

RESEARCH

Meanings Made in Students' Multimodal Digital Stories: Resources, Popular Culture, and Values

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The young generation are both consumers and producers of digital multimodal texts and can thus be seen as cocreators of the culture and the contexts that they are part of. Learning more about how students create multimodal texts and what students' texts are about can extend the understanding of contemporary meaning making. This study examines 23 Swedish fifth-grade students' multimodal digital stories in a school context. The aim of this research was to understand the meaning that the students made in their digital narratives and to describe how they made that meaning. This study's multimodal textual analysis is based on the multiliteracies perspective. The results indicate that all of the students, to varying degrees, took advantage of the available digital and modal resources. Some students chose writing as their sole mode, but others used all of the available resources. Furthermore, the results revealed that students' popular culture experiences influenced many of their texts, which can indicate that popular culture texts are used as resources for making meaning about the world.

Keywords: digital resources; meaning-making; multiliteracies; multimodal design; popular culture; students' text; values

Introduction

Various forms of multimodal texts have become increasingly common in everyday life, largely due to digital innovations. Multimodal texts consist of various modes, such as writing, images, video, and music or sound effects. Social media sites, computer games, and TV shows are examples of multimodal texts (Kress, 2010). According to Bezemer and Kress (2016), it is important to understand the potential of these modes as meaning-making tools in contemporary media. For teachers, this extending variety of meaning-making resources can be challenging because they are facing new requirements regarding the design of education (Jewitt, 2008). Understanding both learning and teaching in the contemporary multimodal classroom environment is essential for considering both how meaning is created and what types of meaning are being created (Jewitt, 2008). Formal meaning-making and text-making in school are still dominated by written language texts, whereas informal meaning-making, often outside of school, involves encouraging young people to make meaning that involves engaging with multimodal multimedia texts (Kress, 2010). Concerning meaning-making in Swedish classrooms, the nation's teaching practices are still characterized by writing traditionally being the most valued form of expression (Borgfeldt & Lyngfelt, 2014; Svärdemo Åberg & Åkerfeldt, 2017). Because stu-

dents' meaning-making and text-making are not limited to what happens inside the classroom walls, schools have the important task of building bridges between students' informal text-making activities and the school's formal text-making activities (Edwards-Groves, 2011; Jewitt, 2009). National and international researchers have indicated that students engage with various multimodal digital texts when not in school, such as popular culture texts (Björkvall & Engblom, 2010; Edwards-Groves, 2011; Jewitt, 2009). Students' text production often reflects their experiences of popular culture (Dunn, Niens, & McMillan, 2014; Schmidt & Wedin, 2015). When engaging with digital multimodal texts such as popular culture texts, critical reflections concerning the text's purpose and whose interests are represented in the text become important (Janks, 2010; Romme Lund, 2017). Although students are enthusiastic consumers and creators of multimodal texts, they sometimes lack critical reflection about texts they encounter or produce (Ryan & Anstey, 2003). However, Dyson (1997) and Hagood, Moon, and Alvermann (2018) argue that students do reflect upon popular culture texts and are, from an early age, capable of understanding much of the underlying messages contained in the texts.

Taking students' experiences of and interests in digital multimodal texts as resources in literacy education can help to reduce the gap between students' informal text-making activities and a school's formal text-making activities, which in turn may include more students in the school's text-making activities (Edwards-Groves, 2011; Jewitt, 2009; Schmidt, 2018).

This study can expand previous knowledge concerning students' contemporary meaning-making in general and students' multimodal text-making at school in particular. A growing body of research exists on how students design multimodal texts in the school environment (Björkvall & Engblom, 2010; Dalton, 2014; Edwards-Groves, 2011; Engblom, 2016; Jewitt, 2009; Svärde Åberg & Åkerfeldt, 2017; Sofkova Hashemi, 2018; Mills, 2011; Smith, 2017) and on how students' engagement with multimodal texts in informal settings influences their text-making at school (Dunn et al., 2014; Engblom, 2013; Schmidt & Wedin, 2015; Williams, 2014). This study will extend this existing knowledge about how 10- and 11-year-old students use available resources when designing multimodal narrative texts on the subject of Swedish as well as what these students write texts about. Such knowledge can contribute to literacy education that takes advantage of students' interests, experiences, and previous knowledge about multimodal text design.

In this study, we examined the resources that students used when designing digital multimodal texts as well as the meaning that students made in their texts. Therefore, the aim of this study is twofold: to understand the meaning that students make in their digital multimodal texts and to describe how they make that meaning. We used the following research questions to achieve this aim: Which of the available resources do students use? Which themes do students chose to create texts about? What values do the students express in their texts?

Students' Design of Multimodal Texts

The research field on contemporary communication (Adami & Kress, 2010; Bezemer & Kress, 2016; Kress, 2010) as well as research on students' multimodal literacy practices (Kalantzis & Cope, 2012; Jewitt, 2009; Lankshear & Knobel, 2008; New London Group [NLG], 1996) have created valuable knowledge concerning how contemporary young people make meaning out of available resources in formal and informal settings. Due to the multimodal character of digital media, students who are designing texts have greater access than ever before to multiple modes (Jewitt, 2009). However, the teaching practices in Sweden are still characterized by writing traditionally being the most valued form of expression for producing meaning (Borgfeldt & Lyngfelt, 2014; Svärde Åberg & Åkerfeldt, 2017). Svärde Åberg and Åkerfeldt (2017) found that high school students mainly used linguistic resources, such as writing, when designing texts, even when they had access to multimodal options. They also stated that the students' attitudes were the result of educational traditions that promote writing as the superior mode of expression (Svärde Åberg & Åkerfeldt, 2017). Some researchers, however, have indicated that the culture of textual design in educational settings is about to move away from the traditional focus on printed text and towards a greater focus on digital and multimodal texts (Borgfeldt & Lyngfelt, 2014, 2017; Blåsjö, 2010; Öman, 2015; Öman & Sofkova Hashemi, 2015). For example, in a study of 9- and 10-year-old students, Borgfeldt and Lyngfelt (2014) found that when teachers encouraged

students to choose resources other than writing, most of the students relied on visual modes such as images and colours when creating texts, with writing mostly limited to a complementary role. In a later study, Borgfeldt and Lyngfelt (2017) analysed students' perceptions of the available resources when designing multimodal texts; the students expressed that it was easier to produce images and colours than to write. The availability of visual modes enabled all of the students in this study to accomplish more textual tasks than they could when writing was the sole mode (Borgfeldt & Lyngfelt, 2017). Using a multiliteracies framework, Öman and Sofkova Hashemi (2015) examined students as they redesigned films; even though the teachers mainly provided linguistic resources, the students used images as their central mode of expression. In line with this, Romme Lund (2017) found that the modes students applied when creating texts were closely linked to the hardware and software that the students used. For example, students who used a movie-editing application focused more on video and audio than did those who used an application for creating presentations (Romme Lund, 2017).

Using the multiliteracies framework, Ryan, Scott, and Walsh (2010) explored various kinds of literacy practices to spotlight the pedagogical challenges that teachers face when they help students to comprehend and design texts in constantly changing textual environments. Ryan et al. argued that when students are experts on multimodal text design, teachers must serve as critical textual analysts by engaging the students in critical reflections on topics such as the use of media to communicate messages.

Students as Critically Reflective Multimodal Text Designers

To actively participate in school and society, children need a literacy education that supports not only functional literacy but also critical reflection on texts—including those that they design themselves. From a democratic perspective, both functional literacy and a reflective, critical approach to texts are fundamental skills (Schmidt, 2018). Today's children, starting at an early age, encounter a multifaceted and multimodal text repertoire and actively take part in various forms of social media (Statens Medieråd, 2017). Engagement with social media and other forms of digital multimodal texts is often an interactive process in which students can be seen as coproducers of the culture and the contexts they are part of (Lankshear & Knobel, 2008). This highlights the need for critical text reflection, particularly in education (Janks, 2010; NLG, 1996). Romme Lund (2017) aimed to provide Danish students with tools for analysing multimodal digital texts. Reflecting on certain questions (e.g., Whose interests are represented in the texts? For what purpose?) increases students' ability to navigate the Internet (Romme Lund, 2017). This type of reflection includes taking a critical view of the values expressed in various texts. Students' multimodal texts often include text parts designed by someone else, such as photos imported from the Internet, for which the students may not know the photographer's motif (Engblom, 2016).

Values are a socially shaped part of culture (Kress, 2010) that reflect both individual and societal ideals. In this way, values are codes of behaviour for certain contexts; as society changes, so do cultural values. In contemporary society, values have shifted away from societal ideals and towards individual ideals, which are based on choices in market consumption (Adami & Kress, 2010). Furthermore, values can be expressed in both explicit and implicit declarations in human communication. Because the interpreter's perspective must be considered, implicit values are more difficult to detect than explicit ones are (Danielsson & Selander, 2014). Importantly, both explicit and implicit values are expressed through various modes and in various types of popular culture texts.

Popular Culture in Students' Texts

Multimodal digital texts are often more closely related to students' engagement with popular culture than to their formal learning. However, students' digital activities, including their engagement with popular culture, possess an often underestimated potential for enhancing the students' learning (Björkvall & Engblom, 2010; Engblom, 2013; Williams, 2014). Indeed, school-literacy practitioners have often overlooked students' use of digital media and popular culture in text design (Engblom, 2013). However, Schmidt and Wedin (2015) and Dunn et al. (2014) showed that students use popular culture experiences when creating stories in school. Students bring their interest in and experiences with popular culture into the classroom context (Kissel, 2011). According to Williams (2014), students use popular culture experiences when composing their multimodal texts in the educational context, regardless of whether teachers have asked them to do so. Dyson (1997) and later Hagood, Moon, and Alvermann (2018) suggested taking advantage of students' experiences with popular culture texts in formal literacy education. The researchers stated that even young students are capable of both discovering and understanding many of the underlying messages contained in popular culture texts. By using students' interest in and experiences of texts that are valuable to them, educators can take opportunities to discuss matters such as gender and socioeconomic background based on the social roles performed by the characters in various popular culture texts (Dyson, 1997).

According to Dunn et al. (2014), in literacy activities, considering the students' experiences and interests increases their engagement and thus leads to meaningful learning. The results from Dunn et al.'s (2014) classroom study also indicated that students naturally engage with and enjoy popular culture and that, when given the choice of what to write about, they often focus on popular culture. Thus, the inclusion of forms of literacy such as rap music, fan fiction, video editing, and computer games in education can help to bridge the gap between school literacy and out-of-school literacy (Lankshear & Knobel, 2008). In accordance with this, Williams (2014) argued that digital media allows students to use their knowledge of popular culture also in educational settings.

According to Walsh (2010), popular culture comprises the texts, artefacts, and practices that are popular among

a large range of young people. Popular culture includes both commercial products and the young people's own content. Lifestyle trends, TV programmes, movies, YouTube videos, and fads are examples of popular culture (Danesi, 2015). Fads are evidence of the interaction between popular culture and business; the nature of fads is that they are in constant flux (Danesi, 2015). A fad can be an object such as a toy, an article of clothing, or an action like a dance move, such as the dab. A fad quickly becomes popular but then vanishes as quickly as it appeared. However, some objects that at first appear to be fads—for example, the Rubik's Cube toy—remain popular for generations. Sparrman (2002) stated that popular culture often reflects stereotypes; for example, comic books and Disney films contain various stereotypical characters. A stereotype is a set of specific characteristics associated with a particular group affiliation (Greenwald & Banaji, 1995). Although researchers have examined the extent of commercial popular culture's impacts on children, they have not considered its effects on literacy education (Björkvall & Engblom, 2010; Schmidt, 2018).

Theoretical Framework

The multiliteracies perspective is an expanded view of literacy that includes not only the sociocultural critical understanding of literacy but also the multimodal and multimedia aspects of communication. Furthermore, it is a political and social theory based on the agenda of developing an official approach to literacy education (Jewitt, 2008). In the term *multiliteracies*, the prefix *multi-* refers to more than one plurality—both communication and representation through a plurality of modes (Kress, 2009) and the plurality of factors that affect meaning-making in the social domain. The factors that affect meaning-making include class, gender, and age, each of which is influenced by various cultures and languages. Kalantzis and Cope (2012) argued that multiliteracies also account for the influence of media technology on text and other forms of communication. Therefore, looking at meaning-making from the multiliteracies perspective makes the entire complexity of contemporary meaning-making more visible. Regarding text design, this means that students—in addition to mastering actual textual creation, including writing and the use of images and other modes—must also understand the meaning of each cultural and social context. As part of this understanding, the critical dimension is important because it enables the critical examination of various resources within text design as well as reflections on how the prevailing power relations influence these resources. These resources can be digital (e.g., laptops and software) and come in various modes (Kalantzis & Cope, 2012). The communicational changes in people's public and private lives also affect their meaning-making. Learners can contribute to their own knowledge processes (Cope & Kalantzis, 2009). Furthermore, Cope and Kalantzis (2009) stated that the nature of agency has changed; citizens and individuals are now expected to be users, players, creators, and consumers, in addition to being followers and readers of others' texts. Because users and consumers are now given greater agency, the power has shifted, and the own-

ership of social and commercial media has become more centred. Researchers should now discuss whether this increased agency has made young people more ready for their social lives and if, in some cases, it has served as an escape from those lives (Cope & Kalantzis, 2009).

The changes in people's private lives mean that the creation of personal identity now occupies greater significance. The members of the younger generations must now take a stand with regards to their identities. For example, gender, ethnicity, and sexual orientation are important components of identity creation. In terms of their cultural messages, school texts now have competition from global popular culture texts. Digital texts thus have the potential—for example, through multilingual films and access to the Internet—to enable various worlds to simultaneously exist (Cope & Kalantzis, 2009). By using the school environment to gain access to mass media, learning can enable a school to reclaim some of the students' learning space. Two problems need to be solved to develop a literary education that fits the current living conditions, (NLG, 1996). First, the literacy knowledge that students need must be identified; second, how this knowledge should be applied must be determined. Literacy is thus a multimodal design process in contemporary education (Cope & Kalantzis, 2009; Jewitt, 2009; Kress, 2003; NLG, 1996). In **Figure 1**, the multimodal design process is visualized.

The Multimodal Design Process

Design refers to both the inherited patterns and conventions of meaning and people's actions as active designers of meaning. People design new social futures when creating meaning, which results in new social conventions and thus new resources (NLG, 1996).

In all kinds of semiotic activities—including the production and consumption of texts as a design process—design involves three elements; the resources available in the design, the design itself, and the redesigned representation (Cope & Kalantzis, 2009; NLG, 1996). Together, these parts indicate that meaning-making is an active, dynamic process without fixed rules.

The Available Design

An available design includes all of the resources available to the designer, including discourses and societal conventions, which are linked to various semiotic activities in the given social contexts. A school, as a social context, features several interrelated discourses. The discourse about teaching is based on the teachers' culture, and the discourse about being a student is based on the students' culture. Both teachers and students also relate to societal discourses outside of school, including those in popular culture. In school, all discourses meet, and both digital and analogue resources are used in meaning-making (NLG, 1996). **Figure 2** shows the available design at various levels.

Design

Design can be seen as transformation—as a redesigning of the world. The designer chooses from the available tools based on his or her experiences, social conventions, interests, and motivations; however, designing is always more

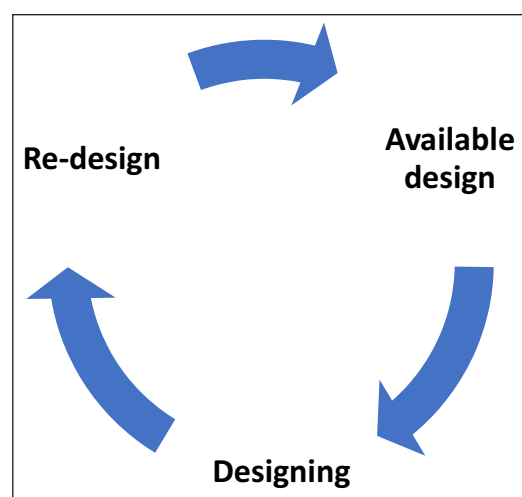


Figure 1: The design process inspired by the work of the NLG (1996).

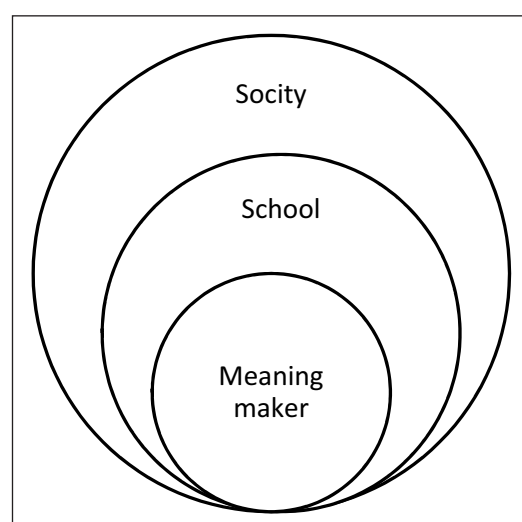


Figure 2: The available design at various levels.

than just the reproduction of the available design (NLG, 1996).

The Redesigned

A redesigned representation is a unique product of students' agency that becomes a newly accessible design and a new source of meaning that is accessible to others. By applying other people's beliefs, designers can combine resources from across borders, including those of popular culture; several cultural forms and traditions can thus be transformed to create new conventions (NLG, 1996). A redesigned representation remains in the social world, and new insights, expressions, and perspectives are created in the redesign process (Cope & Kalantzis, 2009; Kress, 2003).

Methodology

The multiliteracies approach includes a multimodal approach to texts, which highlights that communication and representation occur through several modes (Jewitt, 2009). The method can be seen as multimodal because

production of data is intended to capture students' meaning-making through several modes. Such multimodal methods enables to study all of the modes used in the representations (Jewitt, 2009). This study's data consist of 23 students' multimodal digital narrative texts.

The students who participated in this study were from two classes in the fifth grade (age 10 or 11) at a school located in central Sweden. The sample can be described as both a strategic and a convenience sample (cf. Grey, 2013). It is strategic because the school and students were chosen in line with the study aim, namely to understand the meaning that students make in their digital multimodal texts and to describe how they make that meaning. We wanted to find a school that reflected the breadth of students in Swedish schools, both socioeconomically and linguistically—in other words, a school comprising students with diverse backgrounds and diverse first languages. This sample was important because we wanted to conduct our study in a typical Swedish Grade 5 class. Furthermore, the school choice was based on convenience, which means that the school was also chosen based upon availability (cf. Bryman, 2011).

As the students were younger than 15, their guardians signed letters of consent describing the students' voluntary participation, their right to end their participation at any time, and the security and anonymity of their data (Vetenskapsrådet, 2017). The students also read about these ethical considerations. With regards to trustworthiness and credibility, we continually compared and cross-checked the data and the analyses (Miles, Huberman, & Saldaña, 2014). To add further credibility, we also held debriefing sessions with other researchers from this field.

Analysis Framework

The study presented in this article was focused on understanding what meaning students create in digital multimodal texts and on describing how students create that meaning. We modified the model that Danielsson and Selander (2014) developed for analysing multimodal texts, for use as a framework in our analyses. This modified model includes a description of the available design and the overall text design, as well as an analysis of the values expressed through the various modes in the students' texts. This model, as shown in **Table 1**, offers a way of analysing the use of resources in multimodal texts and how these resources are used to express meaning (Insulander, 2019).

In addition, we conducted a thematic analysis (Braun & Clarke, 2006) to analyse the themes about which the students chose to write. First, to understand the students' representations of the design process, we included a

description of the available design described at the level of the meaning-maker—in this case, the student. To capture the resources that the students actually used, we continued by describing the general structure of the students' texts. To address the first research question concerning how the students used the available design, we described the texts' overall design. We then applied a descriptive statistical analysis to provide an overview of the resources that the students chose to use. Turning to the second research question regarding which themes the students chose to create texts about, we carrying out a thematic orientation. To understand the content in students texts in a more profound way, we conducted a thematic analysis (Braun & Clarke, 2006) followed the initial thematic orientation. After the initial step concerning familiarising ourselves with the data, we coded the texts, which resulting in 12 codes. Finally, we identified five themes in the process of analysing the themes about which the students chose to create texts. To address the last research question, we analysed the values expressed in the students' texts. One limitation of this study is that we did not include the teachers. However, we talked with the teachers and obtained information about the class and how the teachers prepared their teaching on creating digital multimodal narrative texts, which is explained in the next section.

Results

The aim of this study was to understand the meanings that students make in their digital multimodal texts and to describe the ways in which students make that meaning. In the following section, the findings will be presented following the structure of the modified model of Danielsson and Selander (2014). Initially, a description of students' available designs is presented, followed by a presentation of students' designs. Next, the thematic orientation is described. A presentation of findings concerning values as well as values linked to popular culture in students' texts are ending the result section.

Available Design

Because this study focused on meaning-making, we considered the resources that were available to the students in the school environment in a social context. Part of students' available design is how teachers design the education. When talking to the teachers of the class before students started to design their tasks, they expressed that designing a task in which the students were supposed to design multimodal stories was appropriate because a current Swedish curriculum goal for the fifth-grade level in the subject of Swedish is to give students opportunities to create texts in which words, pictures, and sounds interact

Table 1: Modification of Danielsson and Selander's (2014) Model.

Multimodal text focus	
Available design	What resources are available to the meaning-makers?
Overall text design	What resources from the available design are used, and how do the parts of the text interact?
Thematic orientation	What are the texts about?
Values and stereotypes	How are the values explicitly and implicitly represented in each mode?

(Skolverket, 2016). The teachers instructed the students to create digital stories using their tablets. The students could choose the topics and the designs of the stories, including the modes through which they expressed themselves.

To prepare for the digital story-creation task, the students had previously discussed each of the available modes with their teachers. In class, they discussed when it was preferable to use each mode when telling a story. For example, these discussions included ideas regarding what would be best to show with pictures and what would fit better with writing. Following those discussions, the students reflected on how images and writing can interact and examined how images can provide information that is not included in text. For further preparation, the teachers then introduced the students to the tablet application and described what it could be used for. The class also watched a film about how to use each of the application's resources.

The students' digital story design then began with the planning phase. During this phase, the students created storyboards. For the storyboards, the students were supposed to plan their stories using a narrative structure. To prepare them for this task, the teachers talked about what the students would be expected to do in the process of creating their stories. For instance, the teachers stated that narrative texts can be based on real or fictitious events and often show how people or other living

beings react to events. These reactions often carry social and cultural values.

The students completed their design processes using tablets with Internet access. The teachers had given the students instructions regarding how to download pictures from the Internet and which sites to use. An application was installed on the tablets for this use. This application is a tool for creating digital stories through various combinations of modes. The available modal resources in this application included writing, drawing, taking photographs, downloading photos from the Internet, and recording video or audio. All of the modal resources available in the application are presented in **Table 2**.

Students' designs

The students used the available modal resources to guide their stories in four main ways: through writing, images, sound, or speech. In **Figure 3**, these categories are visualized using colours, and there are variations within each category (e.g., in the writing category, both handwriting and digital word processing are included. **Figure 3** also provides an overview of the available resources that the students used.

Writing was the dominant mode for most of the students' stories. As shown in **Figure 3**, all of the students used digital means of writing, and only a few students wrote directly with their fingers on the tablets. Although the most common design was a combination of writing

Table 2: Available Application Resources.

Modal resources	Available choices
Writing	Tablet-based handwriting or digital word processing (with various typefaces, colours, and sizes)
Images	Created or imported drawings and photos
Video	Recorded or imported video clips
Sound	Sound effects, music
Speech	Voice recordings

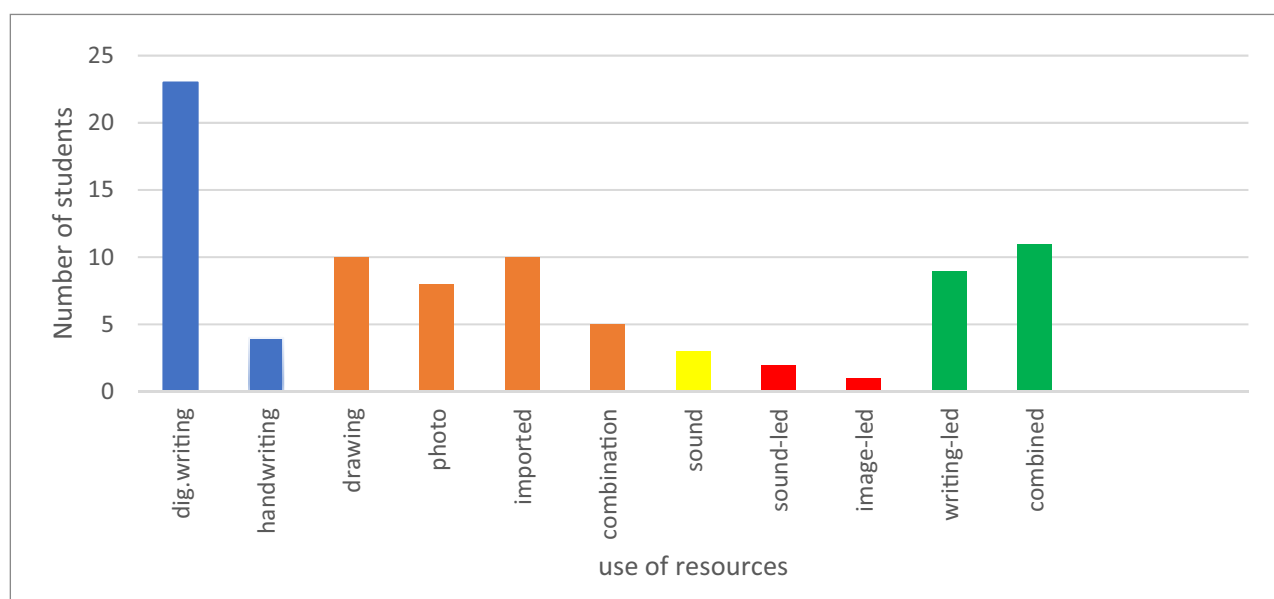


Figure 3: Students' use of the available resources in the digital application.



Figure 4: Example of student use of image. Students' representations are published with students' approval.

and images, many students used writing to guide their stories. All of the students also used images, but they did so in various ways. Drawings and photos taken from the Internet were the most common uses. For the drawings, the students mostly either drew images on paper and then took photographs of those images or drew directly on the tablets. Many students searched the Internet for photos, and some even combined these imported photos with their own drawings. The student whose image is shown in **Figure 4** below first imported a photograph of an airplane and then used the tablet's drawing function to add some lines to it. The written text clarified that the illustration shows a plane in motion, specifically, shaking.

Even though all the students chose to use images, only one student designed a story that predominantly consisted of images. The few students who used sound as a resource did so in various ways. One used sound effects such as *yeah*, *bong*, and *crash*. Another student made a sound file in which he rapped one part of the narrative and included another sound file that a famous rapper had created. A few students used the mode of speech by using voice recordings to read or tell their stories out loud.

Thematic Orientation and Themes in Students' Texts

In the analysis of the students' stories, five broad themes emerged. The stories mainly concerned these themes: *conflict*, *body culture*, *hip-hop culture*, *violence*, *fairy tales*, and *students as consumers*. The codes and themes that were identified are presented in **Table 3**.

As shown in **Table 3**, there are significant variations in the subjects of students' texts. The stories include cute princesses and toys, but also themes of jealousy, conflict in love relationships, and the act of killing to achieve a goal. This variation in the themes indicates that various types of texts influenced the students, thus exposing the differences in their values. The following presentation of the values in the students' texts highlights this aspect.

Values

This section focuses on the values that the students expressed in their texts using various modes. They did not

Table 3: Themes and Codes from the Students' Texts.

Themes	Codes
Conflict	• Two girls who want the same boy • A young girl who fights with her divorced parents • A father who has a new family
Body culture	• Feeling fat or wanting to be thin • Working out to build muscle
Hip-hop culture	• Music • Dabbing
Violence	• Weapons • Fighting
Fairy tales	• Heroes • Princesses
Students as consumers	• The desire for special toys • The desire for special clothing brands

explicitly express most of these values. However, they did make a few explicit statements. For example, in one text on the theme of body culture, a student used writing and images to state that a person must have a thin body to be happy and successful. The first photograph in this section, imported from the Internet, shows a very overweight woman who is unhappy. The written text of the story says nothing about the woman being unhappy, but it does describe a woman who decides to start working out and to eat more healthful food in order to lose weight. The end of the story features a photograph of a thin woman with a medallion around her neck; the written text confirms that the woman is now happy because she succeeded in losing a lot of weight.

One student expressed another explicit value: that "nerds" who play computer games cannot be strong. This student wrote, "I, as a game nerd, can never get through the shield of the knight. His shield is stronger than my dad—and he is strong."

To continue on the theme of body culture, the desire to be fast and strong was expressed mostly implicitly. In one story, an older woman needs to become strong and fast in order to get what she wants. When she takes steroids, her body transforms, and she gains visible abdominal muscles—as expressed in the images in the story, which convey meanings beyond what is stated in the written text. In addition to the woman's bodily transformation, she uses violence to get what she wants, and this violence is also mainly expressed through images.

Several of the students' other stories indicated that violence is the best way to accomplish a goal. In one story, however, the student wrote that to get the Rubik's Cube he wanted, he had to help his mother. This desire to consume seems to be important for many of the students. Some of the characters in their stories became happy only when they finally got the items that they wanted. The students' texts about conflict also included some implicit values.

For example, one student wrote a love story in which implicit value was expressed in both the written text and the images; this story's message is that love involves pain

and jealousy. The photographs in this story showed teary eyes and broken hearts. The words described a person who is angry and sad because of love: "Delena came to me with Samir. I got so fucking angry, and I gazed stupidly at the two of them. I started crying when they came." All the photographs in this story fit with stereotypes of how young people should look. The girls are all thin and long-haired, and they all use a lot of make-up. The men are all physically fit and tattooed. In addition, all of the people in the photographs are much older than the student who created the text.

Values Linked to Popular Culture

The analysis of the texts' content and values reveals that popular culture clearly influenced the students. Popular culture is very attractive to young people, and it is a bearer of social and cultural values. The forms of popular culture that the students used in their texts were mostly related to fads. The following analysis links the themes and values from the students' texts to popular culture.

Conflict and body culture can be linked to social media and reality shows; this was easy to identify in the students' texts because some of the students' photographs originated on the Internet, from YouTube, or on websites for reality TV shows. For example, some students used photos from the website for the show *Ex on the Beach*; all of these photos show thin, physically fit young people wearing minimal clothing. The young women in these pictures wear a lot of make-up and have long hair and blue eyes; some are crying. The men in the photos have large, visible muscles. The themes of these students' stories include unrequited love and conflict—just as in the show *Ex on the Beach* itself.

The forms of conflict in the students' texts may also be linked to U.S. young adult literature. The students used American names for people (e.g., Evelyn Brown) and places (e.g., Brooklyn) in their stories. Examples of the conflicts in these texts include young girls fighting with their divorced parents and young people finding out that they are adopted.

The theme of violence exemplified in **Figure 5** could be related to popular culture as well—particularly computer and video games. The violent stories included a lot of shootings with weapons such as ray guns, which are popular fictional weapons from TV shows and computer games (e.g., *Call of Duty*, *Grand Theft Auto*, and *Minecraft*). The stories also included a lot of YouTube clips involving the use of ray guns. One of the stories that includes violence also uses rap music: The student rapped in the story and also used music clips from a rap artist. Another common feature related to hip-hop culture is the dance move called *dabbing*, which has already spread rapidly around the world. Some of the students' stories included dabbing using both writing and images. It was even the main topic of one student's text, which was about an old woman who wanted to learn how to dab.

A similar theme involved the students acting as consumers and related to toy culture, which is a special kind of popular culture that is aimed at children. Toys whose use has spread quickly via social media include fidget



Figure 5: Violence expressed through image. The woman holding a head in her hand. Students' representations are published with students' approval.



Figure 6: An example of how students texts are linked to students as consumers.

spinners. At the time of this study's data collection, these small toys were quite popular, as shown in the students' stories. For instance, one student wrote about how to get a fidget spinner. Another wrote about a toy that has remained popular over time: Rubik's Cube. The stories also contain other themes related to students being consumers, such as text about clothing brands. Clothes and fashion, including the fad culture, are also part of the students' texts. For example, one student included the Adidas logo as a desirable feature on caps and other clothing.

As shown in **Figure 6** the two characters each wear clothing with three white stripes (which signifies the Adidas brand). Students' representations are published with students' approval.

In other words, students' desires are connected to consumer culture, which provides them with a common

repertoire of characters, images, and themes as a basis for both conversation and play; adults stand outside of this culture (Carrington, 2005). The theme of acting as consumers relates to popular culture because young people often want to consume the items that they see on social media, on TV, in movies, and in games. The products that the students placed in their texts included clothing, telephones, weapons, and sports-drink brands.

The theme of fairy tales also relates to popular culture. The students' fairy tales included princesses, and this influence can be traced to Disney films such as *Cinderella*. All the princesses in the students' pictures and drawings can be seen as examples of the stereotypical Disney princess. In other words, they are beautiful, thin White girls with blond hair and nice dresses.

Discussion

On the one hand, as part of the overall design of their texts, all the students used the mode of writing when creating their stories. Traditionally, writing is the most valued mode in the educational context (Svårdemo, Åberg, & Åkerfeldt, 2017). On the other hand, all students also embraced the possibility of using multimodal design, albeit to varying degrees. This result contributes to the emerging change in students' textual design in educational settings from the traditional focus on printed text towards a greater focus on digital and multimodal texts, as indicated by previous researchers (Borgfeldt & Lyngfelt, 2014, 2017; Blåsjö, 2010; Öman, 2015; Öman & Sofkova Hashemi, 2015).

Letting multimodal text creation into educational settings may encourage students' life worlds and thus mean that texts which students find valuable become recognized in the school world.

In this study, the themes students chose to create texts about appeared to be influenced by their experiences of popular culture, as in the studies of Dunn et al. (2014) and Schmidt and Wedin (2015). The students also frequently used YouTube clips and reality shows as sources—not just of pictures and videos, but also of norms and values, as expressed by the producers of those shows. Several students' texts had references to individual values, but social values were absent from all of the texts. The shift in society concerning agency (Cope & Kalantzis, 2009), whereby individuals have become users and consumers instead of passive consumers, has resulted in a change away from social values and towards individual values. Thus, these ideals are often also reflected in students' text creation in the school context (Williams, 2014). There are two sides to this relationship. Although popular culture provides inspiration and enables students to draw on their own experiences and interests, its embedded values may occasionally be seen as problematic and contradictory to the democratic values of diversity that are part of the national curriculum (Skolverket, 2016). However, as suggested by Dyson (1997) and Hagood, Moon, and Alvermann (2018), instead of just dismissing the texts that students find valuable (such as popular culture texts or social media) as bad culture, educators can open up education to discussions about topics concerning, for example, how social relations

are represented in various texts. Thus, it is important for adults to learn about the culture of young people and have an authentic interest in the younger generation's ways of making meaning and reflecting upon the world. School texts, in terms of their cultural messages, now face competition from global popular culture texts. Digital texts thus have the potential—for example, through multilingual films and access to the Internet—to enable various worlds to exist simultaneously (Cope & Kalantzis, 2009).

As Kress (2010) argued, young people make meaning of the world through multimodal and multimedia texts in informal settings. Future literacy education could take advantage of students' knowledge and experiences of contemporary meaning- and text-making to prevent the exclusion of students' literacy worlds outside school.

When making meaning, young people are influenced by different factors such as age, gender, and socioeconomic background, but also by different types of popular culture texts and social media sites (Kress, 2009; Kalantzis & Cope, 2012). In this way, popular culture and social media may be seen as resources in students' meaning-making about the world. Even though students often are experts on navigating in fast-spreading online viral information and culture and are perhaps even more knowledgeable on this topic than their teachers, the teachers' expertise on subjects such as critical thinking and analytical reflection becomes crucial when providing tools for students to become reflective users and producers of digital multimodal texts (Romme Lund, 2017). Digital texts also carry embedded marketing messages such as product placement, which occurred in several students' stories. Transnational companies such as those behind computer games, TV shows, and social media sites tempt users with products. Thus, students require tools to unpack these companies' messages and intentions so that they can take independent stances (Schmidt, 2017). By independently being able to consider how other people's beliefs can be embedded in multimodal texts, students who are designing such texts can combine resources from popular culture and other sources to create new conventions. In this way, students can learn to see themselves as the designers of a new future (NLG, 1996).

To conclude, the results of this study, in line with those of other studies (e.g., Borgfeldt & Lyngfelt, 2014), indicate that many students utilize the full multimodal potential of digital tools when encouraged to do so.

Furthermore, our results revealed that students' popular culture experiences influenced many of their texts, which in turn can indicate that popular culture texts as well as social media sites are used as resources when students make meaning about the world. By understanding young people's understanding of the world, educators may have the potential to meet students where they are in their understanding. This may be a relevant starting point in discussions and reflections concerning values and human relations and thus, educators may have the opportunity to become part of students' further exploration of the world.

Competing Interests

The authors have no competing interests to declare.

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