

## **Multiliteracies in the Making – Multidisciplinary Conceptualization**

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## Abstract

This article focuses on the concept of multiliteracies from a multidisciplinary point of view. By analyzing texts that were created to discuss differing research foci and relationships with the concept, a nonhierarchical and dynamic model, a wheel of multiliteracies, is formulated for understanding the processes of multiliteracies. Communication, temporality, and contextuality form the hoop of the wheel and the spokes include agency, competencies, expressions, individual experiences, and collectivity. The intertwined spokes can be examined through the tensions connected to communication, contextuality, and temporality: individuality/relationality, local/global, and the tensions built in the concept of time, respectively. The conceptualization reflects recent discussions on multiliteracies and develops the concept further through the dynamics emerging from the built-in tensions in the wheel. Furthermore, this text is an exploration of collective knowledge production through academic writing and the processual quality of multiliteracies – or multiliteracies in the making.

*Keywords: collective writing, literacy, multiliteracies, multiliteracy, relationality*

## Introduction

*“We are the chosen ones... But how does our work really relate to multiliteracies?”*

The purpose of this article is to explore the concept of multiliteracies from a multidisciplinary point of view and to inductively formulate a co-produced conceptualization of multiliteracies. Worldwide challenges such as climate change, increasing political radicalization, neoliberal capitalism, and rising numbers of refugees and displaced people continue to shake the foundations of our environments (Anstey & Bull, 2018). In particular, technological advances, such as developments involving online platforms, exchange of information or the use of generative AI, offer unforeseen opportunities but may also seem daunting. We argue that open dialogue, engaging in collaborative, multidisciplinary knowledge production processes and developing multiliteracies, critical thinking and teamwork skills can be of assistance in attempts to circumvent the potential negative effects of these phenomena. This, in turn, can hopefully pave the way for collaborative efforts in promoting social change in the face of technological developments. Thus, a multidisciplinary exploration of multiliteracies is important for reaching a better understanding of the concept itself as well as the potential it holds in terms of research and practical implications. Equipping people with more advanced multiliteracies skills for designing their social futures is now perhaps timelier than ever, since due to increasing complexity and accelerating development of technologies, it is becoming more and more difficult to predict what the future will bring (see also The New London Group, 1996; Anstey & Bull, 2018).

The structure of this text pays tribute to the inductive process of knowledge-production (for a critique for deductive writing logic in inductive research, see Tracy, 2012). At the time the text started to take shape, all six authors worked at a research hub gathered under the concept of multiliteracies, called MultiLEAP (Multiliteracies for social participation and in learning across the life span). Not all of us had, however, used the concept of multiliteracies as such in our research before and approached it from varied disciplinary backgrounds as well as with a diverse understanding of literacies. Thus, when engaging in the process of applying for a job in the research hub, some of us had to explicate and emphasize the connections between our earlier work and multiliteracies more than others. MultiLEAP itself was a result of science political

decisions aimed at strengthening the core fields and research profiles of Finnish universities (for discussion on a similar research hub, see Sarangi et al., 2019). The objective of the hub was to bring together scholars from different disciplines, such as social sciences, humanities, and education, to focus on multiliteracies as skills needed in the mediatized and digitalized world of the 21st century.

MultiLEAP aimed at strengthening the overall research output of the university under ‘the very wide umbrella of multiliteracies’. Since the concept now was a central part of our academic lives, we wanted to give it a go, but do it on our own, exploratory terms. In short, our goal was to form our own definitions and understandings of multiliteracies based on what we *do*: meet multiliteracies in the making, and to analyze our conceptualization against the existing literature on multiliteracies. This, indeed, is the starting point of the present article. Working at the research hub, we noticed that our approaches to and understandings of multiliteracies varied, and we wanted to see, if different approaches and frameworks could be brought together in formulating a novel way for understanding multiliteracies. Thus, instead of a typical literary review or conceptual analysis (see Nuopponen, 2010; Snyder, 2019), this text explores what we as a multidisciplinary collective think the concept of multiliteracies stands for and what it has to offer for our own work and beyond. Only after producing a shared vision of our own, it will be examined against earlier definitions of multiliteracies and the contributions of the multidisciplinary conceptualization for the field(s) will be pondered.

That said, to help the reader, some earlier understandings of multiliteracies will first be discussed before diving into our own concept formulation. Broadly speaking, multiliteracies can be characterized as a means to understand the world (Anstey & Bull, 2018). The concept originates from literacy pedagogy but, ever since the beginning, the initiative has had more far-reaching societal objectives (New London Group, 1996; Cope & Kalantzis, 2009). The scope of multiliteracies can be illustrated for example, by expanding the traditional understanding of literacy as basic reading and writing skills to include the ability to engage in various forms of literacy practices associated with specific tasks. Thus, multiliteracies entail the ability to adapt to always evolving social, cultural and technological environments (Anstey & Bull, 2018). Multiliteracies also encompass the ways in which people learn to navigate cultural norms and practices related to everyday and working life through socialization (Cook-Gumperz, 2006). In other words, “the concept of multiliteracies attempts to address both the definition of literacy and the implications of the practices needed for the many and diverse contexts of 21st-century life” (Hong & Tan, 2020, p. 43).

For us, the most central characterization of multiliteracies was the one provided by MultiLEAP. Besides the “skills needed in the mediatized and digitalized world of the 21st century”, the research hub’s description of multiliteracies emphasized different contexts and the temporal dimensions of learning. This overarching characterization was the starting point towards formulating a collaboratively constructed and multidisciplinary definition for multiliteracies.

### **The Process of Knowledge Production**

The inductive approach used may be somewhat atypical, but it is built on well-established ontological and epistemological principles introduced in literature focusing on collaborative knowledge production and inductive research. Haraway (2004) critiques scientific writing for producing a false, disembodied notion of objectivity. Instead of the singular form, knowledge, Haraway (1988; 2004) argues for *knowledges*, claiming that knowledge is not disembodied but situated, embodied, cultural, historical, and societal. Knowledge-production – and writing as part of it – is therefore always relational, embedded in messy and entangled networks consisting of both human beings and nonhuman beings/forces/actors, which, in our case, becomes evident in multidisciplinary knowledge production processes (see also Peters et al., 2019).

In practice, the relational knowledge-production used in this study leaned on collective writing. Richardson (2000, p. 923) considers writing as a “method of inquiry”, meaning that it functions as “a way of ‘knowing’ – a method of discovery and analysis”. Richardson argues that: “By writing in different ways, we discover new aspects of our topic and our relationship to it. Form and content are inseparable.” (p. 923). The writing process therefore shapes knowledge-production and should not only be considered as reporting of findings (Richardson, 2000; Lykke et al., 2014). For Haraway, situatedness is about “the joining of partial views and halting voices into a collective subject position that promises a vision of the means of ongoing finite embodiment, of living within limits and contradictions – of views from somewhere” (1988, p. 590). The practice of knowledge production is, hence, already collective and situated. Thus, situated ways of producing *knowledges* need to be acknowledged in academic writing as well (see also Lykke et al., 2014). This text is a result of such a collective writing process.

We put forth our situatedness specifically in relation to our varied disciplinary backgrounds and research foci that bring with them varied theoretical and methodological traditions. This approach is in line with Peters and colleagues (2019) who question the single author as the standard in academic writing in the humanities. This kind of study could also be called a collective autoethnographic experiment (cf. Noel et al., 2023), where collective sense-making materializes in the practice of collective writing (Chang, 2016; Turunen et al., 2020). As Turunen et al. note, interdisciplinary knowledge-production includes serendipity that “allows us to relax our conceptions of knowledge, facilitating the emergence of new forms of knowledge out of the combination of different interdisciplinary backgrounds and our own affective experiences” (p. 6; cf. Lie, 2014a). Moreover, the practice of collective writing questions the humanist ideal of the lone academic scholar/author and places emphasis on the importance of collaboration in implementing social change (Peters et al., 2019).

The writing started with individual textual descriptions of our work and then collaboratively built our path towards a multidisciplinary conceptualization of multiliteracies through joined discussions and collective writing. Because of this, this text also serves as a description of writing as processual knowledge-production where the writing process functions as – borrowing from Richardson (2000) – a method of inquiry.

### **The Steps Towards the Conceptualization**

First, each author of this article produced an approximately 1000-word text (in English) where our individual backgrounds, research and approaches to multiliteracies were ruminated. The questions that guided us in formulating the texts were agreed on collaboratively and included the following: What is your discipline/background?; How do you understand/use the concept of multiliteracies?; How does your (theoretical) approach connect to multiliteracies?; How does your research contribute to existing research on multiliteracies?

The texts were read by the authors and discussed in a seminar with other scholars affiliated with the MultiLEAP research hub. Initially, the plan was to include these short texts in the article as fragments displaying our individual voices. As these texts were not coherent enough for this purpose, they were instead used as data for analyzing the concept of multiliteracies. Thus, at this point, there were approximately 6000 words of multidisciplinary, semi-free-flowing thoughts around the concept. Choosing to use texts created by the researchers themselves as data follows earlier research on creative academic writing practices. Koobak (2014), for example, has suggested that unfinished thoughts and reflections may be useful as the basis of academic writing. In addition, Lie (2014a, 2014b) has argued for the importance of free writing as a strategy guiding the research process, and suggested that producing new *knowledges* may require novel ways of writing. To put it simply, the short descriptions of multiliteracies were deemed as a suitable starting point for the formulation of a collaborative understanding of multiliteracies – a dataset from which new conceptualizations might emerge. The main ideas of the texts and our scholarly backgrounds are summarized in Table 1.

**Table 1 Description of the Data**

<b>Researcher</b>	<b>Background</b>	<b>Title of the Individual Text</b>	<b>Approach to Multiliteracies</b>
Laapotti	Organizational communication	Multiliteracies as relations in organizing	Multiliteracies as competence-based relational phenomenon
Iikkanen	Applied language studies	Multiliteracies and migrant professional integration	Social aspects of multiliteracy, cultural literacy, investment, intersectionality
Koistinen	Literary studies, film and media studies, gender studies, cultural studies	Creative writing as environmental literacy	Creative writing as part of ecological/environmental literacy, ecological/environmental literacy as part of multiliteracies

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Sormanen	Communication and media studies, social sciences	Young people’s online expressive civic and political participation and its connections to multiliteracies	Young people’s literacy skills of political expression and engagement in digital and social media spaces
Martin	Educational research and writing studies	Creative writing as a means for teacher development – a narrative and multiliteracies perspective	Creative writing as a part of multiliteracies and a means for teacher development
Kerttula	Contemporary culture studies	Super Mario politics – multiliteracy, transmedia and contemporary issues	Media literacy, cultural literacy, social literacy

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The analysis started with the first readings and discussions on the texts. In this initial reading, connections were established (i.e., similar themes or theoretical approaches) between texts by different authors. After making the decision to use these texts as a dataset, an inductive approach was chosen to find out how researchers from different disciplinary backgrounds understand the concept of multiliteracies collectively – or, to see what we can make with the concept. The first step was the preliminary analysis. Here we wish to acknowledge that collective knowledge-production relies on material realities, and not all the authors were able to take part in every meeting. Online discussions were nevertheless continued on email threads. In the first collective preliminary analysis of the data, each author went through the data and wrote down ‘keywords’ that seemed important for each text. In other words, the task was to find words and concepts that were the core of our approaches to multiliteracies. We collected these keywords in a shared file and discussed the process briefly.

Although everyone had collected similar words, the keywords were on diverse levels of abstraction (i.e., in thematic analysis they could be characterized as themes, sub-themes, or codes). Furthermore, due to our different academic backgrounds, the keywords could have different meanings in different texts: for example, the word *agency* had several meanings in the texts (see Table 2). This notion led to the first result of our quest: As a multidisciplinary concept, multiliteracies is based on non-univocal concepts that need to be defined situationally and, thus, multiliteracies is a concept with embedded definitional tensions or conceptual continuums. Just to give an example, with a term such as *agency*, the tension could be between individual/collective/relational agency (as will be discussed later in more detail).

**Table 2 Approaches to Agency in the Data**

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<b>Researcher</b>	<b>Agency as</b>
Laapotti	Human and nonhuman, relational (sociomaterial, materialization, relational ontologies/non-distinguishable agents)
Iikkanen	Human, individual (professional agency, distinguishable agents)
Koistinen	Human and more-than-human (sociomaterial, distinguishable and non-distinguishable agents)
Sormanen	Human, collective (distinguishable agents)

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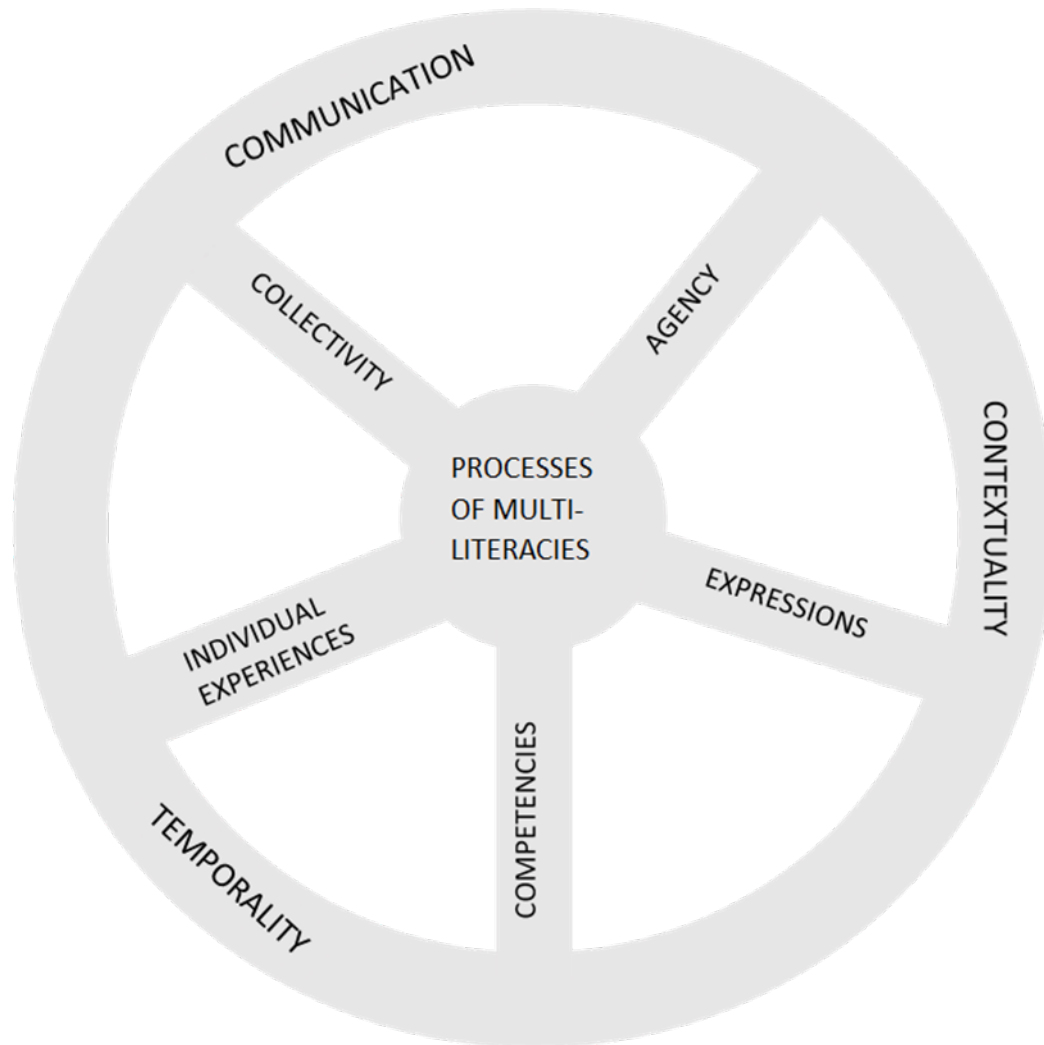
With this new understanding of the nature of multiliteracies, we decided that one of us would serve as the first author and, as the next step, continue with analyzing the keywords, drawing together our joined insights from the preliminary analysis. The decision was made mostly due to time constraints, and it would not endanger the collectiveness of our knowledge-production because we would return to collective writing after the initial analysis. After cleaning up duplicate keywords, I (as now it is only me, the first author who conducted this part of the analysis) ended up with 145 keywords from the texts. I continued by categorizing, merging, and relabeling the keywords into categories and sub-categories (when applicable) by interpreting the meanings and hierarchies between the keywords and categorizing them accordingly. Technically, this was a simple process as described in the literature on qualitative content analysis or thematic analysis (e.g., Braun & Clarke, 2006). I interpreted the importance of the keywords within our original texts based on how focal the keywords were as concepts in the texts. Furthermore, the quantity mattered; if a certain keyword was mentioned multiple times in several texts, it was interpreted as important even if it was not qualified as a key concept in the individual texts (i.e., it was important considering the whole data instead of individual texts).

During the analysis process, I discussed the initial version of the categorization with the co-authors and received support for my thinking in addition to some valuable comments for integrating the categories. As a result, I formed three quasi main categories and five quasi sub-categories, and organized these in the shape of a wheel, as I saw them inherently interconnected and dynamic in nature. I use the term ‘quasi’ here because the categorization does not form a linear main category – subcategory continuum. Instead, the higher-level categories are more like a conceptual or theoretical background for the other categories. Thus, the wheel should be interpreted as a nonhierarchical system where all the parts are related to one another and interact with one another.

The analysis resulted in three main categories, *Communication*, *Temporality*, and *Contextuality*, followed by five sub-categories *Agency*, *Competencies*, *Expressions*, *Individual experiences*, and *Collectivity*. During the analysis, I interpreted the concept of *process* as especially important, and as part of almost all the categories. Thus, it was clearly crucial in terms of the whole, which can be seen as the second key result of our quest. As a result, the main heading, or the center of the wheel, was changed from *multiliteracies* to *processes of multiliteracies*. The processual view will

be discussed in detail later. The result of the analysis, the Wheel of multiliteracies, is presented in Figure 1.

**Figure 1 The Wheel of Multiliteracies**



On top of these categories forming the concept different kinds of *literacies* were mentioned in the texts of the dataset. In addition to multiliteracy and literacy, the terms digital literacy, ecological literacy, media literacy, and social literacy were referred to. These different forms of literacy serve different purposes. They can be viewed as different disciplinary and/or discursive contexts where multiliteracy emerges, used as devices for focusing research under the umbrella of multiliteracies, or seen as pieces of the larger whole that eventually forms our core concept, multiliteracies.

### **Discussing the Wheel of Multiliteracies**

After the wheel of multiliteracies was crafted, I (still only the first author) returned to the original texts with the wheel as a tool for more in-depth analysis. As a result, I drafted a skeleton-like “findings and discussion” section which included the categories from the wheel as subheadings and some notes from the original texts as bullet points under each category. Then, I shared the text again with the co-authors for discussion, critique, and co-writing. In other words, *we* returned to a more concrete practice of collective writing and knowledge-production, making sure that even though the analysis was carried out by only one of us, the collective voices were still there. Next, the outer circle, or the hoop, of our wheel of multiliteracies: communication, contextuality and temporality will be discussed. The most important take from these three fundamental parts of the conceptualization of multiliteracies are the *tensions* (e.g., Bakhtin, 1981) or continuums built in or originating from all these concepts. The tensions do not imply that the wheel is normative or exclusive; the idea is that one should be aware of these and form one’s own relationship or position one’s research with each tension. One can position their research at one end of a continuum or imbricate many dimensions of each continuum.

### **The Hoop of the Wheel**

*Communication* has been one of the key elements of multiliteracies (e.g., Kalantzis & Cope, 2023) and this is also evident in our data. Whereas earlier literature on multiliteracies has treated communication mainly as transfer of information, the wheel of multiliteracies includes *both* the information exchange, or the transmissive, as well as the meaning-making, or constitutive, dimensions of communication (e.g., Frey et al., 2000; Cooren, 2020). Thus, the essence of communication is *relational* because of its mediating quality; communication is the relation between beings (Cooren, 2020). Nevertheless, if communication is reduced to sending, receiving, and interpreting messages (the so-called information-centered view on communication), the outcome is very individual-centered. In the wheel, the relationality of communication brings forward a tension between individuality and relationality, which is visible in many sub-categories in the conceptualization, as will be discussed later. This tension reflects ontological questions around materiality and relationality that are connected to communicative processes, so-called relational ontologies (e.g., Barad, 2003; Kuhn et al., 2017). When operating with multiliteracies, one must accept the deeply communicative nature of the concept and, if necessary, position one’s research ontologically and conceptually somewhere along the continuum between individuality and relationality.

*Contextuality* was very much present in the original texts throughout the different foci in each of our studies. This can be seen as echoing the concept of *situated literacies* familiar from literacy research (see Barton et al., 2000), *situated practice* in the original pedagogy of multiliteracies by the New London Group (1996), as well as Haraway’s call for situated *knowledges* (1988; 2004). For example, youth, activism, education, environment, migration, and games were mentioned as contexts where multiliteracies are seen as meaningful. However, the ways in which context was presented varied from more detailed (e.g., memes, employment opportunities) ones to more general (e.g., art, language, work-life). From this notion, the tension or continuum pertaining to contextuality was drawn: the continuum between the local and the global (i.e., detailed vs. general; micro vs. macro). Thus, when operating with the concept of multiliteracies, one must be aware of the contextual or situated nature and the scale of the concept. Furthermore, one should

define the context(s), and their scale, important for the study, theorizing or teaching/learning situation at hand.

The third concept on the hoop of the wheel of multiliteracies is *temporality*. Temporal elements in the texts emerged as discussions of situatedness, when it was pointed out that the same sets of skills may not apply the same way in other times and places. Furthermore, other time-related phenomena, such as lifelong learning and the ever-increasing pace of cultural and technological development, or in short, change, are central issues connected to the temporal dimension. The tension arising from temporality connects to the tension between the situation at hand (i.e., the here-and-now), the past, and the future, but also to other time-related issues such as pace, synchrony/asynchrony, and linearity/nonlinearity. Thus, context and temporality are separated from each other even though both include characteristics of situatedness. For example, in interpreting cultural texts (here, texts are understood broadly, encompassing not only written texts but also other forms of cultural expression), time and temporality relate to the questions of when something is created and when something is read/interpreted; however, it also is important *where* these texts are created and interpreted, and this is a different question from *when*. Thus, when operating with the concept of multiliteracies, one must be sensitive to temporal issues around the focus of the study or the ways in which these are being theorized.

Communication, contextuality, and temporality form the hoop of the wheel of multiliteracies. With this, we wish to express that these are present in all the concepts of the spokes and the center of the wheel, too, and they are the conceptual prerequisite for the phenomenon of multiliteracies to exist. To put it simply, the ever-intertwined subcategories in the realm of multiliteracies need communication to emerge, exist in a context, and are affected by temporal issues. Analytically, all the categories in the spokes can be explored through the tensions or continuums related to communication, contextuality, and temporality: individuality/relationality, local/global, and the tensions built in the concept of time, respectively. The hoop of the wheel highlights how our collective thinking resulted in multidisciplinary, contextual, and situated *knowledges* because of the tensions that can affect ontological and epistemological issues.

## **The Spokes of the Wheel**

### ***Agency***

In the data, agency emerged as an important concept with regard to multiliteracies. However, agency was understood in diverse ways. First, whereas for some authors of this article agency only refers to human skills and capabilities, and thus implies the Giddensian idea of the knowledgeable agent (e.g., Giddens, 1984), for others it is also a nonhuman (e.g., Latour, 2005), or more-than-human (e.g., Pearson, 2015) question. Second, the tension between individuality and relationality is apparent, because agency was understood as individual, collective, or relational. All these differ substantially from one another and, thus, make a difference in terms of the overall understanding of multiliteracies. For example, are multiliteracies something an individual person can ‘possess’ or execute or is it a collective accomplishment? Collective agency is usually connected to social structures, and relational agency sees agency and action as something that exists only between different beings or entities; no one or nothing can act on their

own as there is always a relation to someone or something (Barad, 2003). The difference between individual and collective agency can also be examined through the tension between the micro and the macro.

These views on agency can, however, mix. Online expressive political participation, such as signing or forwarding online petitions, displaying campaign slogans on personal websites, and posting, commenting, and liking political messages (Gil de Zúñiga et al., 2010), becomes a channel of agency for people through communicative power (Habermas, 1962). Social and digital media environments consequently create communication spaces enabling, for example young people with often restricted access to political debate, the agency to negotiate, express, and contest societal issues and power hierarchies (Castells, 2007). Hence, the term agency here refers to both individual and social circumstances. Furthermore, in the context of language learning, agency can be examined both from an individual as well as from a social perspective. Each language learner and user has their own unique social and cultural trajectory, highlighting the contextuality of multiliteracies. At the same time, individual language repertoires are shaped by the various contexts in which language learners have picked up the resources they have at their disposal (Dufva & Aro, 2015). Thus, both individual agency, that is, how people appropriate the linguistic resources they have acquired, as well as the social circumstances that have allowed them to add particular expertise to their repertoire, play a role in language learning and use.

Connecting individual agency and relational agency to materiality, the material practices of writing in and with nature (e.g., Neimanis, 2016), for example, should be considered as part of today's multiliteracies (Koistinen & Bister, 2023). Writing as a creative process is located in the practice of the writing individual but the materials, tools, and surroundings where one writes, always make it a relational socio-material process. This relationality is highlighted when writing collectively in a human collective or when for example utilizing natural elements – such as leaves, rocks, or pinecones – as part of writing in nature. One of the authors considered materializing processes crucial for organizing in this digital age and tightly embedded in agency. Cooren (2020) defines these processes as "ways by which various beings come to appear and make themselves present throughout space and time" (p. 1). For example, AI tools materialize in communicative processes even when they are not used, and, thus, express their agency in relations between humans. This viewpoint leans on so-called strong socio-materiality which sees everything existing both in social and material forms and that existence in itself is relational (Barad, 2007; Cooren, 2020). From a relational perspective, agency is highly dynamic in nature, which forefronts the contextuality and temporality of multiliteracies, because the meaningfulness of different kinds of agencies materializes through time and space.

### *Competencies*

Competencies reflect the hoop of the wheel perfectly because they can be seen both as individual attributes and relational phenomena; they are contextual because the same skills do not necessarily apply the same way in different contexts. They also have a temporal dimension through learning and development. When looking at the individual level, things like expertise, education and work experience often form the core of a person's competencies. In

communication studies, communication competence traditionally consists of three dimensions; the cognitive, the affective, and the behavioral dimension that are usually connected to the individual (e.g., Spitzberg & Cupach, 2002). Some research on communication competence has taken a relational stance by suggesting that communication competence can be treated as a team level phenomenon (Jablin & Sias, 2001; Shockley-Zalabak, 2016), and as such, is seen as something that exceeds the individual. Competencies can also be viewed through the lens of the social world. For instance, in the context of migration, a degree in higher education or years of work experience may lose their potential when transferred to a different context. The same applies for language proficiency. In Finland, skills in European languages, and English in particular, are considered valuable, and even a very high competence in for example Asian or African languages is often devalued (Laitinen et al., 2023).

Multiliteracy (in a singular form) as such can be considered also narrowly as a competence, as has been done in particular in the field of education. For example, in the Finnish curriculum for basic education (Finnish National Agency for Education, 2014), multiliteracy is one of seven transversal competences. Schools are expected to integrate these competences in their teaching. Thus, each teacher in Finnish basic education is a teacher of multiliteracy. In the Finnish national core curriculum (Finnish National Agency for Education, 2014), multiliteracy is defined as the skills of interpreting, producing, and evaluating different texts (verbal, written, visual, auditive, numeric and kinesthetic). In Finland, multiliteracy plays a significant role in all national curricula from early childhood education to upper secondary education. In this context, multiliteracy (in a singular form) is tied to competence and distinct forms of literacies, and not seen as widely as the wheel of multiliteracies suggests.

### ***Collectivity***

Collectivity and various kinds of collectives can be examined both from individual and collective points of view, and the focus can be either on the micro or the macro level of the collective. Collectivity is organized temporally and exists in a specific time frame. Thus, all the tensions stemming from communication, contextuality and temporality become evident in collectivity. Collectivity can be present for example in learning and development, expertise, and collaborative construction of knowledge – such as collective writing. Today's social and digital media environments have further created a new communication space where many actors, such as media organizations, political decision makers and people with extensive online horizontal networks, negotiate, express, and contest societal issues and power collectively (Castells, 2007). Such a space allows people to independently share personalized content related to common civic/political themes on various social networks (i.e., collectives) and platforms, which can have political significance as connective action (Bennett & Segerberg, 2012). This can be interpreted in such a way that multiliteracies are needed in navigating and acting in a network of various agencies.

For many of the authors, creative expression is at the core of our research. Traditionally, creative expression, such as writing, has been considered a solitary act. However, for example, Sawyer (2012) as well as Gilbert and Macleroy (2020) argue that creative expression is a socially embedded activity and a social process, even when we are writing on our own. The creation of

art is always impacted by already existing work, and it often aims at reaching an audience, hence drawing lines according to all the three sources of tensions mentioned above: communication, contextuality, and temporality. In addition, organizing is always constituted communicatively through various human and nonhuman beings (e.g., Cooren, 2020). Furthermore, when people express civic and political issues online, individuals are the ones producing and evaluating others' texts (and visual material), and through this exchange, social networks are formed.

### *Expressions*

Here, expressions mean the production, creation, and expression of meanings through visual, auditive, kinesthetic, or textual means, such as metaphors or stories that can be communicated via varied mediums such as written texts, music, visual art, or dancing and performance art. For example, production, presentation and sharing of written text, or combining written and other types of texts creatively (e.g., drama, picture books, podcasts, video art) can be seen as a part of engaging in multiliteracies (Rasi et al., 2019). Again, all three tensions become evident, because of the viewpoint of the performer (individual) vs. the audience (collective), different contexts such as social media, and temporality in a form of intertextuality are involved.

In the texts, creativity was often described as the driving force behind expressions. Creative expression can also be seen as a means for learning and growth (Bolton, 2011; Mead, 2024). For example, literacy approaches to writing can offer new insights and perspectives, invite the use of metaphors, and help zoom in and out of a lived experience (Bolton, 2011). Through creative expression people can (re)build their identity, participate in organizing, and develop their competencies, for example.

Contemporary participation in politics often happens through engaging in “online political expression” such as posting, liking, and commenting on political content, rather than through traditional (collective) activism (Keating & Melis, 2017). Social/digital media enables young people to express their civic/political selves in many traditional ways (writing), but, at the same time, also in a novel and engaging manner (liking, reposting etc.). Expressions of *affect* can be explored (among agency, collectivity, and expressions), for example in the context of girls and young women's online political expressive participation that involved engaging in practices requiring multiliteracies skills.

### *Individual Experiences*

The individual experiences spike/category focuses naturally on the experiences of an individual in their environment. At the same time, however, these experiences result from interactions within an environment and, thus, the relational dimension can also be present in individual experiences. Earlier experiences are reflected on current ones and guide people's actions in the future (e.g., Ahmed, 2014). Individual experiences refer for instance to identity formation, emotions and affects, and aesthetic experiences. Individual experiences in multiliteracies can be analyzed, for example, through storytelling and narrative identity work; people (re)build and (re)negotiate their understanding of themselves and the world through storytelling (Brockmeier & Carbaugh, 2001; Bruner, 1987). Some of the authors of this article operate in contexts of migration and identity. Understood in post-structuralist terms, identity is a highly fluid construct

(see e.g., Norton & Darvin, 2015). Since migration can be characterized as movement through social space, it is important to consider how identity formation is affected by a potential conflict between an individual's habitus, and the new field migrants enter (Bourdieu, 1999). In other words, people may struggle with integrating the individual (how they see themselves) and the social (how they are seen by others) aspects of identity formation in a novel environment.

In studies under the umbrella of new materialism or sociomateriality, affect is increasingly the focus of study, for example in organizational studies (see Gherardi, 2019; Kuhn et al., 2017). Thus, when adopting the relational view of multiliteracies, these should not be left out when applying the concept. It has been argued that aesthetic experience of nature can lead to a stronger connection with the environment, evoking a desire to safeguard nature (e.g., Thiele, 2013); therefore, connecting the human individual to the collective, the broader natural realm. This sort of aesthetic experience can also be mediated through art or emphasized by the process of making art (Thiele, 2013), and art and aesthetic experiences can, in turn, be utilized as part of multiliteracies (Koistinen & Bister, 2023).

### **Centre of the Wheel**

Now we have reached the hub of the wheel: the processes of multiliteracies. Analyzing the texts about our individual research and our understandings of multiliteracies revealed intertwined concepts all of which are processual in nature. This leads us to a conclusion that multiliteracies as a concept is a process and, as such, a fluid, dynamic, and living construction the origins of which can be interpreted and discussed through various theoretical underpinnings. This constantly evolving concept can be grasped analytically by considering the perspectives presented above and by demarcating one's own stance or position within these processes that constitute the field of multiliteracies.

The tensioned foundations, or the hoop of the wheel, support the processual view: communication is a process by definition: contexts materialize in (socio-cultural and/or natural) processes, and temporality equals the complex, processual essence of time. The spinning movement of the wheel highlights the dynamics within the continuums between the individual and relational, local and global, micro and macro, now, then and in the future, and those of linearity and nonlinearity. The hoop is not a wheel yet; all the spokes, or sub-categories, are based on the hoop of the wheel and because of this link, they are processual by nature, too.

Next, the key processes introduced in our original texts are described. One process that has already been discussed is the process of storytelling which connects with many of the sub-categories. The processes of meaning-making and knowledge-production (of which this text illustrates) were mentioned in the original texts many times. In addition, learning and development of practices were present from a pedagogical point of view as well. Another important part of multiliteracies is the continuing and dynamic process of materialization, a process in which agency and communication are crucial. This material point of view could be placed under the umbrella of new materialities. These approaches argue, for example, that the way reality is organized by societies is highly dependent on how people make sense of physical locations, such as different spaces or geographical areas (Enns-Kananen & Saarinen, 2023).

Therefore, various assemblages of the socially constructed *and* the material features of societal phenomena, including the interaction between the two, should be studied *together* rather than focusing on each of these individually. To sum up the hub of the wheel, it is all about the process of change. Many changes in knowledge, position, body, place, state of mind, point of view, ages, networks, and so on, are rigidly connected to the processes of multiliteracies. This concurs with the notions of Hong and Tan (2020) in their review of theories and practices of multiliteracies in the classroom; they conclude that especially technological developments result in changes in literacies, mindsets, and pedagogies.

### **Contributions and Conclusions**

This exploration of the concept of multiliteracies started with the authors wondering how their different approaches to multiliteracies can be brought together to expand the current theories and conceptualizations of multiliteracies. We were also wondering why *we* were the ones chosen to strengthen a certain university's research on multiliteracies. In the very beginning of our journey, which is typical for inductive approaches, there was no clear understanding of the forms of contributions this research and theorizing could offer – the results were yet to emerge. To be successful, this study should accomplish something that a) echoes with earlier theorizing of multiliteracies (i.e., the focus of analysis was multiliteracies and not something else), b) brings something new to the field, and c) benefits future studies, teaching, working life, and theorizing. In this section, the findings are compared with earlier understandings of the concept and the contributions are outlined.

### **Wheel of Multiliteracies Contextualized**

The basic idea of multiliteracies in the context of education and learning has been reduced to the idea of two dimensions of multi, the multisituational and the multiform (Kalantzis & Cope, 2023; multilingual and multimodal still in Cope & Kalantzis, 2009). *Multisituational* means that meaning is connected to situations (Kalantzis & Cope, 2023) and, as such, links directly to contextuality in the hoop of our wheel, but also to competences and communication as explained above. Elsewhere, Gee (2017) argues for a balance between 'system and situation' by non-normative elastic approaches. The wheel of multiliteracies furthers this development through its dynamic form that is visible already in our first finding: multiliteracies is based on non-univocal concepts that need to be defined situationally. *Multiform* refers to multimodality which is not explicitly visible in the wheel but built in every spoke and the hoop, accentuated in competences, agency, contextuality (i.e., a communication technology as a context), and communication, which is inherently multimodal. Because the hoop of the wheel is a prerequisite for the spokes, multimodality is firmly present in our conceptualization but in a more implicit manner than presented by Kalantzis and Cope (2023).

Thus, we argue that our approach exceeds the limits of the multisituational and multiform. We do not abandon the two multi's but see them from new perspectives, and add new contents, especially through the theorizing about relationality. This is not surprising because we come from many disciplines and the research hub (MultiLEAP) focused on the overall skills needed in the digitalized and mediated 21st century, not limited to education and learning. Understanding a

complex world requires complex models, and our multidisciplinary approach complexifies multiliteracies in a systematic manner through the wheel of multiliteracies. Perhaps, to answer the demands of this complex and technology-centered world, multidisciplinary should be the third ‘multi’ within multiliteracies.

In 2004, Kalantzis (member of the New London Group) pondered the developments of multiliteracies and discussed the increasing complexity around the concept, mostly connected to new technologies. When talking about the professional role of the teacher, Kalantzis concluded:

They have to be more scholarly; they have to know more; their practitioner role is much more complex than ever before; and they have to work in collaboration with others. The one teacher, one classroom, one group of kids ... is becoming less and less viable in delivering real world knowledge and forming world relationships and experiences relevant to real world needs. (Cloonan, 2004, p. 51)

These notions are visible in the wheel of multiliteracies almost 20 years and many technological evolutions later. A (re)conceptualization of multiliteracies must be versatile and dynamic by design to answer to the complexity-challenge posed by the contemporary world. That is exactly what the wheel of multiliteracies provides through the dynamics embedded in its structure. In the quote above, communication, agency, collectivity, individual experience, and temporality are clearly visible in such terms as collaboration, forming, relationships, and experiences. Furthermore, the all-around change that is condensed in the hub of the wheel seems important in the quote (also Hong & Tan, 2020).

In their more recent work, Kalantzis and Cope (2023) review research on multiliteracies and sum up and update their understanding of the concept as key authors in the field; it is thus reasonable to discuss the wheel of multiliteracies with their thinking. They define contemporary times as a cyber-social era characterized by “differentiated meaning-making practices in social media, affinity group formation, multifarious identities, and the increasingly specialized domains of work, professional, and technical discourses” (p. 5). For Kalantzis and Cope, these are the reasons *why* the multiliteracies approach is needed. In our wheel, these points are reflected, for example, in competencies, collectivity, communication, and, most of all, contextuality. When discussing the *what* of multiliteracies, Kalantzis and Cope (2023) configure participation in meaning through thinking (representation), speaking (communication), and listening (interpretation). From the point of view of communication studies, thinking, speaking, and listening are obvious parts of the communication process, even though very much concentrated on the individual. We argue that a more comprehensive view on communication as a process and as both transmissive and constitutive (for definitions of communication, see Cooren, 2020; Kuhn et al., 2017) serves the overall concept of multiliteracies well. This is because communication constitutes the contexts, interpretations, meanings, and collectives we live in.

Kalantzis and Cope (2023) use the term *transposition* to describe “the transformations that occur in the meaning and the role of social agents in those transformations” (p. 7). This process comprises arrangements in place and time and the forms or modes of meaning, including text, image, space, object, body, sound, and speech. They have operationalized the transposition

process (of meaning) through five questions concerning reference (what?/things and their properties), agency (who?/actions, roles, and conditions), structure (how?/cohesion, design), context (when?/where?/time and place), and interest (why?/purposes, rhetorical appear) (p. 8). This conceptualization of transposition bears great resemblance to the wheel of multiliteracies. At the same time, however, there are many fundamental differences. The main difference is the notion of tensions and the diversity in the meanings of the concepts/terms within the conceptualization. This makes the wheel of multiliteracies a more dynamic and multidimensional tool in understanding not only multiliteracies but also the different approaches to multiliteracies.

Contrasting our conceptualization of agency with that of Kalantzis and Cope (e.g., 2023), for example, we find that even though they use the concept of agency, they do not really demarcate their viewpoint on this debated concept. The built-in tensions of the wheel of multiliteracies offer tools for understanding the possibilities for using the concept of agency in different (but overlapping) ways in various contexts. Especially relational agency and its close-knit connection to the processes of materialization (Cooren, 2020) differ from the points made by Kalantzis and Cope (see also Leander & Boldt, 2012). However, relational ontologies, including the viewpoint of agency, have been acknowledged as important in literacy studies as well: Kuby (2017) for example argues for more-than-human ontologies in literacy studies by building their thinking on Barad's (2007) agential realism. In addition, Jokinen and Murrin (2020) approach literacies as inhuman by focusing on the concept of touch.

Furthermore, the wheel of multiliteracies converges with the analysis by Leander and Boldt (2012). In their influential article, they "reread" the pedagogies of multiliteracies through the philosophy of Deleuze and Guattari (1987) and divided it into three categories: 1) text and bodies; 2) change, design, and identity; 3) and temporality. This very relational viewpoint with emergent assemblages has similarities with the wheel of multiliteracies through the contextuality, temporality, and materiality dimensions of the processes of multiliteracies. Leander and Boldt (2012) describe (the pedagogy of) multiliteracies as ongoing, or as we would say, processual. They also comment on affect and emotion, which are also visible in our conceptualization. However, their argument is built heavily on Deleuze and Guattari's thinking and, as such, provides a specific theoretical perspective, whereas the wheel of multiliteracies is more inclusive and versatile (less normative) through its multidisciplinary and the built-in tensions it evokes. Furthermore, Leander and Boldt leave out or do not emphasize some of the elements and properties the wheel of multiliteracies has, such as agency, competencies, and communication per se.

When reading the key contributors in recent multiliteracies literature, such as Kalantzis and Cope or Leander and Boldt, we can conclude that our conceptualization reflects and contributes to the thinking of both the original creators of and the re-readers of the concept. Thus, we argue that we have achieved the first step for an adequate contribution in our analysis and in creating the wheel of multiliteracies; it echoes earlier theorizing on multiliteracies. Furthermore, we have outlined the added value of the wheel in terms of earlier points of view; the multidisciplinary, dynamic, and multilevel wheel of multiliteracies introduces new perspectives around the concept. Thus, we argue, we have reached the second step by bringing something new to the field, and thus making a genuine contribution.

In their influential paper, Dafouz and Smit (2016) outlined a multidisciplinary framework for analyzing English-medium education in multilingual university settings. This conceptual framework, called ROAD-MAPPING, consists of six dimensions that are “inherently complex, contextually bound, and intersecting dynamically with one another” (p. 397). They argue their framework helps in describing, analyzing, and comparing research in different contexts. Similarly, the wheel of multiliteracies can work as such a framework for multiliteracies research because of its complexity, contextuality and dynamicity embracing features rooted in multidisciplinary *knowledges*. Furthermore, the wheel of multiliteracies could work as a framework for a systematic review: findings of studies focusing on (whatever) literacy could be collected within the wheel according to the themes of the studies (in line with the concepts in the wheel). Then, these findings could be analyzed together and interpreted as *multiliteracies* and, therefore, a more comprehensive understanding could be achieved.

Finally, the focus of many taxonomic approaches to multiliteracies is in various forms of distinct literacies, such as digital, visual, media, or health literacy (for a review of taxonomies, see Marzal, 2020). The wheel of multiliteracies enables the analysis and comparison of different forms of literacies. Altogether, the wheel of multiliteracies can work as a methodological tool for studying, observing, and theorizing multiliteracies. With these notions, we claim that the wheel of multiliteracies also contributes to future studies and theorizing, and overall understandings of the field. Furthermore, the wheel provides practical implications for researchers (e.g., as a methodological tool) and practitioners (e.g., as an umbrella tool for understanding different dimensions of multiliteracies). Thus, the third step for adequate contribution is achieved.

### **Collective Production of Knowledges**

Our nascent conceptualization has many connections and similarities with the ideas of the authority figures in the field of multiliteracies. This can be viewed as validating collective writing/knowledge-production as a methodology to approach multiliteracies. The fact that the findings of this study converge with earlier understandings of multiliteracies, indicates that the very starting point of this exercise, which is bringing scholars from various disciplinary backgrounds together, has resulted in *knowledges* that none of us could have produced on our own. Our collective exploration foregrounds the multidisciplinary value of multiliteracies and the value of a multidisciplinary approach. Just reflecting on what has been said before has value through strengthening the existing theory, but the wheel of multiliteracies also contributes to theory-development of multiliteracies in a novel way.

As authors of this article, we have engaged in a learning process, an exploration of collective writing and collective knowledge-production: multiliteracies-in-the-making, as we call it. This collective knowledge-production and collective writing experiment works as an example of the many dimensions of multiliteracy. As a group of researchers with diverse backgrounds from versatile fields, brought together by a research hub born out of science politics, we lived through all the tensions, concepts, and phenomena introduced on the wheel of multiliteracies. One could say that we learned both from the process and from each other, as well as about the concept. For example, one of us studies the role of algorithmic technologies in organizing, and the collective

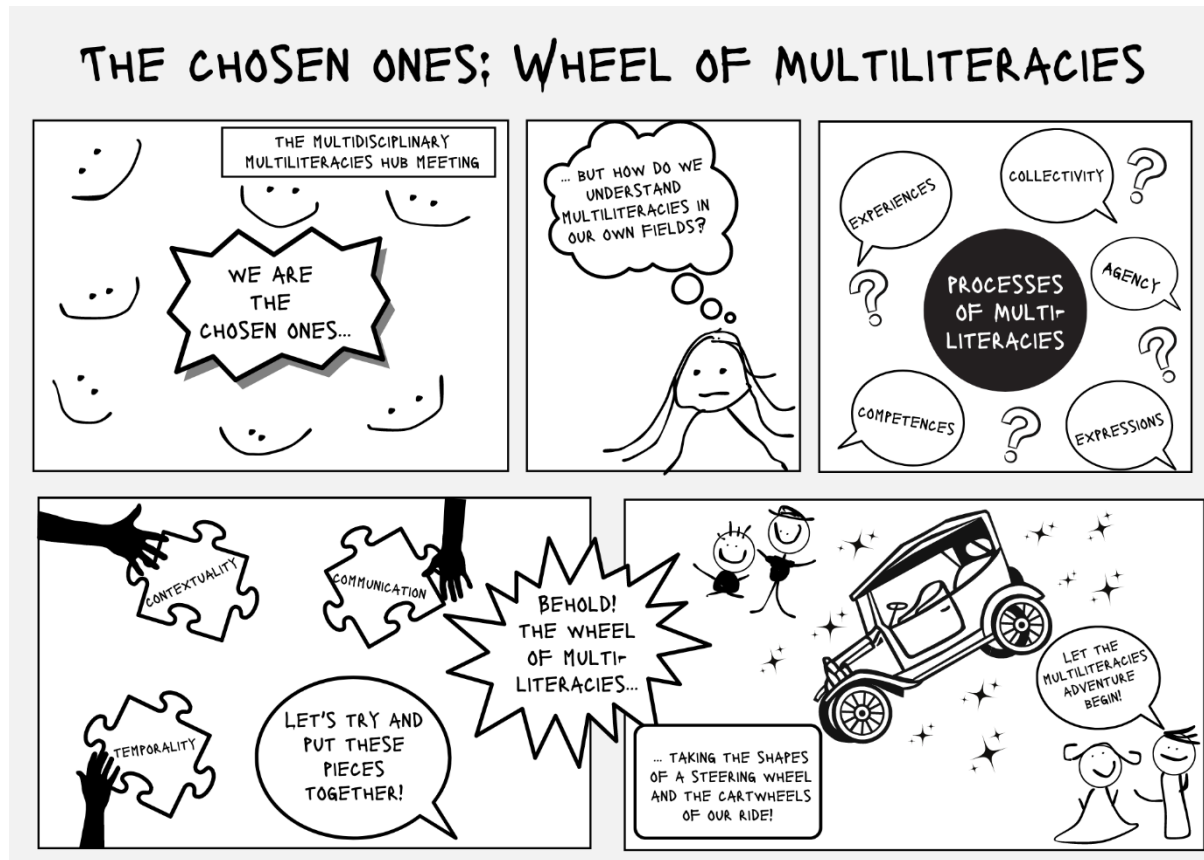
knowledge-production and the wheel of multiliteracies has strengthened the analysis of these algorithmic technologies.

Time and change have been present in writing this text. For example, during the finalizing of the text only one of us still worked in the research hub that brought us together. Three of us already worked in other universities and three in different positions within the same university we all started in. We had to communicate, define new contexts we operated in, and feel the pressure of time to finish this manuscript while working simultaneously on other projects and in varying positions. At times, the writing was very much collective but at other times it was more on the shoulders of an individual (usually the first author) or a smaller group.

The process was indeed messy and as the wheel of multiliteracies shows, the result was more an entanglement of *knowledges* than one shared knowledge (cf. Haraway, 2004). If someone pictures the wheel as focused on an individual at the micro level and only on one point in time (e.g., Usanova & Schnoor, 2022), it is a very different image when compared to a wheel that is understood as relational, context-sensitive, and takes development over time into consideration (e.g., Socolovsky, 2018). The wheel changes according to the position one takes to the concepts on the hoop of the wheel. We think this reflects the reality in the processes of multiliteracies. A similar conceptually unsettling and processual view on theory in literacy studies has been promoted by Snaza (2021) in the context of affect theory. The method and the form of this text played a substantial role in the learning process we all went through; we had not written together before nor had we been engaged in similar projects (yet some of us had more experience in writing non-traditional academic texts than others – and, during our writing process, one of us even ended up researching collective writing, although not in connection to multiliteracies, in a strategic profiling project of another university). Stretching the conventions of academic writing in a project like this necessitated having an understanding of those conventions. Acknowledging the differences in our backgrounds was crucial, for example, for the use of concepts and terms; we had to negotiate for shared meanings considerably. Altogether, we had to implement our competencies and learn new skills during this project.

The path from the start of our process of knowledge-production to the wheel of multiliteracies is described in Figure 2, which was formed into a comic strip to bring more multiliteracies into this multiliteracies article. The wheel of multiliteracies both carries us (as cartwheels) and helps us guide our way (as a driving wheel) through our research work and life in the 21st century.

## **Figure 2 The Process of Knowledge-Production**



We are aware this article touches only slightly on some enormous concepts (agency, competence, affect, philosophy of Deleuze and Guattari, etc.); it is beyond the scope of this text to explain these concepts thoroughly. We are also aware that although we place emphasis on situated *knowledges*, our approach to positionality is quite narrow, as – even though we discuss affect briefly – it mostly leaves out embodied experiences (of i.e. class, race, gender, sexuality, age, and dis/ability) outside of our scope (cf. Haraway, 1988; Haraway, 2004). Further research should take up this challenge and continue the theorizations of this article with a more complex and intersectional understanding of positionality. Additionally, even though multidisciplinary, we represent various disciplines in a quite narrow sense (see Table 1). We do not claim that multiliteracies has been covered fully here; this was an exploration on what *we do* from the viewpoint of the concept, and the aim of this project was to present one multidisciplinary approach to making meaning of the concept of multiliteracies. For example, pedagogies in general are not the focus here and the analysis of the four components of the pedagogy of multiliteracies (situated practice, overt instruction, critical framing, and transformed practice) (New London Group, 1996) are left out on purpose. Furthermore, the issues of accessibility and inclusion (see Kalantzis & Cope, 2023) are not explicit in the wheel of multiliteracies, and this is one of the developments our approach should see through. For example, Drewry et al. (2019) show how a multiliteracies approach supports inclusivity in literacy learning through multimodality.

This conceptualization moves from pedagogies to more holistic understandings of multiliteracies and offers the concept as an overall multidisciplinary tool for exploring and understanding the skills needed in the 21st century, across contexts and the lifespan. We would like to see the usefulness of our conceptualization discussed and argued actively because we believe the processes of multiliteracies play a key role in tackling many significant challenges of our time. Understanding especially new technologies and their role in society demands knowledge of multiliteracies both on practical and theoretical levels. As new technologies continue to evolve, multiliteracies offer the critical framework needed to navigate and shape the complex and disperse (communicative) landscapes of the future. By recognizing multiliteracies, individuals can comprehend and critically engage with the technologies that shape our contemporary and future societal structures. As researchers, we must engage with multidisciplinary collaboration to build robust yet adaptive theoretical models that embrace the complex and dynamic nature of this technology-instilled world.

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