 'explores what *becoming* human means, rather than limiting itself to establishing what *being* human means' (p. 14, for a critical discussion see Blenkinsop and Wilhelmsson 2024). Also writing on Bildung within this Didaktik tradition, Rucker describes how 'educative teaching under the claim of *Bildung* is characterised by the fact that students are searching for orientation in questions of a good life and living together in order to find their own answers' (Rucker 2023, 73). Thus, in a Bildung process, the teaching content is transformed from being the teacher's or the school's to becoming the student's own content in their search for a good life with others. This is the Jasperian turn, where the content turns into the student's own question in a process of grasping the world more fully.

Similar ideas are present in current ESE research, though not with an existentialist framing. The idea of a subjective or personal side of the content has been developed in different ways in previous ESE research. For instance, when Öhman and Sund (2021) formulate the notion of sustainability commitment, one of the key components is that students can understand their role in the teaching content. Without such anchoring in the student's own lives, knowledge about ES issues is reduced to something 'out there,' making sustainability problems somebody else's problem (see also Lundegård 2018; Öhman and Öhman 2013). The need for students to establish other kinds of relations to the teaching content is also underscored by Stevenson (2007b) when he outlines the gap between traditional schooling and what is required in environmental education. Our Jasperian-infused understanding of the role of knowledge in ESE adds to these contributions by providing a philosophical and existentialist framing of the movement when teaching content becomes the student's own question.

In brief, when instrumentalism is contrasted with the existential dimension of ESE content, the different roles knowledge is assigned becomes apparent. From an instrumental perspective, knowledge is considered a well-defined and measurable object that students are expected to acquire when education functions properly. From an existential perspective, knowledge is viewed as a Bildung process that broadens the student's understanding of the world.

3.3. The role of students' prior experiences

When education is structured around a rationale of externally defined goals, a key question is what role students' experiences have in education. Following Todd's (2022) theorisation, strong instrumentalism is at direct odds with experience in terms of sensory experiences. With reference to Osberg and Biesta, Todd (2022) writes: 'This functional and mechanistic understanding of education speaks not a language of experience, sensibility, or relationship, but of outputs, delivery, and implementation' (p. 334).

As we see it, one reason why instrumental education does not speak the language of experience but rather that of delivery is that education is caught up in a conduit metaphor of teaching. The concept of conduit metaphor was initially developed by linguist Michael Reddy (1979) to describe a way of thinking about communication as a conduit or pipeline where meaning is sent and received. As Reddy points out, the English language is full of expressions and phrases where communication is viewed as a conduit, with the listener extracting what has been sent. If teaching is caught up in a conduit metaphor, it suggests that it is the teacher's role to transmit the content to the students and for them to open the package. Reddy writes: 'After all, receiving and unwrapping a package is so passive and so simple what can go wrong? A package can be difficult or impossible to open. But, if it is undamaged, and successfully opened, who can fail to find the right things in it?' (Reddy 1979, 289). We argue that when teaching is seen as a conduit within instrumental education, students' previous experiences become redundant. The teacher can wrap the content differently to better 'come across,' but it remains a one-way process of transmitting and receiving a fixed message. The students' previous experiences may be crucial for their understanding, but they neither change the process nor what the teacher communicates. What matters most is what students should achieve, regardless of their prior experiences. In strong instrumentalism, the primary achievements seem to focus on employability (Ruitenberg 2022; Säfström 2022).

Considering the existential aspect of ESE teaching content, students' prior experiences take on a different role. Inspired by Jaspers, we argue that when ESE teaching content becomes the student's own existential question (the Jasperian turn), it must involve the student's prior experiences. If the teaching content fails to connect with the student's prior experiences, it is difficult to see how it could become the student's own. It is through engaging and intertwining the student's prior experiences that the content can become *their own*, rather than someone else's. As Ghaemi (2007) describes Jaspers' idea: 'Each person has some aspects to his/her personality, ideals, values and ways of thinking that are unique to him/her. Jaspers describes this uniqueness of individuals, which other existentialists later called Eigenwelt, as an essential aspect of human nature' (p. 77). Although students as a group share many similar experiences, each individual's collection of prior experiences is ultimately unique and genuinely their own – if the term 'individual' is to have any real meaning. This does not mean that students' prior experiences should be regarded as inherently good or right; students, like the rest of us, are embedded in cultural practices, power relations, and norms. What the Jasperian turn highlights is that students' prior experience cannot be ignored if the content is to be truly their own.

Here, we want to emphasise that this is not simply about students addressing an ESE issue on an individual level; instead, it is a movement where the content is more deeply connected with the students' prior experiences. For example, when the teaching content 'climate change' shifts and becomes the student's own question, touching upon issues such as 'what it means for me to exist in a warming world alongside others', then it is a process that involves the student's previous experiences of living in a world with others (cf. Verlie 2019).

As we examine previous ESE research, we observe examples of how students' encounters with ESE teaching content evoke questions requiring them to reconsider their position and previous experiences. For instance, in exploring the existential strand of environmental and outdoor education, Blenkinsop and Ford (2018) write: 'Coming to recognize the natural world as vibrant, agential, and colonized at the same time results in learners having to face themselves, as humans, as members of a particular culture, and as individuals' (p. 327). Therefore, Blenkinsop and Ford emphasise how students' encounters with the natural world through environmental and outdoor education can challenge them to confront their own position and previous understandings of what it means to coexist with other beings.

Moreover, Affifi and Christie (2019) highlight how ESE can explicitly address students' prior (existential) experiences, such as their experiences of loss. They argue that when Western culture tends to avoid the existential aspects of loss (such as death, biodiversity loss, habitat destruction, etc.), the educational role of these experiences might diminish. However, incorporating students' experiences of loss into ESE can be challenging, as it also raises questions about the teacher's own mortality:

> To address this loss, educators will need to face their own mortality, the death of those around them, the destruction of animals, plants, and places, the extinction of species, and looming always on the horizon, the possible obliteration of a functional biosphere (Affifi and Christie 2019, 1144).

Therefore, considering the existential dimension of ESE teaching content, students' prior experiences are crucial as they become intertwined with the content when it transforms into their own existential question.

3.4. The role of emotions

The role of students' emotions within an instrumentalised education has a similarly redundant role as their previous experiences. In strong instrumentalism, where teaching is seen as a conduit, students' emotions do not influence the process, the message is delivered regardless of the students' emotional state. Also, when knowledge is seen as an object for students to memorise or acquire rather than something that should influence them existentially, their emotions regarding the content become redundant. Therefore, instrumentalised education aims not to evoke existential questions and processes of growth in the context of environmental crises, but rather to achieve specific outcomes measured by target indicators. In short, from an instrumental perspective, the outcome of education matters, not the process.

However, determining whether the education system has achieved the desired outcome can be challenging at a systemic level (for an individual, it may be easier to know if they obtained the grades, job, or diploma). To determine whether an education system has successfully achieved its goals, the data on outcomes must be both valid and reliable. Only upon evaluating education systems do emotions become a factor in instrumentalism, particularly the students' feelings of motivation. When education systems are evaluated, the students' emotions are used as instruments to produce reliable data.

To give an illustrative example: In OECD's (2023) report on the PISA study, there is concern that students might not be sufficiently motivated to perform their best during the test. To address this potential lack of motivation, the PISA report outlines ways to encourage students to do their best. In the instructions to the PISA test administrators, OECD gives them a script to read aloud to the students at the beginning of the test session:

> This is an important study because it will tell us about what you have been learning and what school is like for you. Because your answers will help influence future educational policies in <country and/or education system>, we ask you to do the very best you can. (OECD 2023, 298).

A similar concern is raised nationally within the Swedish educational system. When Swedish PISA results declined in 2012, the National Agency for Education launched a study to explore whether some decline could be attributed to students' lack of motivation (Swedish National Agency for Education 2015). Therefore, the data used to evaluate the education system's effectiveness might be compromised by students' unwillingness to perform well on standardised tests. In Sweden, one proposed solution to this issue is to give greater weight to the standardised test results in students' grades (and subsequent admission to higher education). Put differently, the solution is to link data production with students' instrumental use of education (Swedish Government Official Reports 2025).

Looking at the existential side of ESE content, emotions have a different role to play. For Jaspers, existential situations can stem from crises and evoke strong affective responses. Such situations can also be openings for the subject's authentic existence and offer opportunities for growth (Ghaemi 2007). This aligns in some aspects with Vandenplas, Van Poeck, and Block (2023) empirical study of the existential tendency in climate change education, which identifies how students can experience an existential moment when encountering climate change as teaching content. An existential moment 'involves an *unplanned, unexpected and not yet reflected strong emotional experience* related to the existential dimension of CC [climate change]' (Vandenplas, Van Poeck, and Block 2023, 1737). It is an emotional experience that is both intense and poignant. In Verlie's (2019) study of how her students emotionally responded to climate change, she identified six common responses: anxiety, frustration, overwhelmed, grief, guilt and hope. Drawing on this, she highlights the need for affective adaptation in education, not just in terms of resilience or coping with climate change, but as a metamorphosis that can be tricky and painful and is 'an openness to emotional challenges, a capacity to endure, live through, welcome and encourage changes and to guide others in their efforts to bear worlds' (Verlie 2019, 760). Thus, by highlighting the existential dimension of ESE teaching content, we see that emotions are crucial in students' encounters with the content. The encounter with the content can evoke strong emotions and a poignant experience of bodily disturbance (Vandenplas, Van Poeck, and Block 2023). Furthermore, their encounter can be viewed as part of an existential confrontation with the world that challenges one's own existence and prompts questions about how to live well with others (Verlie 2019).

Thus, from an instrumental perspective, it is the utility and impact of a specific emotion (motivation) that becomes important when gathering reliable data about

the education system. From an existential perspective, emotions are seen as woven into the very fabric of students' genuine and authentic interactions with ESE teaching content. In that sense, it is not limited to one emotion but can range from anxiety and grief to frustration and hope (cf. Verlie 2019).

3.5. The role of time

Within strong instrumentalism, time has a direction toward predefined goals and revolves around efficiency questions. In her outline of a strong instrumentalism in education, where the focus is on deliverable results and outputs, Todd (2022) describes the instrumentalism in machine-like terms: 'And like all mechanisms, education thereby needs to become well-oiled, efficient, and smooth-running' (Todd 2022, 334). As the question of time is actualised in the efficiency of education, it follows that time must be measured so that none of it goes to waste (cf. Wildemeersch, Håkansson, and Læssøe 2023). In this instrumentalism, time in education and teaching becomes a scarce resource measured against the predefined goals. As Ruitenberg (2022) describes, 'the politics of instrumentalism is impatient' (p. 289) because instrumentalism is short-sighted, where the desired outcome must be produced in the near future. However, even if the shortsightedness and impatience were overcome, a long-term instrumentalism in education would still frame education as preparation for what comes after, failing to make it about the temporal now. This is not a new problem, but something that Dewey already recognised as a problem in education in 1893 when coining the often-used quote: 'Cease conceiving of education as mere preparation for later life, and make of it the full meaning of the present life' (Dewey 1893, 660).

For ESE, the questions become whether the teaching practices are efficient and whether they provide reliable information about their efficiency. This also means that in relation to other subjects and teaching content, sustainability problems must earn their place in curricula and syllabuses, both as relevant *and* efficient in reaching the predefined goals. Due to this logic, a stuffed curriculum becomes a temporal problem for teachers and students.

Furthermore, policy initiatives and ideas about key competencies exemplify an instrumentalism widespread in ESE policy and research. Concepts of key competencies focus on future educational outcomes rather than the learning process and are 'based on the idea that we can predict what is needed in the future' (Öhman and Sund 2021, 2). Also, as Ruitenberg (2022) points out, even if instrumental education achieves the desired outcome today, it is not guaranteed to do so tomorrow; instruments can become obsolete or 'be put to an unforeseen use' (p. 289).

Turning to the existential dimension of ESE content, we see that temporality appears differently. From Jaspers' perspective, education lies at the intersection of the past, present and future, and he argues that no single time horizon should be prioritised over the others (Horn 1993; see also Nixon 2016). However, the relationship between the past and the future passes through the present. In outlining Jaspers' argument, Horn (1993) writes: 'It is only through concentration on the present moment accepted with a spirit of responsibility that the past and future can come truly into their own' (p. 726). This means that, from an existential perspective, time cannot be understood in the linear, mechanistic terms of instrumentalism. Instead, there is an intricate

relationship between the past, present and future that manifests in education, where the role of time must be understood in relation to the aims of education. As described above (in section 3.1), we argue that, when the existential dimension is taken into account, the aim of education must be understood as educative openness oriented towards growth and Bildung. In both the Deweyan notion of growth and within the German Didaktik notion of Bildung, educative processes stretch beyond the test, the course syllabus and the school year (Dewey 1893; Klafki 2000). Instead, the boundary of growth must be understood as constituted by life itself, as it is for any living being. Therefore, the notions of growth and Bildung must be understood in terms of a temporal openness in which learning and education have no definitive end. From this existential perspective, we are never fully finished understanding our world because complete understanding is unreachable, and there is no temporal boundary other than life itself.

Nevertheless, at the same time, the environmental and sustainability problems that societies face are characterised by urgency – urgency is inherent to some environmental and sustainability problems. When considering the current climate change, urgency is perhaps the main characteristic of the problem, which IPCC emphasises:' There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all' (IPCC 2023). For education, and particularly ESE, this means that the teaching content carries its own urgency that cannot be peeled away, as it is inherent to it (Wildemeersch, Håkansson, and Læssøe 2023; Verlie 2019). Even if the teaching content, such as climate change, comes with an urgency to act, it is not necessary to deduce that education should revolve around immediate action, as Bergdahl and Langmann (2022) describe:

> Hence, despite the need for immediate political action, a central educational question is how to acknowledge the existential dimensions of climate change and yet offer a 'middle ground' where both adults and children are given time and space to challenge the 'passive gaze' of our time and to publicly and collectively engage in far-reaching visions about more sustainable futures (Bergdahl and Langmann 2022, 416).

Therefore, the urgency that existential sustainability issues impose on ESE does not need to be expressed as an educational urgency. Some ESE scholars draw this even further, Wildemeersch, Håkansson and Læssøe (2023) argue that 'ESE requires a pedagogy that provides for alternative arrangements of time and space, while enabling educative moments interrupting a linear flow of time […]' (Wildemeersch, Håkansson, and Læssøe 2023, 1417). Such an interruption, they argue, could open up ESE to slowness and hesitation, in contrast to efficiency and decisiveness (see Wildemeersch 2018; see also Payne 2014).

Building on these conceptualisations, we assert that time serves a dual function within existential and instrumental framings. From an instrumental point of view, the short term is evident in the 'impatience of instrumentalism', as Ruitenberg describes, and its focus on efficiency. Conversely, the existential perspective on ESE emphasises the urgency of environmental crises as a reflection of the short term. Meanwhile, the long-term outlook is reflected in how instrumentalism uses education to prepare individuals for life after formal schooling. From an existential perspective, the long-term view of time seems to be more about slowness and hesitation, where education is a place that gives time (cf. Bergdahl and Langmann 2022; see also Di Paolantonio 2016).

4. Discussion

In this paper, we argue that ESE is caught between the existential dimension of its content and the instrumentalisation of the educational system within which it operates.

We build our understanding of the existential dimension in ESE on the philosophy of Karl Jaspers (1971). By drawing on his work, we specify what it means when teaching content becomes an existential question for the student, the Jasperian turn. With this theoretical grounding, we can avoid framing the existential dimension as an internal dwelling or mere subjective speculation. What makes the Jasperian turn valuable for us as educational researchers is that it highlights the process by which teaching content turns into the student's existential questions and how this is a process of gaining a deeper understanding of the world (i.e. the content). Although Jaspers' existential philosophy is much broader and more complex, this philosophical foundation is productive and fruitful for ongoing discussions and research about the existential dimension in ESE.

Furthermore, we explain the relationship between the existential dimension and instrumentalism as a tension that guides ESE in different directions, rather than as a contradiction, which helps us avoid falling into absolutist and dichotomous thinking. Following Stevenson's (2007a) caution regarding ESE and Ruitenberg's (2022) regarding instrumentalism, dichotomous thinking is neither correct nor educationally 'productive'. With this said, a problem which ESE faces is the strong (and possibly hegemonic) position that instrumentalism has taken in many educational systems. Consequently, it reduces the space for the existential dimension of ESE and thus overlooks a fundamental part of the teaching content.

A key question for ESE is how and where the existential dimension of its teaching content can be accommodated. To put it succinctly: In what teaching practices and school structures within an instrumental system can teachers and students jointly and sincerely address the existential questions that environmental crises evoke? Identifying these gaps and opportunities may be challenging for teachers, policymakers, and researchers. However, opening up for the existential dimension in classrooms with students raises ethical concerns. As described above, the existential dimension of the teaching content can elicit strong emotional responses among students (Vandenplas, Van Poeck, and Block 2023; Verlie 2019). This means that there is an ethical responsibility on the teacher to know how and when to open up the existential dimension in teaching, as it must be done carefully and 'in view of students' wellbeing' (Vandenplas 2025, 22). We hope that our contribution provides support when seeking opportunities to incorporate the existential dimension of ESE within an instrumentalised system. Clarifying the tensions and their manifestations can be a first step in addressing them and finding ways to approach and engage with the existential depth of ESE teaching content. Our contribution may hold different significance for teachers, policymakers, and ESE researchers. For teachers, identifying opportunities to include the existential dimension may be part of their didactic choices when planning lessons and addressing topics such as the climate crisis. Also, through exams and tests, teachers indicate to their students what kind of knowledge and learning processes are valued in ESE, even if their autonomy varies between countries and education systems. For policymakers, our contribution might help them become more aware of how strong instrumentalism

impacts education, especially ESE. Highlighting the tensions within ESE could increase their awareness of the effects of instrumentalism, making them see what educational opportunities are lost due to the heavy focus on accountability, transparency, and target indicators. Lastly, for ESE researchers, our article offers a philosophical ground for the existential dimension in ESE and a theoretical clarification of its relation to instrumentalism. It contributes to the ongoing discussion about the relationship between ESE and schooling (cf. Stevenson 2007a). Also, we see a risk that ESE researchers develop models, approaches, and guidelines that aim to incorporate environmental and sustainability issues into instrumental education without recognising underlying tensions. That is to say, the models, approaches, and guidelines developed by ESE researchers may become detached from, and potentially irrelevant to, the instrumental reality teachers and students face. Our contribution provides theoretical support to prevent these risks and enhance the development of ESE resources that are theoretically grounded and practically relevant to teachers' realities.

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Author contributions

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