Chapter 11
Personalized Story-Making on the iPad: Opportunities for Developing the Self and Building Closeness with Others

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Introduction

This chapter presents case study data from a detailed observation of a 5 year-old girl and her father as they used an interactive iPad app designed to enable users to create multimedia personalized stories. Kucirkova and colleagues (2013, 2015, 2016) have studied multimedia personalized stories (MPS for short hereafter) extensively in previous work and Sakr (2012), Sakr and Kucirkova (forthcoming) have explored how digital devices may contribute to our sense of self and inter-actions between children and adults in the home. In this chapter, we explore further our shared interest in multimodal literacies and sociocultural theories of the self.

In line with other chapters in this book, we explore how the iPad, a specific semiotic resource, affords meaning in a particular context with a focus on the embodied and material experience of the child. Our analytic lens conceptualizes the self as a distributed self; that is, a self that is not a stable and solid entity, but rather a reflection of a dynamic and fragmentary sense of being. Sociocultural theories suggest that the self is actively constructed and re-made through networks of interactions with others and with the material world. In accepting this premise, we suggest that a self can be constructed differently depending on the people and semiotic resources available in a given situation. In this study, the semiotic resources available were a story-making app downloaded on an iPad, and the features of this app were experienced by a 5 year-old girl and her father.

We begin this chapter with a selected overview of the key points from Bruner's (1994, 2001) and Lemke's (2000, 2002) theories related to the notion of self. This is

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followed by an overview of our methodological orientation, which focused on multimodal interaction analysis, and the details of how this study was conducted. Our findings constitute four ways in which we saw personalization features shaping the child's sense of self and the exchanges she shared with her father. In the discussion at the end of the chapter, we consider the implications of these findings for early childhood, along with the limitations of the study and suggestions for future research in this area.

Multimedia Personalized Stories

There is a well-documented increase in the use of digital interactive media by young children in many Western countries (for a documentation of these trends see, e.g., Ofcom 2015-2016 for the UK or the 2011 and 2013 Common Sense Media reports in the USA). Interactive media such as iPads offer many programmes ('apps'), which provide children with a multitude of new ways to explore, practice and experience their identity. Kucirkova (forthcoming) argues that apps, which have personalization options, are particularly popular among young children and have the potential to influence their representation and experience of self. This is because personalized apps offer children a number of options to portray their faces (e.g., by inserting a selfie using the front-facing camera into a blank space or into a template), to add their own drawings, audio-recordings or texts. Some apps leave the extent of personalization up to the child (for example the story-making app *Our Story* has no templates), while other apps (for example *Toontastic*) have a standard 'story arc template' beginning with a setup, conflict, challenge, climax and resolution. A recent addition to the range of personalizable apps are interactive multimedia story-apps, that is apps which allow the child to individualize specific elements of a given story. The app used in this study is *Mr Glue Stories*, which offers children a library of stories to choose from, of varying levels of reading difficulty. When the user chooses a story to read and engage with, they are prompted at different points during reading the story, to name characters in the story, to decide on props that appear in the narrative, and to create audio and visual illustrations to accompany the story.

Sociocultural Theories of the Self

From some sociocultural perspectives, the self does not exist as a single or stable entity. Instead, our sense of self is constructed and gradually built up in everyday interactions with others, through ever-becoming events and practices. In Bruner's theory of constructivism, the self is not fixed, but described as emerging through dialogue with others. Bruner (1990, 1994, 2001) argues that our sense of self is most visibly and prominently constructed through the stories we tell others. Stories

have a narrative structure with a beginning, middle and end, with a purpose and moral; through these features they can offer a structure to our experiences, feelings and thoughts. This helps with our own understanding of who we are and how we feel about our lives and the world around us. However, it also implies that the self can have many different forms and purposes, because there are different stories we share with different audiences and because stories take on different forms depending on the context and the resources available within a context. If we take it as our premise that self is distributed in 'action, in projects, in practice' (Bruner 1990: 117), then in addition to the features of the narratives we construct, we need to consider the wider action, project or practice in which this narrative takes place.

Lemke's exploration of the self considers how the self is brought together through texts despite its existence across multiple timescales. Lemke does not focus on narratives as Bruner does but instead, foregrounds the role of texts, which, he believes, are a way of collecting together the disparate self across time and place (Lemke 2000). A text can be in Lemke's model a paper-based text as in a book but also a multimedia artefact as in a digital story. Through texts, the self remains coherent across ever-changing configurations of objects, people and environments.

When we think about story-making on the iPad, both Bruner and Lemke's understanding of the self and how it is constructed will apply. Digital story-making offers an opportunity for users to collect the disparate self together through the production of narrative and the creation of a textual artefact. From a social semiotic perspective, as outlined by van Leeuwen (2005), the semiotic resources that are used in the story-making will shape how meaning is made, and we can posit that this will in turn influence the sense of self that emerges through the activity. Semiotic resources are the 'actions, artefacts and activities' (van Leeuwen 2005: 2) that are involved in meaning-making. In the study we present in this chapter, the semiotic resources on offer include the specific app used for the iPad story-making, and the personalization features built into this app, which are of particular interest to us. We are interested in how such features impact on the sense of self that is created and/or projected through the activity of parent-child story-making.

Closeness Through Collaborative Story-Making

As well as our interest in how MPS can shape the child's sense of self, we are interested in how the intersubjective exchanges between the child and parent might involve different personalization features in digital story-making. In theorizing the relationship between the child and the parent, we conceptualize the shared affect between the child and parent as something that is constantly changing and in dialogue with the environment and a specific activity occurring in this environment. We are particularly influenced by Stern's (2000, 2004) theory of 'moments of meeting'. These are moments in which children and parents experience heightened levels of attunement to one another: a 'mutual knowing of what is in the other's mind' (Stern et al. 1998, p. 4). Although Stern's theory was originally developed as

a psychoanalytical tool, we are interested in using the 'moments of meeting' framework as a means of operationalizing the idea of parent–child closeness as it unfolds. Moments of meeting are visible through the behaviours of the child and the parent, and are often accompanied by a physical closeness and connection. Examples would include moments in play when both parties break into spontaneous laughter, or when a child takes the hand of the parent in order to give them the confidence to do something that they might otherwise be too fearful to do. Such moments are not decontextualized traits of a relationship but important in child–parent relationships and greatly enhance the overall quality of family interactions (Stern 1998). As such, Stern's theory can enrich the sociocultural perspectives we discussed in the previous section.

In previous work (Sakr and Kucirkova 2017) we have examined how moments of meeting are fostered in child-parent collaborative art-making and how the involvement of different semiotic resources in art-making can differently shape when these moments arise and what behaviours they comprise. For example, we found that when engaged in collaborative digital photography, a child and her father were likely to experience moments of meeting that were about their shared desire and attempts to capture on camera fleeting occurrences in the external environment. On the other hand, when using crayons and paper, moments of meeting were more likely to arise through the adults' demonstration of particular drawing techniques and the child's interest in copying these techniques. This finding relates to previous literature on the dynamics between children and adults when they engage in acts of digital creativity. Carter-Ching et al. (2006) studied children and adults using digital photography in the preschool and primary classroom and found that during such activities, teachers were likely to relinquish their authorship and were more likely to assume the role of co-investigator alongside the children in the class, thereby fostering higher levels of closeness and connection.

Again, when we consider a social semiotic perspective on how MPS shape child–adult interaction, we are encouraged to consider the particular semiotic resources that are involved and how these feature in the network of the interaction. The particular story-making app that this study looked at, *Mr Glue Stories*, involves different types of personalization, which occur in various modes (audio, visual, written) and have distinct relationships with the overall narrative that is being constructed. A micro-analysis of the interaction can help to elucidate how particular personalization features feed into the interaction between the child and the parent, including into moments of meeting.

Methodology

Our methodological approach stemmed from Lemke's (2001) assertion that semiotic artefacts play a fundamental role in the creation of a sense of identity, and that meaning-making acts that contribute to a sense of identity traverse time and space. We intended to identify moments of meaning-making that contributed to a sense of identity

for a young child, and to investigate how these moments occurred in the different spaces of an interaction. More specifically, we were interested in the meaning-making that would occur in the physical interactions between a child and father, and the meaning making that would involve the digital tool of the iPad story-making and all of the constraints and potentials that this tool comprised. As a means for investigating meaning-making and how it is shaped within the spaces of an interaction, we applied a multimodal lens. Multimodality is a theoretical and methodological perspective that highlights how children's meaning-making occurs through multiple modes of communication in specific social and material contexts. With its focus on the importance of social influences, multimodality has its origins in Halliday's (1978) social semiotics, later elaborated by Kress and van Leeuwen (1996, 2001). As a theoretical and methodological framework, multimodality highlights the role that modes other than speech play in every interaction. These modes include gaze, gesture, movement, touch, physical manipulation, body orientation and posture.

Method

Observation

A 5-year-old child and her father were observed using the app *Mr Glue Stories* together in the home of the child's grandparents. The observation occurred on a weekday evening and was conducted by the child's aunt (second author of this paper). Prior to this observation, the child had had one experience with the app, while the father had not previously used the app. They were invited to play with the app together; no additional instructions were given. The observation was one of a series of observations conducted to explore the child's interactions with different story-making apps and different members of the extended family. In this chapter, we focus on just one observation in order to focus in detail on a particular instance when the child's sense of self and/or the child–parent interaction is brought to the fore. The observation lasted for 23 minutes and 5 seconds and ended when the child and the parent decided together that they wanted to do something else. The researcher videoing the interaction was not involved in the interaction except when the child or parent directly engaged with her. As the child's aunt, the interaction was more relaxed than if the recording had been conducted by a stranger, but the closeness between the observed and the observer also entailed a higher level of participation than might otherwise have occurred.

Analysis

Since our interest was in the interaction as it unfolded and how the child's sense of self visibly manifested during the activity, we took the approach of multimodal interaction analysis (Jewitt 2009; Jewitt et al. 2016; Norris 2011, 2012).

In multimodal interaction analysis, several modes, along with speech, are taken as meaningful and indicative of the underlying relationship dynamics on which the interaction is based. For example, in Sakr et al. (2016), multimodal interaction analysis was applied to observations of children as they explored the history of a local site of interest using iPads. The analysis elucidated aspects of the children's emotional engagement in their history learning and how this was mediated by the physical-digital activity as it occurred. The first stage of multimodal interaction analysis is a multimodal transcription of the video data, which demonstrates how different modes are drawn into the interaction and how they work together to achieve various communicative purposes. The transcript consisted of detailed notes of the behaviour of the child and the father against time stamps, as well as a concurrent description of the speech, special sound effects and pre-recorded messages displayed by the *Mr Glue Stories* app during the interaction. By focusing on the multiple modes of communication and interaction, we have developed insights into the child's engagement with the personalization features and how this manifested in her use of language, social interaction with her father using bodily gestures and sociolinguistic aspects such as laughter.

The transcript enabled us to identify moments that we wished to analyze in a higher level of detail. Since our focus was on the potential of personalization features to shape a child's sense of self and child–parent interactions, we looked for instances of interaction in which personalization features of the app were engaged with. Such moments included the use of the audio recording and drawing tools, or the naming of the characters in the story, or the selection of props that would appear in the story. Four such moments were identified across the observation. In Table 11.1, we have briefly described what each of these moments involved. For clarity, we only focus on the personalization moment here, not on the earlier stage of multimodal transcription.

Table 11.1 Personalization moments

Time stamp (in minutes and seconds)	Personalization moment (a short description of the app's personalization feature in use)
07:51	The child chooses the name of the main character to be 'daddy'. Dad, when reading the story, puts emphasis on his name as the main character in the story
10:02	The child and parent discuss the cultural and ethnic origin of child's friend (Hannah) NB: this moment was not analyzed in more detail in this study
11:15	The child creates a drawing to accompany an event in the story. Dad comments on the creature and pretends to be scared
12:22	The child draws a 'Stegosaurus' and discusses with dad why it's not a T-Rex, focusing on the app's drawing tools.
14:52	The child chooses the name for the second character 'Hannah' (the name of her friend). Dad mentions Hannah with an added emphasis when reading the story

At this point, our analysis returned to the research questions guiding the study and the theoretical frameworks that were outlined earlier in the chapter. Through iterative and collaborative viewing and discussion, we decided on four themes that constitute aspects of the interaction that personalization appears to offer. These aspects of the interaction relate in turn to the construction of the child's sense of self and the child's interaction with her father. In the findings below, we present these four themes. We briefly explain each theme, then illustrate it with a vignette from the data, and then discuss in relation to the theoretical perspectives we offered at the beginning of the chapter.

Findings

Personalization Empowers the Child to Have an Emotive Effect on the Immediate Audience

Through personalization features, such as the capacity to create illustrative drawings or make audio recordings relating to action taking place in the story displayed in *Mr Glue Stories*, the child produced semiotic artefacts that individually had an immediate impact on her father. In the example below, she creates a drawing that is designed to scare her father and in response he pretends to be afraid.

> The child is painting with her finger on the screen while her father continues to read the story. In the story, the main character, called 'daddy' (a name chosen by the child) is scared by a piece of paper with a drawing on it. Following this part of the story, there is a moment of shared eye contact between the father and the child and they laugh together. The child asks the father what she should draw.
>
> Father: I don't know, draw something on the paper that's gonna scare daddy!
>
> (The father taps on the ipad and chooses a colour) That colour!
>
> The child starts drawing with her finger, using the colour chosen by the father.
>
> Father: This is supposed to scare me, remember?
>
> The child eagerly distributes the yellow colour across the screen. There is a big splash of the colour across the entire iPad screen.)
>
> Child: Yeah. I'm trying, I'm just trying my best
>
> The father pretends that he is scared and gasps in fear as he looks at the picture. The child smiles. The father gasps in fear again.
>
> Father: No, don't draw anymore I can't take it!
>
> Father tickles the child on her tummy, as if trying to prevent her from drawing on the iPad, they both giggle. Then, the girl continues to draw, smiling.

In this moment, the child is empowered as an author of the story and experiments with choices that impact on those around her. Her sense of self is strengthened through these explorations since her involvement in the narrative enables her to understand her potential to shape the responses of others. In particular, two

personalization features enable her to do this. Firstly, in naming the character in the story, she is shaping how the narrative relates to the immediate situation and relationships around her. Second, she is invited to create a drawing that has narrative importance, since this drawing is described in the story as scaring the main character. In making 'daddy' the protagonist in her story, she implicates her father in every decision that she takes in crafting the story. For example, her subsequent decision about what to draw is based on what will scare her father and she repeatedly gauges his affective reaction to what she is drawing. His verbal and physical responses offer momentum to her decision-making about what to draw and how to draw it.

The vignette comprises multiple signs of attunement between the child and father, including the moment of shared eye contact and laughter in response to the story, and the close physical affection involved in the father's response to the child's drawing. These multimodal features of the visual, physical and verbal mode are indicative of a positive engagement and enjoyment of the session. The device and the activity relating to it bring the child and the father together both on a verbal and physical level. This contributes to the learning potential of the session, with the child closely paying attention to the story and her father's response. It illustrates that, despite the frequently cited concern that technologies might disrupt or negatively affect parent–child interaction (see for example Ingram 2016 in *Daily Mail*), this is not always the case. Quite the opposite- the digital story has brought the parent and child together and constituted a point of joint attention and shared joy. This is similar to observations made by Goodwin (2000, 2007) about the bodily participation frameworks that emerge between two people when they engage with the same material artefact, and move their gaze back and forth between the other person and the artefact. Furthermore, the sense of closeness in this part of the observation stems from the inversion of typical child–parent power dynamics. In this instance, it is the child who has the power to frighten the adult and the father plays with this role reversal through his exaggerated performance of fear. This is a typical strategy used by adults in play therapy with children in order to build closeness (Cohen 2001).

Personalization Enables the Child to Reflect on Self-Competencies

In assuming responsibility for the creation of some of the elements in the story, the child is encouraged to reflect on what she can achieve with and without help. Since the story invites her to create drawings and audio recordings, which in turn demonstrate and respond to her comprehension of the complex plot, she becomes more aware through the personalization features of what she is capable of. In the example below, which follows on from the interaction described in the previous section, she is attempting to draw a Tyrannosaurus Rex, but her father mistakenly

thinks that she is drawing a Stegosaurus. She reflects on what she was trying to do versus the effect she has actually achieved and explicitly points to how the properties of the iPad have impacted on her drawing.

> Father: It's a Stegosaurus! I knew you were gonna draw a Stegosaurus!
>
> Monika: Why? Are you scared? (Monika looks at him but continues drawing)
>
> Father: It's supposed to be a Stegosaurus, it's got the spikes. Is it a Stegosaurus?
>
> Monika: (continues to draw) No! It's a T-rex! I tried to do smaller ones but it didn't work… (points at the iPad screen)
>
> Father: Anyway…it's a good scary-looking dinosaur. Good job.

Although the father is mistaken in thinking that his daughter has drawn a Stegosaurus, his interpretation of the drawing relates to previous experiences they have shared together. This is a good example of how texts can exist across multiple timescales as described by Lemke (2002), and draw together experiences that have occurred at different points in an individual's life. As well as strengthening the sense of self, as described by Lemke, we see in this example how this has the potential to build closeness between individuals since they can remember together past experiences that they have shared and bring these into the current interaction.

When the child reflects on what she was trying to do, she implies that the iPad has constrained her actions. This might also explain why she does not feel offended by her father's mistaken assumption about what she is drawing. She attributes his misunderstanding at least partly to the iPad. This is interesting since it shows the child making sense of her competencies not just in relation to herself and the skills she possesses, but as part of a network of material factors – in this case, the material tools that she is using in the drawing. She commented on her drawing addressing her father, although the words she said were a reflection of an inner dialogue she must have had before uttering them. Indeed, on a metacognitive level, child's reasoning in this short episode is remarkable: she connects to the father's inner world as well as to the actual drawing she produced and the app's affordances. Her drawing reflects her aesthetic preference and internal standards or schema for what a Stegosaurus should look like. Her speech reflects her understanding of the story meaning and the sociocultural expectations connected to it (i.e. what is considered scary).

Personalization Offers a Chance for the Child to Celebrate Important Relationships

Through the app, the child has the chance to design aspects of the characters in the story, including changing the main characters' names. She uses this opportunity to celebrate important relationships in her life, with people that are both present and absent. In the previous two sections, we already noted that she changed the name of

the main character in the story to 'daddy' and in the following example, we see how this simple change impacted on the parent–child experience of the story together.

> As the father reads the story, he places a slight emphasis on each changed name as it appears in the text. The child listens in delight, with her hands placed loosely along her body with the iPad resting on her knees. Every time the father says 'daddy' when reading the story, the girl smiles. The child starts to explain what is happening to Mona, who is quietly filming a couple of metres away.

> Child: He [the father] keeps on saying daddy because he typed in daddy. Who's doing it? Because daddy and me (Child points to her chest) and then it keeps on saying daddy, daddy, now it's saying 'Daddy shouts out for Hannah'! (The girl explains eagerly and loudly, turning her head from side to side, speaking to the camera, to Mona and to the father at the same time.) Daddy did this, daddy did that, daddy did this, daddy did that! (Child moves her arms quickly back and forth, then slumps back into the sofa, pretending to be exhausted)

This episode shows an orchestration of bodily and verbal resources to achieve a connection between the child and her father and the researcher. The child moves in space with big gestures, calling for attention from the father and the observer/researcher. She manipulates the volume of her voice to convey her excitement and attempts to elicit the same response in her family members—which she achieves with her laughter and funny dance moves. In a sociocultural perspective on the self, the self only exists in relation to others. As Bruner (1994, 2001) argued, narratives are important in developing a sense of self because they allow us to position ourselves in relation to others and make sense of the relationships that are important in our lives. This is clearly demonstrated in the part of the observation described above, when the child is enjoying hearing about her father in the story, and engaging with him on two levels—as the person supporting her in the immediate circumstances and as a character in the story that she had selected. Bruner (1994, 2001) suggests that each narrative exists on two landscapes—an action landscape and a character landscape. In the latter, narrative offers an opportunity to make sense of the motives, intentions and desires of others. Through naming the character 'daddy', the child is grappling with her own father's inner mind and world. In naming the main character in the story after her father, the child emphasises the importance of this relationship to her; the act establishes and comments on their closeness. In the following section, we see how as a character, the father is brought into contact with other important relationships that the child enjoys in her everyday life.

Personalization Can Connect Different Parts of a Child's Life

As mentioned in the previous section, personalization allows a child to celebrate their relationships with various people in their lives, not just those who are immediately present. In evoking their memory of other important individuals in

their lives and those who are immediately present in the same narrative, the parent and child are intertwining different parts of their life. In the last vignette, the child uses the story as a way to bring together her father and her best friend at school, Hannah. Through the story, her father and Hannah interact as best friends. The child finds this extremely funny, as the following extract shows.

> Father: (reading the story)'It was a very funny thing but when daddy needed a friend, Hannah turned up.'
>
> The child interrupts the story and explains again to Mona why this is funny while giggling.
>
> Child: And Hannah isn't even, isn't his friend…she is my friend!
>
> She smiles and hugs herself, giggling.
>
> The father continues reading the story text on the screen, the child listens eagerly.
>
> Father: 'I'm pleased to see you, said daddy gratefully.'
>
> The child repeats this loudly and laughs. The father and Mona laugh as well.
>
> Monika: I put in Hannah and Hannah isn't even daddy's friend!
>
> Father: Now I'm on an adventure with your friend! And I'm getting rescued by a five-year-old!

In this example, the child is playing with different social contexts in her life and making them interact in ways that they would not do normally. She finds this fictitious and unusual combination funny, suggesting that she has an explicit recognition of the differences between the imagined and real world and the different types of relationship that are important to her. The father is brought closer to the child's world through the imagined interaction between him and the child's school friend. He plays witness to the child gathering together different parts of herself, and the different positioning of herself in relation to others. From Lemke's (2000) perspective, the app mediates the father's understanding of the child's sense of self as it is distributed across multiple sites and timescales.

Discussion

We have suggested four ways in which personalization features in iPad story-making can facilitate the development of a child's sense of self and their closeness with others. Personalization positions the child as an author who can experiment with their effect on others in the immediate surroundings, and reflect on their competencies, as they are shaped by the immediate physical–digital environment. Personalization also offers the opportunity for the child to celebrate and play with important relationships in their life, making sense of themselves in relation to others and social contexts that they inhabit as part of their everyday life.

Story-making on the iPad with the *Mr Glue Stories* app appeared to offer a powerful platform for the child's construction and exploration of self. Lemke's (2001) work discusses the importance of semiotic artefacts in our sense of identity.

More than 15 years ago, he argued that our sense of identity is increasingly manifested in the context of a 'traversal culture' (p. 579). Traversals are movements of meaning-making across times and spaces. In an age of 'digital remix' (Lankshear and Knobel 2006), we fluidly traverse physical interactions and digital text-making. We carry meanings across these spaces, playing out our identity on multiple stages, each characterized by their own semiotic conventions. The child and father in our observation are engaged in a particular type of traversal. They move between the physical interaction they share and the story they create through the iPad app. For example, they shape a 'daddy' that exists on the iPad while simultaneously constructing a sense of identity for the 'daddy' that continues to exist beyond the creation of the story. Lemke suggested that traversals have the potential to challenge the ideological influence of mass-distribution media outlets; at the same time, he suggested that in a traversal culture, those with power would create 'semiotic packages' that constrain the creativity of our traversals and control how we move between times and spaces of meaning-making. The feature of personalization in the context of iPad story-making can be read in either way. On the one hand, we can think about personalization as destabilizing the intentions of the designers of the 'Mr Glue' app, since the users can exercise choice in the semiotic artefact they are engaging with. On the other hand, personalization encourages the user to enmesh their identity more fully in the parameters that the designers of the app have predetermined. For example, the story that features in the observation presented here is one essentially of 'good' and 'evil'. This narrative structure can be understood as a message about how the world works. By making 'daddy' the protagonist—the good character—the child and parent are more invested in the good/evil dichotomy. Thus, rather than diluting the influence of the app designers, the traversals between physical and digital interaction potentially heighten the impact of the structures imposed by those with the power to design and disseminate digital tools.

Shifting identities and power relations have been observed with non-digital resources before. For example, Grainger et al. (2005) observed children's writing and authoring of their own stories in a series of case studies in UK primary schools. They concluded that the personal voice experienced through story-making enables children to experience different parts of self: 'through telling personal tales children can voice their emotional, imaginative and interpersonal awareness which can motivate them to use language for intrinsic means, not external schemes, and investigate their identity in the process' (p.125). This quote resonates with Bruner (1994: 43), who conceptualized written and oral narratives as key building blocks for one's coherent sense of self because self 'is storied, or narrative, in structure'. Writing in itself is an activity which connects an individual focus to a wider shared narrative. It raises audience awareness and gives writing a shared, collective purpose. In other words, children's experience of writing enables them to connect their individual story to a wider shared narrative. This is what Grainger et al. (2005) described as an almost universal human desire, because 'when we are engaged in communication we need a response or some kind of feedback, whether from our

own inner voices or from another human being to reassure us that we are having some impact on the world' (p. 56).

The *Mr Glue Stories* app connects the reading and writing process and the individual and shared identity through an interesting, so far little researched, approach: the child is not writing the entire story from scratch, nor is she inventing the story narrative. Rather, the app provides a template, a coherent, funny story the child only needs to customize with a few story elements. The choice of the story characters is up to the child and is a choice that any child can easily make. The story-writing is thus largely facilitated by the app. In Bruner's language, the app provides a convenient scaffold for the child's entry into the story-making world. As such, the use of *Mr Glue Stories* serves a dual aim: it fosters the child's writer identity and it also enables her to bridge the individual and shared story-worlds. In this particular instance, it enabled the child to be on an equal footing with her father in terms of a shared feeling of fun and humour.

Although we have examined personalization as it occurs in the context of iPad story-making, we are not suggesting that personalization is an entirely digital or tablet-based phenomenon. The personalization of stories can also occur in paper-based media or in oral storytelling. Children can, for example choose a name for the main character when they write a story on paper or when they perform a story in a school drama. However, iPad story-making is special in the extent to which it makes this opportunity possible with different types and levels of personalization. The personalization occurs seamlessly and is represented through multimedia elements (in sounds, pictures and text). The multiple modes available through iPad story-making make the personalization richer, but the frequency of personalization within iPad story-making is also important. iPad personalized story-making has therefore the potential to support children to explore their own experiences of the world, to develop a stronger sense of self, and to facilitate closeness with others. Furthermore, effective use of iPad story-making in the home can support children and parents to find out more about one another and strengthen their relationship.

Our conclusions are limited in that they are based on a single observation, which related to one child–parent relationship. When observed at different times, this child and parent may have interacted in different ways with the personalization features on offer. These will not necessarily occur in every interaction involving iPad story-making; other child–parent dyads may have interacted differently. In addition, other MPS apps will present distinct personalization opportunities and we presented only the key four possibilities of personalization features relevant to our data. However, our findings do show some of the ways in which personalization features can play a role in children's sense of self and their relationships with others. We therefore see our study and the findings we have reported here as an invitation to investigate further the potentials of personalization features in iPad story-making in relation to children's sense of self and their intersubjective exchanges with others, particularly adults in the home context. Future studies will change components of the sociocultural context and observe how this shapes the interaction differently—including changing the participants involved in the study and the app that is used.

A longitudinal perspective would also support further research in this area, since it would be interesting to see how the child and parents' interactions with the app change and shift over time as they become increasingly familiar with the personalization features on offer.

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