Material Green Entanglements: Research on Student Teachers' Aesthetic and Ecocritical Engagement with Picturebooks of Their Own Choice

MARNIE CAMPAGNARO ⓘ AND NINA GOGA ⓘ

This article reports on a course module designed to promote an ecocritical and new materialist approach to children's literature and to support student teachers' skills regarding sustainability. The course module was offered in autumn 2020 and was completed by 260 students of children's literature with no previous scholarly knowledge about ecocriticism prior to the course. Building on basic ecocritical theory, posthuman perspectives on humans' intra-actions with material entities, and the students' previous experiences with didactic tools for developing sustainability competencies through literature, the course module aimed to critically contribute to the implementation of the UN's Sustainable Development Goals in teacher education. The research material consists of fifty-three video assignments by groups consisting of three to four students. The material has been analysed in line with the methodological implications of video content analysis, focusing on three aesthetic and material entanglements – that is, entanglements with picturebooks, with peers, and with the environment.

Key words: *green materialism, aesthetic, ecocriticism, picturebooks, video content analysis, teacher education*

Contemporary picturebooks show a growing interest in the entanglements between humans, other life forms, and the environment. These picturebooks often offer stories that are characterised by a high aesthetic quality while at the same time inviting young readers to reflect on urgent and pressing issues like inequality, loss of biodiversity, and climate change. These new directions in children's literature consequently challenge the teaching of children's literature on all educational levels. For this reason, the study of contemporary children's literature needs not only to be informed by new theoretical perspectives like

ecocriticism, but also to explore and develop the methodological tools and teaching practices needed to prepare students to address these urgent issues.

This article reports on the results of a course module designed to promote an ecocritical and new materialist approach to children's literature. The aim of this article is to present and discuss how the students engaged critically with children's literature of their own choice in a video assignment designed to increase their aesthetic and ecocritical skills and to allow them to reflect on the potential of picturebooks for discussing Sustainable Development Goals (SDGs) in their future didactic practices.

Building on basic ecocritical theory and theoretical perspectives on intra-action, our study aims to critically discuss the implementation of the UN's SDGs in teacher education. The material consists of fifty-three video assignments by groups consisting of three to four students. The research material has been analysed in line with the methodological implications of video content analysis focusing on three sorts of entanglements bodily, haptic, and conceptual entanglements with picturebooks, with peers, and with the environment.

We will first present the theoretical framework and some background information about the course design. Then, the three types of entanglement observed in the students' video assignments will be discussed and supported with a closer look at two cases. Finally, we will reflect upon the potential of this research for our future teaching.

THEORETICAL PERSPECTIVES

Several steps must be taken to present and discuss how students engaged critically with children's literature of their own choice in a video assignment designed to increase their aesthetic and ecocritical skills and to allow them to reflect on the potential of picturebooks for discussing SDGs in their future didactic practices. The first step is to present the theoretical backdrop of the course module, which may be divided into two parts: one that was both the overarching idea of the whole course module and was taught to the students in the lessons, and one that motivated the teachers' course design, including the way the lessons were carried out and the assignment was framed and presented. To prepare for the course module, the students were asked to read articles presenting and applying classic ecocriticism and a children's chapter book suited to exploring and discussing key ecocritical perspectives. Ahead of the exploration and discussion of the chapter book, the students were also introduced to the basic idea of ecocritical literature conversations (Goga and Pujol-Valls; Campagnaro and Goga), which in turn was tested by the students themselves during the lesson. Hence, the lessons were designed partly as a theoretical lecture and partly as a didactic laboratory. This mixture, and the way it was carried out, was motivated by key posthuman knowledge (Braidotti) and new materialist approaches to children's literature (García-González and Deszcz-Tryhubczak), both of which encourage creative experimentation emphasising acts of co-shaping, process, and

transformation. This process of co-shaping also links to the Baradian neologism 'intra-action' (Barad 33), which differs from interaction in that it destabilises discriminatory binaries and emphasises the mutual constitution of agencies. '[T]he notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action' (33). In the case of our work, creative experimentation is reflected in the ways students became entangled with picturebooks, peers, and the environment.

The lecture on ecocriticism aimed to present the key ecocritical ideas to the students and to provide them with a conceptual toolkit appropriate for ecocritically analysing and thinking about children's literature. More explicitly, the students were introduced to Glotfelty's definition of ecocriticism as 'the study of the relationship between literature and the physical environment' and as 'an earth-centered approach to literary studies' (Glotfelty xviii). They also became well acquainted with Garrard's elaboration of Glotfelty's definition as 'the study of the relationships between the human and the non-human, throughout cultural history and entailing critical analysis of the term "human" itself' (Garrard 5). In addition, an adaptation of Glotfelty's key questions for an ecocritical inquiry (Glotfelty xix) was presented and explained. The adaptation consisted of the adjustment of the questions to target picturebooks instead of literature in general. Hence, an ecocritical examination of picturebooks was explained as a critical study of how nature is represented verbally as well as visually, what role the physical setting plays in the plot of the picturebook, whether the values expressed in the picturebook are consistent with ecological wisdom, and in what ways and to what effect the environmental crisis seeps into the picturebook.

To illustrate how to engage with the adapted ecocritical questions when reading and studying children's literature, the relevant lesson concentrated on Collodi's story about Pinocchio. The story of Pinocchio is the story of how a piece of wood turns into a human being, after being transformed into different species (for instance a donkey). These metamorphoses call for both perspectives on human–plant–animal relationships and posthuman perspectives on engineered bodies where the borders between humans, technology, and matter are blurred or challenged. We may say that the story pays 'attention to relationality among "parts," distributed agency, and decentering of the human as agent' (Truman 4). Thus, it retrains, as Braidotti puts it, 'readers to think outside anthropocentric and humanistic habits' (133).

While the students also were experiencing ecocritical literature conversations with the eco-fantasy novel *The Ice Sea Pirates* (2015) by Swedish author Frida Nilsson, the framework of the conversations was motivated and shaped by posthuman ideas about collaborative non-competitive sharing, meaning making, and knowledge production, and about keeping explorative and experimental experiences collective, open, multiple, and non-hierarchical (Braidotti, 146–8). Consequently, the conversations where students engaged with children's literature and each other, and later also with the selected environments of their left-alone-conversations, had the potential to challenge the ideas of the knowing subject as Man, or Anthropos alone, and to create what Braidotti refers to as

'a more complex assemblage that undoes the boundaries between inside and outside the self, by emphasizing processes and flows' (45–6). This assemblage constitutes a 'new collective subject, a "we-are-(all)-in-*this*-together-but-we-are-not-one-and-the-same" kind of subjectivity' (54). Being 'all-in-this-together' has some ethical implications. It requires that we can interact, support, respect, and respond to one another (52) or practise an affirmative ethics.

By arranging ecocritical literature conversations that are open for students to experience, explore, and undo various boundaries by emphasising processes and flows, we also aimed to respond to García-González and Deszcz-Tryhubczak's call for affective engagements within knowledge production that make 'the participants think with commitment to one another, to the texts they study and the world around them' (54). These theoretical ideas and perspectives not only framed the outline of the lessons, but also influenced and motivated the guidelines of the students' task and were crucial for the framework of the analysis of their video assignments.

EDUCATIONAL CONTEXT AND COURSE DESIGN

The course module reported on in this article belongs to the academic course Children's Literature: History, Theory and Reading Education at the University of Padua. The children's literature course, which is part of the didactic offering of the single-cycle degree in primary teacher education (five years), prepares the professional profile of both preschool and primary school teachers. They study subjects ranging from general teaching to childhood pedagogy, from the foundations of music to children's literature, from modern and contemporary history to developmental and educational psychology. Consequently, it is relevant to offer students didactic modules that are also able to foster their soft skills and prepare them for sustainable and social justice challenges. According to the UN, such preparation 'requires participatory teaching and learning methods' to 'motivate and empower learners to change their behaviour and take action for sustainable development' (UNECE). This is the reason why a new didactic course module was specifically designed within the course on children's literature. To demonstrate the acquisition of the skills embedded in the module, the students were asked to submit a five-minute collaborative video assignment promoting an aesthetic and material engagement with a selected picturebook appropriate for participatory interactions with topics emphasised in the seventeen SDGs. Additionally, the assignment specifically asked the students to analyse and interpret in groups the selected picturebook from an ecocritical perspective and to design an engaging eco-didactic project for pupils aged three to ten.

Although the assignment was not mandatory, 208 students chose to participate in and complete the video assignment. The 208 students were divided into fifty-three groups of three or four members each. The didactic activity related to the assignment was divided into five phases. In the first phase, each member of the group selected three picturebooks to read and discuss with the

other group members. Although there were no specific limitations regarding the selection criteria, the students were already familiar with a large and varied corpus of picturebooks and possessed analytic skills in how to engage with and explore children's literature. In the second phase, students discussed and selected the picturebook that best fitted the ecocritical goals, expectations, and aesthetic sensitivity of the group. In the third phase, they were asked to identify and report on the most qualifying aspects of the picturebook, focusing on verbal and visual strategies and connecting them to an ecocritical analysis. In addition to conducting the analysis according to the aesthetic and ecocritical framework shared with them during the plenary lectures, the students were supposed to also consider the material aesthetic dimension experienced in the hands-on ecocritical literature conversation. In the fourth phase, students elaborated a written draft to highlight the main relevant aspects of what had been discussed during the previous phases. In the fifth phase, students recorded a five-minute video according to the following scheme: three minutes for the book analysis, a brief description of the plot, and a selection of the most relevant aspects of their ecocritical reflections and SDG foundation, focusing on two or three doublespreads; two minutes for the presentation of their eco-didactic project.

METHODOLOGICAL APPROACH AND MATRIX DESIGN

To analyse the students' video assignments, we used a qualitative research approach based on content analysis (Hsieh and Shannon) and video analysis (Fischer and Neumann). Although content analysis and video analysis are characterised by their stepwise procedure and presumably transparent and objective qualities, we would like to note that we are aware, as pointed out by García-González and Deszcz-Tryhubczak, that '[w]hat we do as researchers intervenes with the world and create[s] new possibilities' (53) and that 'whenever we collaborate with our colleagues or when we realise that concepts developed by others make a difference to our own positions' (55) we engage in a sort of diffractive practice. That is a practice that focuses 'on what a given phenomenon, event, or text does and what it is related to, which in turn enables [the researcher] to see its agency and be affected by it' (55).

The following section seeks to present and combine the principles and methodological structure found in both content and video analysis with the more capacious and situated ideas found in diffractive practices. First, we would like to present the basic principles of content and video analysis, and then we will describe in more detail how we designed a matrix for coding data. Finally, we will clarify which data the present study is based on and which data would be interesting to explore further in future projects.

Although content analysis represents a structured and stepwise method for analysing larger corpora of qualitative data, it is also, as pointed out by Hsieh and Shannon, 'a flexible method for analysing text data' (1277), since it is 'a research method for the subjective interpretation of the content of text data through the

systematic classification process of coding and identifying themes or patterns' (1278). Regardless of whether one uses conventional, directed, or summative qualitative content analysis, the analytical process will be similar and follow the same steps (1285). These steps are to formulate the research questions, select the sample to be analysed, define the categories to be applied, outline the coding process, implement the coding process, determine trustworthiness, and analyse the results of the coding process. As emphasised by Hsieh and Shannon, '[t]he success of a content analysis depends greatly on the coding process' (1285).

Additionally, the use of videos in an educational context introduces other relevant aspects that should be considered – for instance, during the coding process. Video analysis involves a micro-analytical mirror-framed observation (Calandra and Rich) and fosters research and teaching skills like focalising, reflecting, and representing. This method implies a specific approach to handling images: images can be seen many times, slowed down, and dissected frame by frame, and researchers should consider the methodological challenges related to this tool, such as how to analyse, select, and present video data (sequences or still photos), or ethical questions concerning privacy and reproduction (Goldman et al.).

Parting from the research question – that is, how do first-year university students engage critically with children's literature of their own choice in a video assignment designed to increase their aesthetic and ecocritical skills and to allow them to reflect on the potential of picturebooks for discussing SDGs in their future didactic practices – the sample to be analysed was the fifty-three video assignments and the overarching focus was the possible ways in which the students engaged critically with children's literature.[1] Prior to the determining of the categories to be applied, the video assignments had been viewed and evaluated at the close of the course module. Hence, based on the first examination of the assignments and on the theoretical framework of the module, which emphasised aesthetic and ecocritical perspectives, nature awareness, creative and co-shaping experimentation, and dialogue, we decided to create a matrix suitable for coding the following categories (Table 1).

After designing the matrix, we prepared a detailed plan for how and when to revisit the video assignments. Over a period of two months, we alternated between revisiting the fifty-three videos separately and together to question and discuss our coding and findings according to the matrix. This alternation was intended to try to maintain the trustworthiness of the research, but, as mentioned above, collaborating with colleagues may influence our own positions and create new possibilities during the coding process. To keep the data open for these new possibilities, we also noted specific sections or frames in the videos that we thought could be of particular interest and suitable as examples of what we saw crystallising into some prominent findings. Dissecting specific frames in specific video segments represents, as mentioned above, a methodological challenge with respect to the trustworthiness of the research.

When all videos had been viewed and the content coded, we started analysing the results of the coding process. We numbered the findings and

Table 1. The *material green entanglement matrix* used to analyse the video assignments.

book selected	• title • author/illustrator • publisher • year
entanglement with the picturebook	• the picturebook as a background (no interaction) • the picturebook as a witness (simple interaction) • the picturebook as a constructor (strong engagement)
entanglement with peers	• short and linear presentation by each member (one turn) • short and linear presentation by each member (two or more turns) • dialogue in group • hybrid
entanglement with the environment	• indoors • outdoor nature as background (no interaction) • outdoor interaction with nature • hybrid
facts of the plot analysed and interpreted	• a clear critical, aesthetic, and ecocritical approach • traces of a critical, aesthetic, and ecocritical approach • little or no critical, aesthetic, and ecocritical approach
suggested eco-didactic project with focus on	• product • process • dialogue • hybrid

searched for both patterns and particular cases. As pointed out by Sarah E. Truman, a diffractive research practice 'cannot merely pay attention to what *matters* but also need[s] to consider what's been *excluded from mattering*' (6). In the following section, we will focus on the three types of entanglement that we found in the video assignments, being aware that we have *left out* several pieces of data that could have been valuable to include to give an even better idea of the students' achievements during the process of their work. That means that we have *excluded from mattering* a thorough analysis of the picturebooks selected by the students, the eco-didactic project that they were asked to outline at the end of the assignment, and the students' analytical skills as they are displayed when they interpret the specially selected doublespreads. Furthermore, we have not included any information about the selection process and the drafting of the video that the students shared in the designated forum. We hope to be able to include these reports in a future study because they may reveal aspects of the ecocritical dialogue, collaboration, and co-shaping that we assume form the basis of the submitted video assignment.

THREE TYPES OF ENTANGLEMENT: ANALYSIS AND FINDINGS

Before focusing on the three types of entanglement found in the video assignments, we will present a few general observations related to the selected picturebooks and the SDGs that the students decided to focus on in their assignments.

In total, the fifty-three groups selected forty different picturebooks, thirty-one of which were selected by only one group. Thus, nine of the picturebooks were selected by more than one group. The picturebooks that were selected more than once illustrate the variety of the picturebook corpus. Two picturebooks were chosen by four groups: Shel Silverstein's *The Giving Tree* (1964), a true classic in the discussion of an anthropocentric exploitation of nature, and Noelia Blanco and Valeria Docampo's *The Mill Valley* [La valle dei mulini] (2013), which provides readers with an aesthetic sensation and reflection on wind power. Furthermore, seven picturebooks were chosen by two different groups each. These were: Peter Brown's *The Curious Garden* (2009), about how a child transforms a grey city into a green and idyllic world; Thierry Lenain and Olivier Tallec's *What If ...* [Il faudra] (2004), which presents a child's reflections on possible ways to care for the world; Luca Tortolini and Anna Forlati's *La volpe e l'aviatore* [The fox and the pilot] (2017), about an interspecies friendship between a boy and a fox; Terry and Eric Fan's *The Night Gardener* (2014), about an intergenerational friendship and the struggle to make city dwellers aesthetically aware of their environment; Lizi Boyd's *Flashlight* (2014), which follows a young boy on his nocturnal discovery of the surrounding nature; Chris Haughton's *Shh! We Have a Plan* (2014), about the importance of listening to and respecting all living creatures – small ones as well as big ones; and, finally, David Almond and Levi Pinfold's *The Dam* (2018), which reflects on what may get lost in local cultures and folklore when large enterprises transform nature landscapes into sites for human exploitation of natural resources.

Although the large number and diversity of the picturebooks allowed the themes, topics, and artistic styles to be connected to different SDGs, the most frequent SDG mentioned in the video assignments is SDG 15 (Life on land). SDG 15 is mentioned in twenty-seven of the fifty-three video assignments: in nineteen as the only SDG and in eight together with other SDGs, most frequently with SDG 12 (Responsible consumption and production). SGD 12 and SDG 10 (Reduced inequalities) are the second most frequent SDGs, each being mentioned nine times. The reason for the high number related to SDG 15 may be that this is a rather broad goal, which makes it easy to relate to.

In the next sections, we will present the core of our research linked to the three types of entanglement that we studied and analysed.

Entanglement with picturebooks

We identified three overall degrees of including and engaging with the selected picturebook. The first degree refers to those groups that hardly displayed, included, or engaged with the picturebook in their video assignment. The second degree refers to those groups that displayed but did not really engage with the book, and the third degree covered the groups where the selected picturebook and the intra-action with it played an active and constructive role in the presentation and discussion of the group. We found that few groups (8

of 53) could be clearly tagged as belonging to the first degree. Furthermore, the degree of entanglement was a little hard to decide for almost half of the remaining groups. That is, should they be tagged as belonging to the second or the third degree? Despite these challenges, most of the groups (30 of 53) clearly engaged with the book as a physical object and could be tagged as belonging to the third degree. In the following, we will focus on the various ways the students intra-acted with the selected picturebooks. In these examples we saw how the relationality among 'parts' (Truman 4), like trees, weeds, soil, students, and books, decentred the human as agent.

A rather effortless way to engage with the book was to keep the book in one's hands, and we saw many examples of such an interaction outdoors as well as indoors. If outdoors, the students often carefully selected the location – close to trees, in parks, not seldom surrounded by autumn leaves. The crucial and more challenging point was whether they, during their presentation and analysis, opened the book and turned pages or displayed spreads. If they did turn pages or display spreads, the next step was to examine whether the pages or spreads were selected in line with the students' conceptual reasoning, and if the combination of displayed spread and reasoning was linked together within the ecocritical thinking they were asked to take into consideration. In addition to the book-in-hand way, another way to get involved with the book in question was various modes of reading aloud or voicing the book, either by the students themselves or by children they knew and included in their assignment.

For some groups the book almost became a member of the group, a companion to dialogue with and hence a way of understanding the world from within and as part of it. The groups that carefully selected the book and considered it a companion demonstrated this by encountering and picking up the book, by passing the book from one student to another, and by stepping back and letting the book in question almost act on its own by filling the frames of the video format. We also saw carefully selected approaches to dialoguing with the book, such as presenting the cover of the book, *Wild* (2013) by Emily Hughes, close to the student's face, as if they were having a tête-à-tête, presenting the student with similar characteristics to the protagonist (tousled hair and wide open eyes), and immersing both in the surrounding nature (leaves crowning the head of both student and protagonist).

In short, and to recapitulate, the students eagerly entangled in varied and, very often, tactile ways. They also seemed to entangle in ways that they presumably experienced as appropriate to the picturebook selected.

Entanglement with peers

A compelling aim of this course module was to support and foster in-depth ecocritical literature conversations within each student group. Inclusive, relational, and non-competitive approaches were crucial both to sharing the group's ideas about children's literature and environmental awareness and

to deciding contents, structure, and interactions in their video production. Consequently, the modalities chosen by the group to present their discussions in the video assignment were pivotal elements to measure the affective participatory atmosphere inside each group and their engagement with the topics and the task required for this assignment. Describing, analysing, commenting on direct quotations from the selected picturebook, illustrating, searching for key concepts, or questioning the plot of the picturebook, for instance, were only some of the varied and captivating activities that students used to put their dialogic skills to work.

The analysis of the 265 minutes of video recording, mapped in the material green entanglement matrix (Table 1), revealed that students, probably influenced by the different didactic methodologies presented by the teachers during the lessons, adopted four distinctive mechanisms to entangle with peers: one after the other with a single turn at talking; one after the other with two or more turns; various forms of group dialogue; and a hybrid formula combining two or more different modalities of entangling with peers.

These differences in students' interactions demonstrated that the students developed different levels of engagement. Many groups worked together, using a simple and predictable modality of presentation, and did not establish an authentic dialogic connection among the peers. Other groups were quite creative and combined different and effective modalities of dialogue, such as a short introductory monologue followed by alternating discussions in pairs, co-sharing tasks, discussions about plots and SDGs, and creating graphical questions or posters on the screen to emphasise a concept or a crucial phase of their analysis.

In the first mechanism, peers interacted with each other within the group according to a simplified scheme: each member took the floor (one turn) and successively presented a preassigned short part of the video assignment. Although there were some different variations (one after the other, but, for instance, at the beginning or the end of the video students remained together on the screen), the video presentation was rather linear and involved no or very little engagement with each other. Due to its simplicity, the first mechanism was the most frequently used (27 out of 53).

In the second mechanism, 'one after the other with two or more turns', students used a more sophisticated approach, usually supporting their analysis with richer examples and more dynamic transitions. The presentation was still based on the formula 'one after the other', but members divided their speaking time over more than one session and this choice contributed to supporting the video assignment with a more lively, dynamic, and collaborative interaction. Moreover, in several cases, students experimented with different solutions to visually enhance their attempt to develop a cooperative and participatory ecocritical dialogue, such as always remaining present as a group on the screen and presenting doublespreads, concepts, or signs in the same ways or using similar screen backgrounds, framings, or settings as a symbol of their own group identity. This second mechanism of co-working with peers was selected by sixteen of the fifty-three groups.

In the third mechanism, with the most engaging and affective participatory approach, students effectively intra-acted together in a constructive way. They appeared as a group most of the time, presenting together and taking different speaking turns. Their approach was dialogic thanks to their skills and attitude towards interchange and their positive reactions to the flow of emotions experienced during the other peers' speaking turns. To move the dialogue from one member to the next, they frequently posed questions and mutually invited other members to participate, problematising thoughts and hypotheses. There was a vital engagement (and joy too) in combining and rethinking the hermeneutical discussions the group had during the video production process. What emerges from these presentations is a strong group identity, marked by original visual solutions on the screen such as the division of it into four squares. Because of the demanding aspects of the participatory approach, only eight of the fifty-three groups effectively experienced this kind of dialogic co-shaping.

The last mechanism, the hybrid approach, consisted of an accomplished combination of the three previous formulas. And despite the distinctive number of groups choosing the first mechanism (one after the other), the transitions between them often proved that they had indeed attempted to create a collaborative thread running through the entire assignment.

Entanglement with the environment

As outlined in relation to the matrix design (Table 1), we observed four different ways to entangle with the environment in the video assignments (indoor, outdoor environment as background, interaction with outdoor environment, and hybrid ways). Perhaps for practical reasons, most students created their video assignments indoors with no special attention to the background (34 of 53). Consequently, we saw lots of bedrooms, bookshelves, and kitchen walls with no intended relation to the selected book or the SDG in focus. However, some students seemed to design backgrounds suitable for the environmental topic or SDG in question, including greenery or specially selected supplementary books or paintings with thematic allusions to nature. These arrangements gave the impression of bringing the outdoors indoors.

For those who decided to record their video outdoors (10 of 53), the most usual way to entangle with the environment was to let nature work as the background for their presentations and discussions (6 of the 10 videos outdoors). They typically presented and discussed the picturebook in front of or close to a tree. Few groups (4 of the 10) interacted with their outdoor environment by, for instance, touching the ground or immersing the picturebook in a surrounding carpet of leaves. We could say that the way the students engaged with the selected environment in some ways echoed the setting of the picturebook, like when the students who studied the picturebook *A mezzanotte* [The midnight fair] (2020) emerged from the margins of the woods like the animals in the book (Figure 1).

Fig. 1. Example of how students and creatures both seem to emerge from the margins of the woods. Printed with permission.

To give a better idea of how the three types of entanglement worked in the students' video assignments, we will conclude this section by presenting two cases, one outdoor and one indoor.

Two cases portraying the three types of entanglement: Diamonds *and* Flashlight

One of the groups that consistently intra-acted with the picturebook, with peers, and with the environment worked with Armin Greder's *Diamonds* (2020). The book is designed as a conversation between a child and her mother about the sources and mining of diamonds. To anchor their ecocritical perspective, the students linked the book to SDG 8, which focuses on promoting sustainable economic growth and decent work for all. The students carefully selected a location in front of a cave-like hole imitating an entrance to a mine.

The students presented their work using the formula 'one after the other', but all in the same place, right by the cave-like hole, and thus clearly linked together. Most striking was the way they communicated or linked together by passing the book from one student to another. Each student held the book in their hands and turned the pages, and the seamless transition from one student to the next was made by zooming in on and out from the book. In this way, the book became an always-present member of the group, a companion to dialogue with.

In the second example that demonstrates a thorough interconnection between students, the picturebook selected, and the environment, the students intra-acted with the wordless picturebook *Flashlight* (2014) by Lizi Boyd. The black pages tell the story of a little boy wandering in the night woods through

moonlit flora and fauna, except where the flashlight's beam shows tiny plants and animals as they appear in full-spectrum light.

In their video assignment, the students tuned their digital setting according to the environment of the picturebook. All members of the group used the same background, echoing the same nocturnal environment of the protagonist. Moreover, they carefully integrated their ecocritical reflections with their material and aesthetic approach. Hence, their intra-action with the plot was dynamic, effective, and emotional: they attentively turned pages, pointed at plants and animal, and tuned their voices to fit the nocturnal atmosphere of the book. Furthermore, they collaborated with each other, sharing tasks or integrating and completing the reflections of their peers.

DISCUSSION AND CONCLUSION

In this final section, we will discuss the most relevant findings answering our research question. First, we will discuss how the collaborative and participatory design of the course module and the assignment provided the students with opportunities to explore the picturebook freely, supportively, and critically and reflect respectfully upon their own learning process. Second, we will discuss how the students built their environmental awareness by activating the ecocritical and aesthetical analysis tools they were exposed to in the lessons on the course. Finally, we will discuss how we reflected on the challenges of a collaborative entanglement between scholars and of designing and conducting a student-centred learning process based on material entanglement and co-shaping.

We saw that the intensity of engagement with the picturebook, with peers, and with the environment varied a great deal, ranging from rather instrumental presentations to imaginative and dynamic examples. We also noted that only a few had thought carefully and in detail about how their critical analysis of the book could structure their presentation and discussion. This variety may be because the students were first-year students and not very familiar with constructive collaboration practices where they are given the responsibility to decide and structure their task rather freely within the framework of the assignment. Additionally, we assume that the Covid restrictions they were experiencing at the time (facing the second lockdown) may have been a hindrance to them in their practical co-shaping process. However, as our findings reveal, it seems evident that the degree of intensity often corresponds with the effectiveness that arises in their shared responses to the task.

A second interesting observation is linked to the entanglement with the plot of the picturebooks and the analytical framing. The students either brought their bodies and ideas inside the picturebook, or they brought the picturebook into their environment. Both methods made the picturebook become a member of the group, a companion to dialogue with. Although the students presented several promising ecocritical readings, we saw that it was a philosophical challenge to reconceptualise their own ideas about nature. In their analyses,

many students tended to use idealised, idyllic, or simplistic conceptualisations to explain the complex entanglements between the various life forms represented in the picturebooks. We experienced many efforts to reflect, but only a few were carried out to their full potential. The students were able to introduce a wider range of environmentally motivated themes in their discussion (i.e. different SDG focalisations) and they presented problematised reflections on sustainable ways of engaging with environmental issues and debates in their analysis. We think that to succeed in this task, students should be given more possibilities to train their dialogic skills.

Although we, during the designing and planning of the course module and assignment, tried to arrange for various opportunities for the students to engage affectively with the material, with peers, and with us as dialogic mediators, the overall findings demonstrate that the learning process also challenges us as scholars, educators, and facilitators of participatory practices. We could perhaps have invited the students to experience in more detail how we ourselves have collaborated as children's literature researchers, but also as creators of new materialist educational practices in both in-person and digital contexts.

To conclude, judging by the findings and the aim of the course, it makes sense that we, in future teaching projects, should focus even more on questioning, problematising, and encouraging students to have confidence in their own thoughts, discussions, and collective ideas. To improve students' entanglement with children's literature, the most important factor is perhaps the educators' own competence and ability to carefully observe, notice, and value the potential embedded in the students' sometimes hesitant attempts to engage with, analyse, and reflect on the material of their study. From this perspective, as mentioned above, the video content analysis could support teachers in developing such competences and skills.

ORCID

Marnie Campagnaro ⓘ https://orcid.org/0000-0003-1732-0716
Nina Goga ⓘ https://orcid.org/0000-0001-5658-5237

NOTE

1. Before we started our research on the students' video assignments, we collected permission from the involved students to conduct our research within the framework of the presented research questions. Included in the students' permission was also the opportunity to include anonymised (names left out) still photos or samples from the videos to illustrate some of the findings. To avoid influencing the students' responses to the given task, we asked for their permission after the evaluation and marking of the assignment were completed.

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Marnie Campagnaro is an assistant professor at the University of Padova. Her research interests include picturebooks, architecture, object-oriented literary criticism, sustainability, and Italian children's writers.

Nina Goga is professor of children's literature at Western Norway University of Applied Sciences. Her research interests include ecocriticism, nonfiction children's literature, children's rights.