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A multiliteracies approach to online reading to learn: a case study

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ABSTRACT

This paper aims to contribute to the discussion of a multiliteracies approach to online inquiry reading. After presenting the key principles of this theory, I focus attention on an online platform acknowledged for its learning aims – TED-Ed – as an empirical basis for researching the practicability of such an approach. An original lesson available on the platform was studied, revealing that it only partially complies with the pedagogy in question. This analysis showed that while multimodal, hyperlinked and purposeful online reading was clearly taking place as a situated and transformative experience, there were, nevertheless, significant restrictions in the enactment of the theory, specifically, the partiality of the meaning-making paths designed to scaffold students' learning, the absolute invisibility of semiotic resources used for making meaning and the adoption of an uncritical attitude toward meaning making. Finally, discussion is made of the most significant insights to be drawn from this analysis, concerning the potentials of such plat- forms for practice and research and the need for practitioners to develop their understanding of online reading to learn in order to fully enact the theory underpinning the multiliteracies approach.

KEYWORDS

Multiliteracies; online inquiry reading; pedagogy; professional development

Introduction

Multiliteracies is a powerful social-constructivist approach to literacy learning (Cope & Kalantzis, 2009; Group, 1996; Kalantzis & Cope, 2012; New London Group, 2000; Pereira & González Riaño, 2018), which focuses on social practices as the basis to understand literacies and literacy pedagogy. Its original manifesto was developed on the basis that "The world was changing, the communications environment was changing, and (. . .) literacy teaching and learning would have to change as well" (Cope & Kalantzis, 2009, p. 165). This central argument has remained unaltered, though perhaps clarified and explored in Cope and Kalantzis's (2009) and Kalantzis and Cope's (2012) "new learning" model.

Multiliteracies is generally presented as "an agenda for the future of education, requiring the creation of educational processes and systems that are in many respects very different from those of the recent past" (Kalantzis & Cope, 2012, p. 28). The rise of the information economy and the growth of the information and communication technologies undergirding its construction are key societal challenges sustaining the specific argument for pedagogical transformation of the literacy curriculum.

This new pedagogy is envisioned with the aim of adequately preparing future citizens for the new literacies emerging from the new social reality. The Internet is a case in point. For employees and the general public alike, it has become an indisputable space for enacting fundamental new ways of constructing knowledge in the information society (Kalantzis & Cope, 2012; Leu & Maykel, 2016). Leu et al. (2013, p. 1158) envision the Internet as "this generation's defining technology for literacy and learning within our global community", indeed developing as part and parcel of the lives of children around the whole world (Baron,

2015). This is clearly evidenced in the results reported by the *Global Kids Online* project (http://blogs.lse.ac.uk/gko/synthesis-report/), conducted by The Department of Media and Communications at the London School of Economics and Political Science, with the support of the European Commission's *Better Internet for Kids* program and UNICEF. The report of the pilot study (carried out and trialed with children aged from 9 to 17 years old in Argentina, Serbia, the Philippines and South Africa) states that online literacies "can have important implications for children's lives", since children make up "an estimated one third of Internet users worldwide" (Byrne et al., 2016, p. 4). More recently, the 2017 inquiry report reveals that, for instance, in Brazil "approximately eight out of ten children (85%) aged 9 to 17 years are internet users, which corresponds to 24.7 million users across the country" (http://globalkidsonline.net/brazilian-findings-2017/, last access: 3 December 2019).

Online reading to construct and share knowledge is a clear example of a new literacy practice established by the Internet (Leu et al., 2011, 2013, 2014, 2015; Leu & Maykel, 2016). Again, the results of the *Global Kids Online* study have consistently shown that the experience of being positively engaged online is part of the learning practice of the children studied, one of the main revelations being that "most children who use the internet say that they learn something new online at least every week and that children are gaining information from internet access" (Byrne et al., 2016, p. 6). As the latest report confirms,

> like adults, children are taking advantage of the internet to enjoy their right to information. Between one fifth and two fifths of children can be considered 'information-seekers', in that they carry out multiple forms of information searches online each week – to learn something new, to find out about work or study opportunities, to look for news, to source health information or to find events in their neighborhood (UNICEF Office of Research, UNICEF, 2019, p. 21)

However, reading online is not an easy practice for young users. Research has also shown that, despite their expertise in the use of Internet for social interaction or gaming, young users reveal difficulties in using the information that they find online to learn (Leu et al., 2014). This idea finds support in the fact that "younger users lack the digital skills of their older peers, especially when it comes to children's self-reported ability to check whether or not the information they find online is true" (Byrne et al., 2016, p. 6) as well in recent research that shows the difficulty in planning and enacting the search for information as well as in analyzing the collected information (Danby & Davidson, 2019).

Leu and colleagues tentatively attribute children's difficulties to the lack of the specific skills and strategies required by online inquiry reading. While acknowledging that the

definition of reading online to learn is an open area for research and discussion, they assume that "the nature of reading . . . is being transformed by the Internet" (Leu et al., 2013, p. 1174). Indeed, the Internet is characterized by a new "epistemology of shared knowledge and expertise" (Mills, 2016, p. 34) made possible by the convergent, multi-media and hyperlinked affordances of digital technology. Though building upon print-based reading skills, it further requires specific reading skills, strategies and dispositions "to make full use of the Internet" (Leu et al., 2013; Leu & Maykel, 2016). Besides, research coming from neuro-cognitive science has been underlining the potential effect of online reading upon attention. Attention is the first essential component in deep reading-to-learn processes (Wolf, 2016), but it is also "the most transparent, medium-influenced change seen in young and old alike" (Wolf, 2016, p. 145). Children's natural difficulty in focusing attention when faced with the myriad of stimuli offered by digital contexts (Klingberg, 2009) results in the configuration of fast, erratic and shallow reading (Wolf, 2016).

Bearing in mind the unique nature of online inquiry reading, its role in "learning and education as students advance through our educational systems" (Leu & Maykel, 2016, p. 214) and the difficulties shown by online readers, there has been a call for a new, specific online reading pedagogy (Kervin et al., 2018; Mills, 2010). Leu et al. call for a repositioning of online reading to a central position in policy and literacy education (Kervin et al., 2018; Leu et al., 2011), maintaining that "teachers will be challenged to thoughtfully guide students' learning within information environments that are richer and more complex than traditional print media, presenting richer and more complex learning opportunities" (Leu et al., 2013, p. 1163). In effect, Leu and collaborators envision the need for a "new teacher's role as orchestrators of learning contexts rather than dispensers of literacy skills" (ibid.), assuming that misalignments of practice and pedagogy will likely happen should educational systems not keep up with changes in practice. They see this as an area for further study, formulating the following research question: "How might we best support the developments of these aspects (of the new literacies) within both real and virtual learning contexts?" (Leu et al., 2013, p. 1170), an idea that resounds to Kroustallaki et al.'s (2015) recommendation to develop specific online tools that offer young users' search spaces that might scaffold them in the necessary learning. Online learning platforms come up as relevant spaces for enacting a new reading pedagpgy. By making use of the affordances provided by an internet-mediated environment, such platforms offer newly designed practices that widen "possibilities of access and participa- tion, expanding the range of potential instructors and learners, as well as the range of semiotic resources available for designing learning environments" (Bezemer & Kress, 2016,
p. 120), thus potentially allowing for the development of focused online reading and learning. In another field of study, Wolf (2016) also calls for the education of a focused and patient online-reader's mind as a way to avoid "the deterioration and demise of thought- ful, deep reading" (Wolf, 2016, p. 154), quoting emergent research that shows how proper training and good learning can overcome the negative effects of the propensity for attention to be distracted among the multi-stimuli and multitasking involved in online reading (Jimura et al., 2014).

I see these demands for a new online reading pedagogy as a clear instance of the general call from multiliteracies for a new literacy pedagogy. Reading, in fact, plays a fundamental role in learning as envisioned in multiliteracies, in which every sense-

making process, as enacted in reading, is a "process of renewal, of personal re-creation or transformation – i.e. a process of learning" (Cope & Kalantzis, 2009, p. 175). And I consider that the pedagogy set forth by multiliteracies establishes a very suitable theoretical framework in which to discuss the required theoretical approach to online reading to learn. With this paper I thus aim to contribute to such a discussion by studying how the reading practice designed for young users by an online learning platform acknowledged for its learning aims – TED-Ed – is in line with a multiliteracies online reading pedagogy.

I begin by presenting the key concepts and learning processes of a multiliteracies approach to online reading to learn. I then focus attention on a lesson offered by TED-Ed as an empirical basis for researching the practicability of this approach. I present the study of an original lesson (available on the platform), which provides an immersive context for online reading to construct and share knowledge. Analysis of this lesson reveals two major potentials that arise from applying a multiliteracies pedagogy, namely its generic organization and the experience it provides of multimodal, hyperlinked and purposeful online reading. At the same time, the analysis unveils restricted dimensions in the enactment of the theory, namely, the partiality of the meaning-making paths designed to scaffold students' learning, the absolute invisibility of semiotic resources used for making meaning, the adoption of an uncritical attitude toward meaning making and the final rhetorical application of the knowledge constructed through reading. I conclude the article by identifying and discussing the most significant implications and conclusions drawn from the empirical analysis concerning enactment of an online reading-to-learn pedagogy.

Online reading-to-learn pedagogy

The concept of a distinct reading-to-learn pedagogy for web-mediated learning, which I present in this section, builds on the understanding established by multiliteracies of the *what* and the *how* of literacy pedagogy while crucially incorporating key dimensions arising from specific theories of online reading.

The "what" of an online reading-to-learn pedagogy

Learning to read has always been a fundamental dimension of the literacy curriculum, and this tradition continues to be relevant when it comes to defining the specific contents associated with online inquiry reading. Low-level cognitive processes (such as word recognition and syntactic parsing), deep reading processes (such as imagery, perspective-taking, background knowledge, analogy, inference, critical analysis, insight and novel thought [Wolf, 2016]), and metacognitive processes (such as monitoring and solving reading problems [Irwin, 2007]) are fundamental reading processes and have been integrated into the learning content of offline reading pedagogies. Essentially, the first group of skills leads readers to literal meaning-making; the second takes them beyond words and text structures and into personal, emotional and thoughtful meanings, which are also potentially new; and the last group of skills assures readers' strategic control in meaning-making. Online inquiry reading generally builds upon such skills, at the same time expanding or renewing the set of competences and strategies expected from an

expert online inquiry reader (Mills, 2010; Rowsell et al., 2013; Leu et al., 2013; Walsh, 2006, 2008).

Online literacy practices involve the emergence of new or renewed text *genres*, such as posts, blogs, wikis, relay writing, fan fiction, videos, instant messaging, among many others, each differently situated in new social practice, with specific aims and showing specific organization patterns (Mills, 2010, 2016). Such text types inevitably form the reading content of any online reading pedagogy. Yet coherent meaning-making using such Internet-mediated texts involves much more than dealing with genre structures and written words alone. In effect, the affordances of digital media have significantly enhanced or transformed certain features of texts that are read online (when compared to print-based texts). Acknowledging this is essential to identify further learning content within an online reading pedagogy.

Multimodality is one of such enhanced textual features, in fact assumed as one of the key meaning-making features in the design of digital texts (Jewitt, 2005, 2008; Kress, 2010; Rowsell et al., 2013; Serafini, 2014; Walsh, 2006, 2008). Modes comprise material resources for meaning-making that are "socially shaped and culturally given" (Kress, 2010, p. 79). In digital communication contexts, not only are the written and oral modes of verbal language used to build up representations and communicate meanings, but also static and moving images, color, sound, music and layout are employed intention- ally. Digital texts have been described as multimodal ensembles (Kress, 2010), designed in accordance with the specialized potentials of different meaning-making modes, in which these various modes converge into a complex, coherent semiotic unit. This means that beyond merely using the written code, new meaning-making skills are required to make meaning of online texts. This semiotic understanding of meaning- making (Kress, 2010) is key to defining the *what* of a multiliteracies pedagogy, according to which *multimodal resources* are adopted as learning content (Cope & Kalantzis, 2009). Multiliteracies contends that people are expected to learn the "patterns and conven- tions of representation" (Cope & Kalantzis, 2009, p. 175) and how to relate "meaning form to meaning function" (p. 177) as found in multimodal texts. I thus consider multimodal codes to be an essential element of content in a multiliteracies approach to online inquiry reading if they are to be proficiently "orchestrated" by readers (Kress, 2010, p. 157).

Another significant particularity of multimodal, online texts lies in their interconnect-edness. Hyperlinks make online texts potentially unbounded (Lemke, 2002). This is a new textual feature, again with considerable impact on the skills required to make meaning. The multi-directional nature of multimodal online texts (Walsh, 2006) considerably com- plicates the setting of the reading path and the text that is finally read. This means that *self-determination and monitoring* have become essential processes when navigating online so as to gain insight and learn (Coiro, 2011; Rowsell et al., 2013; Wolf, 2016). Online readers need to consciously design for themselves a specific reading plan with clear reading objectives, to attentively enact strategic procedures to construct their reading path among multimodal texts (such as locating, selecting, reorganizing and synthesizing the relevant information for their specific purposes [Leu et al., 2013]), and also to assess the result of their reading plan in function of the initial reading objectives (Coiro, 2011). This is necessary in order to finally arrive at the construction of coherent and relevant knowledge that transforms readers and which they can communicate to others

(Leu et al., 2013). I consider this strategic procedure to be another key aspect of content within an online inquiry reading pedagogy.

A further dimension of online digital texts is their potentially unedited nature, perhaps best illustrated by the proliferation of "fake news", making it essential that readers constantly interrogate the accuracy and reliability of any text that can be found in the internet. However, besides the need for such critical thinking, multiliteracies also takes in key tenets of critical literacy, considering texts as socio-culturally situated and con- structed – and therefore never neutral -, demanding that readers develop a constant ideological awareness of the social interests being served and the intended reader positioning (Gee, 1996; Luke et al., 2001; cf. Cervetti et al., 2001). The ability to identify, resist and overcome inaccurate or biased perspectives has become a key competence for the understanding and enactment of twenty-first-century citizenship (Kalantzis & Cope, 2012) and a central assumption in "changing pedagogies for changing times", conceived as necessary to "engage students in the interpretation, analysis, critique and production of signs in and for particular contexts, audiences and purposes" (Lewis & Tierney, 2011: 320; Coiro, 2015; Wolf, 2016). As I see it, this *critical stance* again constitutes another essential layer of content in the multiliteracies approach to online inquiry reading. This need was, in fact, voiced by children themselves in Byrne et al.'s (2016) research.

The "how" of an online reading to learn pedagogy

Within the multiliteracies framework, educating individuals to be free-thinking citizens with deep knowledge, including their ability to be expert online readers, crucially depends on designing learning environments where a core learning repertoire is enacted (New London Group, 1996; Kalantzis & Cope, 2012; Jewitt, 2008; cf. Lim, 2018)). This repertoire is assumed to be central in producing "deeper, broader, more trustworthy, more insightful and more useful knowledge" (Kalantzis & Cope, 2012, p. 249). It reconciles processes such as *experiencing the known and the new; conceptualizing by naming and with theory; analyzing functionally and critically*; and *applying appropriately and creatively*, together involving "learning by doing as well as by thinking" (Kalantzis & Cope, 2012, p. 25).

Experience is assumed to lay the foundation of learning (Dewey, 1916). Essentially, when *experiencing the known*, learners' needs, identities, expectations, aspirations, inter- ests and motivations both situate and provide a departure point for learning, whereas when *experiencing the new*, learners are immersed in "new factual information and experience new things" (idem: 243–244). Within an online inquiry reading pedagogy, I consider *experiencing* to include reading practices in which readers make (old and new) meanings by tacitly activating reading skills and strategies in socially and culturally situated online reading tasks designed by teachers.

Conceptualizing refers to abstract knowledge that is consciously constructed by learners (Vygotsky, 1979, 1986). When *conceptualizing by naming*, "learners clarify, classify, group and distinguish" (Kalantzis & Cope, 2012, p. 245), thus defining terms. When *conceptualizing with theory*, they become active theory makers, enabling them "to clearly describe patterns in the world" (p. 245). In an online reading-to-learn pedagogy, I consider *conceptualizing* to involve students being guided in explicitly developing the specific knowledge about online inquiry reading as discussed before, namely the multimodal

nature of texts and specific reading strategies, as well as the necessary metalanguage to refer to it, and in constructing their own understanding of what online reading involves. *Analyzing* refers to learners' use of conceptual knowledge to deliberately look into what they have newly experienced. When *analyzing functionally*, learners use specia- lized knowledge to develop chains of reasoning, infer and predict knowledge (Kalantzis & Cope, 2012, pp. 246–247). When *analyzing critically*, learners evaluate by interrogating "the interests, motives and ethics that may motivate knowledge claims . . . an ever-vigilant process of reflection about purposes and interests" (idem: 247). Once again, within an online reading pedagogy, I take the view that knowing by *functional analyzing* guides learners to use their conceptual knowledge about reading to describe language patterns and their meaning functions as well as to reflect about the skills and strategies that they have used to make meaning, thereby deepening their understanding of such specific knowledge. Besides, I assume that knowing by *critical analysis* guides readers beyond the represented meanings by for instance, looking into the sources or unveiling the ideological assumptions hidden in the texts they are making sense of and appreciating how these are conveyed through manipulation of representation modes.

Finally, *applying* supposes an active return to experience, allowing the learner the possibility to use what has been learned in new meaning-making practices (Dewey, 1938). A*pplying appropriately* is a process by which knowledge "is designed to get things done" (Kalantzis & Cope, 2012, p. 248) in the real or in simulated world situations, whereas by *applying creatively* "we attempt to make big leaps. We take knowledge from one context and apply it in a vastly different one" (idem: 249). In learning to read online, this final move involves the learner in new, informed meaning-making situations, including the reading of new multimodal texts and the construction of creative new texts to communicate with others.

In the multiliteracies framework, learning designs are envisioned as involving learners in collaborative sequences of actions that are meaningful and realistically complex (Kalantzis & Cope, 2012, p. 274). It is assumed that the wider the set of knowledge processes enacted in a learning design, irrespective of their actual order, "then the more solidly grounded the knowledge will be" (p. 221), inasmuch as the learning context shows intentional organization, that is to say, "a sequence of actions that have a narrative structure" (p. 261), unfolding into "orientation" (in which a learning purpose or a stirring question is set) – "journey" (set of prepared learning activities) – "destination" (in which the learning is shared or put to use).

Case study

Online learning platforms are some of the most significant social spaces for learning practices that have emerged with the Internet. In this paper, I focus on one such case, namely TED-Ed.

TED-Ed is an open-access, international platform that has been promoted by TED (Technology, Entertainment, Design) and presented as a non-profit, nonpartisan founda- tion devoted to "spreading ideas" (https://ted.com/about/our-organization). TED-Ed has been specifically developed to envision educational practice, an intention which is well captured in its "subtitle" *Lessons worth sharing*, in the statement that "Everything we do

supports learning" as well as in the acknowledgement that it is currently serving "millions of teachers and students around the world every week" (https://ed.ted.com/about).

The platform offers thousands of "lessons" and "series" (which are lessons organized into themes) targeting students aged over 13 years old. Each lesson follows a general learning design triggered by a challenge, and involves the reading of multimodal and hyperlinked texts, offering comprehension tasks and a forum that allows learners to share their understanding. Each lesson can be accessed online for an audience (e.g., a class of students), in which case the lesson is a scaffold for further construction of learning (in class, for example). Lessons in TED-Ed are originally developed by the TED-Ed team but they can also be created by users (that is, teachers and students), in which case they customize an "original lesson" or follow the given template to generate a new lesson. I first came across TED-Ed through an example of such customization as performed by one of my (teacher) PhD students as part of the lesson she was designing as an instance of "flipped learning" (Courtney, 2012).

Considering that TED-Ed lessons are scaffolded simulations of online inquiry reading, the platform is well-suited for doing a multiliteracies pedagogy, indeed a particularly appropriate space in which to research the practicability of the reading pedagogy presented above. When browsing Ted-Ed I came up with the following research question: *In what ways do lessons on online platforms engage readers in practices that are aligned with a multiliteracies approach to online inquiry reading, if at all?* I decided to develop a case study of one particular lesson (Stake, 2000) as a way of responding to this research question. The lesson in question is titled *What does it mean to be a refugee?*, a TED-Ed original developed by a team of script editor, director, animation artist, composer, sound designer and two educators which can be accessed at http://ed.ted.com/lessons/what-does-it-mean-to-be-a-refugee-benedetta-berti-and-evelien-borgman. I selected this les- son for its social significance in the hope that this might add to its pedagogical potential. The claims that I will make regarding this question result from analysis of three main units: the reading practice as a whole, the texts (the video and the written text), and the prompts offered as a means for students to make meaning.

I performed a multimodal discourse analysis of the texts. This involved a deliberate blend of Systemic Functional Linguistics (SFL) (Halliday, 1994) and the grammar of visual design (Kress & van Leeuwen, 2006) through which I have shaped the interpretations that I present in this paper (Low & Pandya, 2019). In the analysis, I focused on the identification of the genres enacted in both texts (Martin & Rose, 2005). I also used notions related to ideational (or experiential) and interpersonal metafunctions (especially the interactive roles played by participants and modality or degree of authenticity or reliability) to characterize the meanings represented in both texts, which have allowed me a common basis for analysis. I transcribed the verbal text and used these labels (ideational and interpersonal meanings, interactive roles and modality) to code the main parts that I identified in the verbal genre. While I have used SFL tools to analyse the ideational and interpersonal meanings represented in the written text, I have used the grammar of visual design (Kress & van Leeuwen, 2006) as my main set of semiotic tools of inquiry to look into ideational and interpersonal form-function relations, also paying particular attention to coding orientations and colour. I performed a multimodal transcription of every scene in the video and used these labels (ideational and interpersonal meanings, coding orienta- tion and colour) to code the parts that I identified in the film genre. I use some shots from

these scenes in the presentation of the analysis below. In addition, I performed a content analysis of the lesson as a whole and the prompts for student meaning-making within the texts. This specific analysis was undergirded by the key principles of the online inquiry reading pedagogy presented above, that is to say, I have looked into multimodality (in which case I applied the same codes described above), reading strategies and meaning making processes involved, coding meaning units accordingly.

I assumed that this analytical procedure would give me strong evidence as to whether students' knowledge construction was, in fact, "different from everyday, casual or incidental learning in the lifeworld" (Kalantzis & Cope, 2012, p. 261). In fact, it allowed me to ascertain to what extent the lesson was in keeping with the multiliteracies approach to online inquiry reading.

Findings

On the whole, the main results of applying these tools of inquiry show that in the lesson analyzed there are instances of clear alignment with the multiliteracies approach to online inquiry reading but that there are also many instances of clear detachment from the presented theory.

The lesson

One of the most interesting aspects of the online reading pedagogy enacted in this lesson concerns its generic organization, which seems to exemplify Kalantzis and Cope's (2012) "narrative" learning path of "orientation – journey – destination". The lesson-as-a-genre follows the five-section pattern followed by every TED-Ed lesson (cf. Figure 1). It is introduced by *Let's Begin . . .*, a paragraph which directly focuses on the topic to be addressed in the subsequent video and poses a concrete question. This clearly serves as the "orientation" for the learning journey. The next moment available is the *Watch* section,

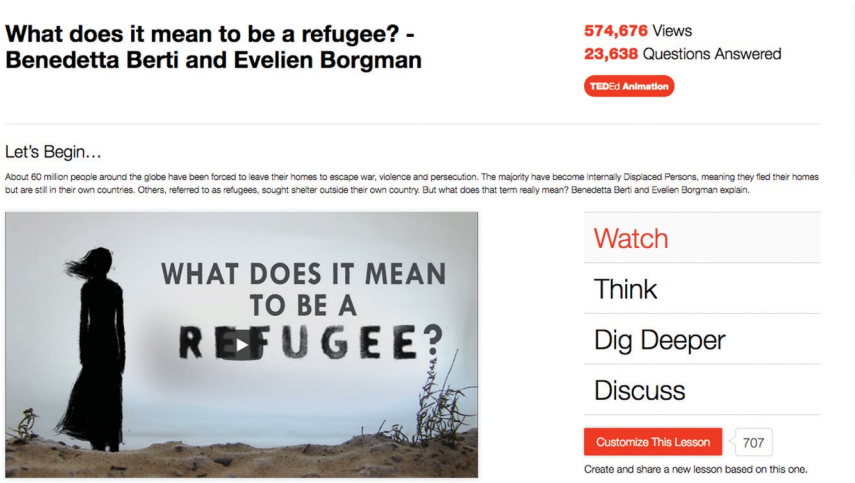

Figure 1. The *lesson*'s generic organization. "Let's begin": setting out an inquiry reading experience

which offers an animated video with the option of subtitles in different languages. This is, in turn, followed by the *Think* part of the lesson, which includes a set of reading tasks focusing on the meanings represented in the video. Next, there is *Dig Deeper*, offering a hyperlinked text which, as stated in the heading *Additional Resources for you to explore*, provides students with further relevant information on the topic. *Watch, Think* and *Dig Deeper* can be viewed as "the journey". Finally, students are given the chance to enter a forum dealing with the issue under study in the *Discuss* section, which effectively acts as the learning "destination". As such, the structure of this lesson unfolds as a very interest- ing designed learning environment, offering learners a simulation of the inquiry reading that they frequently perform on the Internet.

This section is comprised of the following paragraph:

> About 60 million people around the globe have been forced to leave their homes to escape war, violence and persecution. The majority have become Internally Displaced Persons, meaning they fled their homes but are still in their own countries. Others, referred to as refugees, sought shelter outside their own country. *But what does that term really mean?* Benedetta Berti and Evelien Borgman explain. (italics added)

The question that we come across in this section further justifies characterizing this lesson as an example of inquiry reading practice (Leu et al., 2013) since it specifically identifies a term as the conceptualizing target of the envisioned learning. The paragraph guides readers into a purposeful *experience* of online reading so that they can construct knowl- edge necessary to answer that question. The reading practice thus involves a key com- ponent of online reading pedagogy, namely self-determination and clear reading purposes (Coiro, 2011; Leu et al., 2013). This paragraph remains visible throughout the lesson as a heading frame, conveying the idea that each moment in the lesson sets out a path designed to lead users to the construction of relevant knowledge in order to answer the query.

Watch

Watch is particularly relevant for characterizing the reading pedagogy enacted in this lesson. The video that we find there is representative of the new multimodal texts that are often used in online reading practice and it is announced as a source of information to answer the leading question introduced before.

The video is a complex semiotic ensemble, indeed exemplary of the instantiation and complementary functions (that is, meanings) of the different semiotic resources (modes) used to design it as an orchestrated whole (Kress, 2010). The video has two major layers of meaning, namely a sequence of animated images (and sounds) and a verbal text.

The verbal text is an expository genre (Martin & Rose, 2009), presenting information that is organized into the following parts: historic definition of the concept "refugees" (vs. "migrants"); reasons and data (e.g., the number of refugee children); travel and reception conditions and social integration difficulties. This text predominantly conveys factual meanings strongly attached to an impersonal, authoritative voice (Halliday, 1994), thus calling for the construction of an *objective meaning of what it means to be a refugee* through the activation of low-level meaning-making processes:

> The world has known refugees for millennia (. . .) Today roughly half the world's refugees are children, some of them unaccompanied by an adult, a situation that makes them especially vulnerable to child labor or sexual exploitation. (. . .) Most refugee journeys are long and perilous.

At a certain point in the definition of refugee, one also hears the following: "but international law, rightly or wrongly, only recognizes those fleeing conflict and violence as refugees". This opens the door to dispute the stated facts as well as challenge the understanding that what is presented in the video is probably just one among several alternative views. Moreover, at the very end of the video a personal historical perspective on the issue is introduced with the statement: "If you go back in your own family history, chances are you will discover that at a certain point, your ancestors were forced from their home, either escaping a war or fleeing discrimination and persecution", with a final emphatic call being made towards refugees: "It would be good of us to remember their stories when we hear about refugees". These parts demand the construction of intersubjective meaning through the explicit activation of personal background knowledge, thus hinting at reflexive meaning-making.

The verbal text could exist by itself, but the animated and aural parts interweave with it in significant ways. The animated images represent a narrative organized into segments of events unfolding in time and in space with a traceable chain of reasons and conse- quences of characters' actions (Kress & van Leeuwen, 2006). It shows the non-happy- ending story of refugee journeys. It also makes visual use of key written words, such as *refugee, displaced* and *asylum*, which would help anchor the meaning if this were a silent film, though the support of the verbal message in fact also makes the story clearer. In addition, shapes, colors and sounds are very significant meaningful units (Kress & van Leeuwen, 2006), fitting together to create a set of powerful situated meanings. For instance, throughout the animation there is a play of colors (ash-gray, sandy-yellow, dull bronze and black) and sounds (including gun shots, crackling fire and vultures' screams). Figure 2 is a frame in which black vultures are seen and heard on a greyish

Figure 2. Black vultures on the greyish horizon.

horizon, the symbolic value of which is especially significant in a context in which difficult journeys are being verbally referred to.

Figure 3 is a sequence of three frames which depict how a protection fortress becomes a compacted space of fragile tents (and on a highly significant dark chromatic horizon), this visual meaning complementing the verbal information that is heard referring to the difficulties encountered when arriving at the place of refuge.

Figure 4 shows the zigzag procedures for granting asylum.

Other codes and meanings are orchestrated in the animated images, such as the slow but regular cadence of the music, clearly constructing the meaning of the functioning of a machine, and thus contributing to the meaning of dehumanization in the story being shown.

A very important element in these animated images is the gaze, proximity and angle between participants, which together create significant meanings regarding the relation- ship between the viewer and characters. The images shift from a close-up of legs walking, to a view of people's hands and then their profiles and eye expressions, which are fixed and unsmiling. This positions the viewer as a witness to the refugees' dramas. But the final set of images depict a series of faces staring forward searching for eye contact with us, the viewer, thus changing our positioning: we are no longer witnesses but rather directly called to become involved with what we are witnessing (Figure 5; cf. also Figures 3 and 4).

Figure 3. How the dream for protection becomes a helpless amount of fragile tents.

Figure 4. Erratic procedures when looking for asylum.

Figure 5. From witness to participants in the refugees' dramas.

As a narrative, these animated moving images call for empathy through the activation of deep meaning-making processes such as perspective or imagery, that is to say, they call for the construction of a fully-fledged subjective meaning of *what it means to be a refugee*.

This video illustrates the deployment of "a variety of knowledge media, representing knowledge in many ways" (Kalantzis & Cope, 2012, p. 274). As a semiotic ensemble, the video enacts a complex pragmatic action upon the reader, offering the negotiation of a rich set of meanings (factual, controversial, experiential, emotional), which are potentially crucial to finally reaching a well-developed answer to the question leading this lesson. Since it sustains the *meaning-making experience* of learning (the known and the new), the video plays a very significant role in establishing the setting for some rich reading practice. Nevertheless, further analysis shows how the potential of this reading-to-learn experience is, in fact, explored pedagogically only to a limited degree.

Think

The *Think* section provides a set of eight meaning-making tasks related to the video. Content analysis revealed that, in most cases, the tasks exclusively target the verbal message but only to limited extent, because learners are not guided towards all the potentially significant meanings represented in the video. Against expectations, only the verbal, objective and authoritative meanings are valued for students' work. There is no space for subjective or reflexive meanings, no deep reasoning or questioning, as can be seen in the following questions, in which the meaning is explicitly stated in the verbal text:

(2) What is the difference between refugees and internally displaced persons?
(3) According to the international legal definition, a refugee is someone who ___
(4) An asylum seeker is____;
(5) Host countries have several obligations towards refugees, such as ___

Question 1 ("Worldwide, approximately how many people have been forced to leave their homes to escape violence and war?") is, in fact, answered in the *Let's Begin* paragraph; questions 6 ("Can you explain the differences between, and common traits of, refugees and migrants?*")* and 7 ("Think about a family forced to leave their country to flee war. Explain the main obstacles and challenges they may face along the way") differ minimally from this pattern, since they can be answered by reorganizing information explicitly found in the verbal text. Question 8 ("What can ordinary people do to help families and individuals who have become refugees?") has no answer in the video, though one can be found in the *Dig Deeper* section.

Overall, *Think* offers a very restricted simulation of what reading to learn really requires from readers, thus constituting only a limited instantiation of the expected pedagogy. The

multimodal complexity inherent in the symbolic visual narrative is devalued as a source of information, and deep reading processes of imagery, perspective-taking, background knowledge, analogy, inference, critical analysis, all of which are essential for meaning negotiation and reflexivity, are not on the pedagogical radar. There is a conspicuous gap between the video that is offered for meaning-making, and the meanings that are favored. The result is a very restricted meaning-making experience, involving a set of meanings that I consider too limited to enable students to construct transformative knowledge. As will become clear, this restriction conditions the meaning-making and learning aimed at in the following sections. There is, moreover, no "conceptualizing" regarding the complex reading process in which learners are involved as for instance, evident in the fact that no semiotic resource is made visible to the meaning maker (either by conceptualizing or analyzing functionally).

Dig Deeper

Since there has been no attempt to conceptualize reading, *Dig Deeper* cannot be expected to provide an adequate way of analyzing the reading process in the "learning narrative" conceived by Kalantzis and Cope (2012). It does, nevertheless, offer a potential moment to analyze the concept of refugee previously constructed, one that is built upon another reading experience. Yet again the learning design is some- what deceptive.

Dig Deeper comprises a hyperlinked text in two parts. One consists of a set of four paragraphs offering links to different texts/genres, including *reports, stories* and an *inter-view*, in which authoritative as well as subjective voices talk about *refugees*. The second part is made up of four more paragraphs wherein a direct, impersonal voice speaks with an assertive tone: "It is important to realize . . . at the same time we should keep in mind", herself offering opinions and perspectives, which readers are asked to assume as their own. There is also a link to a personal essay in which someone offers suggestions of ways to help refugees. In this section, there are no explicitly designed learning tasks besides the instruction to follow links in order "to learn more . . . "; "to further investigate" . . . (in the first part) and "here you can find a few ways in which you can help and empower . . . " (in the second part), thus directing the reader to an autonomous construction of further learning.

Just as in the previous section, the reading experience in this section involves multi- modal texts. Yet, the focus of the instructions for readers once again falls on the verbal text, which reinforces the tendency found apropos the *Think section*. Furthermore, although multiple information is offered with the potential to strengthen and broaden the learner's (still weak) understanding of *refugee* and draw social implications, no scaffold is offered to help them analyze or think critically about the authoritative and controversial information being offered and by so doing make potentially insightful meanings. In fact, no pedagogical bridge is established between the two reading experiences (the video and the hyperlinked text) and their respective meanings, which condition the learner's capacity to converge and reconcile both sources of information. Yet again, no attempt is made to "conceptualize" or make the complex reading process visible to the meaning maker. Therefore, *Dig Deeper* reinforces the above finding that enactment of reading pedagogy is very restricted.

Discuss

Discuss provides an opportunity to apply what has been learned in the form of personal views and communication with others (Leu et al., 2013). It comes in the form of writing, a coda that involves fully enacting what has been read previously with the potential to become a space for personal insight, and thus for transformative learning. I believe that this is, indeed, the aim behind this section of the lesson. The coda reads as follows:

> Refugees have the right to be protected in their host countries. In your view, are refugees being properly protected? Refugees also have the right to escape war and seek shelter and safety in a host country but, in practice, enforcing that right is not always easy. Should host countries keep their borders open for refugees at all times, or should they be allowed to set and enforce maximum quotas?

However, one is forced to ask whether students have already built enough relevant knowledge to be able to engage in such sustained argumentation. In fact, these questions can be looked at as purely rhetorical, since the lesson itself hints at *the expected answers* with no design for authentic reflection and personal insight. And despite the relevance of the questions that are advanced for discussion, they do not return to the initial leading question, which should perhaps be part of the expected "learning destination".

Discussion

The first point that I wish to discuss is the apparently fortuitous yet powerful way in which this platform appears to be a laboratory of insights into the multiliteracies approach to online inquiry reading, as presented earlier. The second and most important point concerns precisely the learning that I took from the above case study of one TED-Ed lesson. It allowed me to come up with an initial answer to the research question, and to discuss the practicability of the theoretical understanding underpinning the pedagogy of reading online to learn.

The findings of the analysis allow me to state that the reading *practice* found in this lesson corresponds only very partially to a multiliteracies approach to online inquiry reading. While the learning path presented by the lesson is organized around a narrative-like genre, setting a purpose for reading from the outset and deploying multimodal and interactive texts for information representation and knowledge sharing (which are much valued in the multiliteracies model), the practice as a whole does not correspond to the multiliteracies approach in a number of significant ways.

It is clear that the reading *experience*, though extensive, does not effectively enable deep reading, as seen in the partiality of the meaning-making paths that scaffold students' learning from both texts. The tasks found in the *Think* section of this lesson target exclusively (and almost literally) the meanings represented in the verbal mode, which therefore becomes pedagogically foregrounded. As such, only certain aspects of the multimodal ensemble are open to actual pedagogical meaning-making, whereas the meanings represented by the moving images and sound are closed to learners' inspection, therefore remaining invisible, in spite of their apparent contribution to the meanings represented in the video and, certainly, to learners' meaning-making experience. This exclusive focus on the written mode of the verbal language was also evident in both the *Dig Deeper* and the *Discuss* sections. This finding about how the lesson restricts readers'

access to the full meanings available in the multimodal online text therefore resonates with Kress (2015) discussion on the role of multimodality in education:

> If the aim of language education was to support *communication* in its 'full' form, the *speech* and *writing* would need to be taught as part of [multimodal] ensembles. Curricula and teaching practices would need to be adapted accordingly. Without an awareness of [multi- modality] we have some pieces of a jigsaw puzzle, not knowing which pieces they are, and which might be needed in order to make sense of the whole (p. 58),

thus adding to the role played by multimodality in online inquiry reading as argued in this paper. Besides, in the lesson, there is a lack of *conceptualizing* about the performed reading, evident in the absolute invisibility of semiotic resources used for meaning- making in the *Think* and *Dig Deeper* sections. In addition, there is no specific *analysis*, whether functional or critical, focusing on the meaning-making in the texts. The final *applied* learning opportunity encourages collaborative learning but is limited to the restricted knowledge about refugees that might have been constructed. In this lesson, the reading tasks are not realistically complex (cf. Kalantzis & Cope, 2012, p. 274) and there is not much room for personal redesign or transformation, as expected in the multi- literacies framework.

However, as I see it, the observed misalignment between the enacted lesson and the envisioned pedagogy cannot be interpreted as revealing limitations in the platform itself with regard to enacting such an approach nor any impracticability of the theoretical understanding (concerning the pedagogy of reading online to learn). In my view, the TED-Ed platform offers outstanding potential for the enactment of such a pedagogy. Its lessons are purposeful meaning-making experiences based on the reading of multimodal and hyperlinked texts, and so, therefore, I would suggest that the meaning-making tasks could target the represented meanings and involve the complexity inherent in the construction of such meanings. For instance, tasks targeting the video could scaffold readers in reconciling (by synthesizing) the emotional and factual meanings that are involved in the definition of "refugee" as represented in the animated images with those represented in the oral mode, and then in reconciling these meanings with the ones represented in the hyperlinked texts. Additional tasks might offer the possibility for students to develop an awareness of their meaning-making process, for instance, but drawing their attention to modes involved in the representation of the different meanings that they make. By doing so, students would be challenged to construct "increasingly sophisticated and deeply perceptive conceptual schemas" (Kalantzis & Cope, 2012, p. 274) about online reading. Tasks could also be designed to involve the reading of controversial and even opposing perspectives so that learners could develop the capacity to critically analyze online texts. Finally, students could be offered the possibility to communicate meanings in creative ways that involved other modes than written language only. None of these possibilities was explored, however.

On the other hand, I contend that the source of the observed restrictions stems from the pedagogical conceptions undergirding the construction of this instance of learning practice, which I consider to be very inconsistent with the pedagogy of reading online to learn as presented above. The assumption of teachers as conscious "designers of knowl- edge-making environments, builders of learning scaffolds, managers of student learning and researchers of learner performance" (Kalantzis & Cope, 2012, p. 71) is a central tenet of

the multiliteracies approach. However, the educators who have designed this lesson appear to be working in a totally novel context of meaning-making but using insufficient specific conceptualizations about online inquiry reading. Simply put, they seem to lack knowledge of the new, specific pedagogical content that is necessary (Grossman, 1990; Shulman, 1986, 1987). Acknowledgement of this misalignment – between the demands of new reading practices such as those created by the Internet and the use of traditional understandings of reading – finds support in Leu et al. (2011, 2013, 2014); Kervin, Mantei & Leu (2018), who have also expressed their concern with the consequences of this situation: "these misalignments are likely to create important problems for any educational system unable to keep up with the changes" (Leu et al., 2013, p. 1169). The TED-Ed lesson analyzed thus evidences this concern.

Conclusions

Reading on the Internet to learn is a new social practice of meaning-making that is driven by rising numbers of students learning online. It has proven to be difficult and in need of a specific pedagogy. My analysis of one particular instance of this contemporary practice has aimed to show the practicability of a multiliteracies pedagogical approach that might sustain such learning. The case study that I conducted on an online inquiry lesson aimed to provide empirical support for this theoretical approach. The findings allow me to conclude that the theory finds support in new online reading practices as exemplified by the Internet-mediated lessons designed and offered by Ted-Ed. However, my research has also revealed that the full practicability of the online inquiry reading pedagogy discussed in this article is also crucially dependent on teachers' specific knowledge of the theories underpinning this approach. Such pedagogical renewal is likely to be a necessity for all teachers, since online inquiry reading is a resource used by every teacher in their pedagogical practice (cf. Brozzo et al., 2013).

While these conclusions are limited and not generalizable, thus needing the support of further similar research involving other learning platforms and practices, I believe that an important future development arising from this study might be to improve the TED-Ed lesson analyzed and to use it in a classroom of critically motivated students and teachers who have updated their theoretical know-how, with particular focus on what students have learned in the end as well as on teachers' professional knowledge and perceptions about the learning practice. Doing so would provide important further empirical support regarding the practicability of the theoretical approach to online inquiry reading. Besides, it would expand the object of inquiry and the methodological approach beyond the analysis of the designed reading potentials of the lesson into the ethnographical study of the social practices of actual meaning making enacted in situated classrooms (Anderson, 2013). While that would clearly hold the potential for widening the research of the multiliteracies online reading pedagogy, it would also bring in the emergent, unpredictable and non-designed aspects of the relational pedagogical process into the research arena, thus also widening the focus of research to inquire on students' agentive and likely subversive participation, that is, on their "desiring", as Leander and Boldt (2018) put it or on "transliteracies" in Smith et al.'s (2018) conceptualization, in the enacted online reading practice. Therefore, as well as supporting the design of new learning practices, platforms such as TED-Ed might ultimately turn out to be non-negligible research facilitators (cf. Leu

et al., 2013).

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