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Digital Storytelling as Poetic Reflection in Occupational Therapy Education: An Empirical Study

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Digital Storytelling as Poetic Reflection in Occupational Therapy Education: An Empirical Study

Abstract

Stories are powerful aids to reflection. Thus, the use of stories may be a pathway to enhanced reflective practice and clinical reasoning skills. The aim of this study was to evaluate whether and how digital storytelling can contribute to occupational therapy (OT) students' learning through reflections on experiences from placement education. A cohort of OT students (n = 57) participated in a 2-day workshop to create digital stories. Data were generated through a questionnaire with a response rate of 100% of students who completed the workshop (n = 34). Quantitative analysis methods were used to reveal a level of agreement in the questionnaire statements, and qualitative content analysis was performed for the open-ended questions.

The results show that the students learned through reflection on placement experiences in the digital storytelling process as they emphasized reflection as a main outcome. They highlighted the importance of sharing thoughts and reflections with peers. The students confirmed that this happens through the creative process and the use of multimodality in poetic reflection, but they were less convinced by the use of the narrative approach as a dramatic structure. The students experienced reflection and sharing as important elements in the digital storytelling process. However, investigations are needed into the use of a narrative approach to enhance reflection with larger cohorts as well as more thematic analyses.

Keywords

narrative, digital storytelling, clinical reasoning, practice placement, creativity, multimodality, socio-cultural learning context

Cover Page Footnote

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The purpose of this article is threefold:
One, to describe digital storytelling as applied in
the occupational therapy (OT) undergraduate
program in the College of Applied Sciences at
Oslo and Akershus University (HiOA); two, to
provide the theoretical foundation for this
approach; and three, to evaluate whether and how
digital storytelling can contribute to OT students'
learning through reflections on experiences from
placement in OT practice.

Students planning to become occupational therapists need to develop their clinical reasoning skills, which involve knowledge beyond theory (Bannigan & Moores, 2009; Mattingly & Fleming, 1994). This kind of knowledge has theoretical and experiential dimensions but also a personal dimension (Crepeau, Cohn, & Schell, 2008). Practice placement is an important step in the development of a personal professional identity; however, in order for students to benefit from placement, they need the opportunity to reflect on their experiences. In addition to space and time, there is also a need for the conscious design of tasks and processes to develop clinical reasoning skills through reflection (Sladyk & Sheckley, 2001).

Stories provide powerful ways to aid reflection and give attention to feelings, thoughts, and emotions (McCorquodale & Kinsella, 2015). Storytelling and the use of narratives are a part of the tradition of clinical reasoning (Mattingly & Fleming, 1994). This tradition is taken one step further in digital storytelling (Lal, Donnelly, & Shin, 2015). Since 2007, digital storytelling has been integrated into various undergraduate programs at HiOA as a mode of teaching and as a

form of documentation to enhance the personal dimension of developing a professional identity. In the second year of the OT undergraduate program, digital storytelling provides students with the opportunity for poetic reflection on practice experiences.

Definitions of Digital Storytelling Concepts Used in This Article

Digital storytelling may take many forms, as seen daily on YouTube, Vimeo, and other social media. Digital storytelling for learning from practice placement at HiOA builds on the process developed by the Center for Digital Storytelling (CDS) (now Storycenter www.storycenter.org) in Berkeley, CA, whose purpose is to support individuals in creating and sharing personal stories about their lives (Lambert, 2013) (for an example of a digital story see http://www.patientvoices.org.uk/flv/0566pv384.ht

m). Poetic reflection is a concept that combines personal reflections (an expressive form of reflective writing) with public or professional reflections (an informative form of reflective writing) (Bjerknes & Bjørk, 1994). Jamissen and Skou (2010) describe poetic reflection when applied to digital storytelling as a combination of a narrative approach (as opposed to a traditional report), a multimodal representation (as opposed to a purely written text), and a creative process where students are encouraged to support each other in investigating the meaning of their experiences.

At the heart of the digital storytelling workshop is the story circle, which provides a safe space, place, and opportunity for the participants

to share their stories, ideas, and reflections and to receive feedback from their peers (Hardy & Sumner, 2014). As discussed below, for the purpose of this article, we use the terms narrative and story interchangeably (Hamilton, 2008). Both narrative and story constitute an alternative approach to knowledge and learning, different from generalized and theoretical knowledge, and one more in line with experiential knowledge and reflection.

Storymaking is largely prospective, offering a vision of something yet to come, while storytelling is always retrospective (Mattingly & Fleming, 1994). Schell and Schell (2008) further describe storymaking as:

a collaborative process through which therapist, client, and family prospectively link the present to the future by imagining the effect of occupational performance problems in scenes of future occupational contexts. The process results in the prospective treatment story through therapeutic emplotment. (p. 447)

Reflection and Clinical Reasoning in OT Education

OT education aims to develop professional skills and a professional identity in students by building the kind of knowledge typically characterized by a combination of theory and practice, technical and social, factual and personal, and artistry and science (Crepeau et al., 2008; Powers Dirette, 2016). As professional education programs are becoming more and more academic (Heggen, 2008), there is a growing concern in Scandinavia about the challenge of

enabling and encouraging students' development of the personal and social aspects of their professional identities. However, OT education in Norway is founded on a broad understanding of knowledge referred to as knowledge-based practice. This approach encompasses the three dimensions of knowledge needed to work as a therapist: evidence-based knowledge, experience-based knowledge, and personal knowledge, with respect to the client's perspective and needs (HiOA, 2013).

The term evidence-based practice, used internationally, has also expanded beyond just the use of evidence from research in practice to include the evidence of experience (Hardy, 2007). The therapist also has to integrate his or her own expertise with the client's values and available resources when making decisions (Bannigan & Moores, 2009; Powers Dirette, 2016). Bannigan and Moores (2009) introduced the model of professional thinking. Their concept integrates reflective thinking and evidence-based practice, and they argue for these skills to be taught to students simultaneously as complementary approaches to gaining clinical reasoning skills (Bannigan & Moores, 2009). Furthermore, Powers Dirette (2016) describes the importance of bridging the gap between art and science and contends that different types of knowledge are equally important in OT (Powers Dirette, 2016). Clinical reasoning is an established concept describing the professional knowledge of an OT practitioner. Mattingly and Fleming (1994) describe clinical reasoning as an approach that involves several forms of thinking and ways of perceiving. Accordingly, to talk about how

therapists think involves considering how therapists understand their clients and how they perceive their clients' situations. It is important for students to reflect on how they approach and solve problems, and how they use different types of knowledge in different contexts (Bannigan & Moores, 2009; Steward, 1996). Digital storytelling may provide a bridge between theory and practice, offering an opportunity to consider how particular situations affect students' own clinical reasoning and theorizing through sharing of practice reflections. Moreover, this might enable a greater understanding of how tutors and supervisors use theory in their practices (Steward, 1996).

OT educators strive to find ways to enhance reflection and clinical reasoning in students (Sladyk & Sheckley, 2001). Fieldwork and practice placement provide opportunities for learning from experience and may contribute to improved clinical reasoning, but activities to develop clinical reasoning may also shift the focus away from the need for reflection if there is too much happening simultaneously (Sladyk & Sheckley, 2001). The students may experience activities meant to enhance reflection and clinical reasoning skills, like digital storytelling, as interrupting their focus on developing clinical professional skills with the user in placement. In this article, our concern is the need to create both space and time for reflection on experience after, and separate from, the demand for action inherent in the concrete situation (Schön, 1987).

The OT curriculum at HiOA is based on a sociocultural perspective on learning, implying that knowledge is constructed in a social and

cultural environment (Daniels, Cole, & Wertsch, 2007; Lave & Wenger, 1991). Thus, good relations and cooperation in the student group, as well as between students and their supervisors and teachers, are fundamental for learning. To ensure good quality in the program and space and time for interaction, it is essential to have dialog and to share knowledge and skills. Also, there is a need for the conscious design of tasks and processes. To this end, some have argued that theoretical activities thought to increase clinical reasoning include telling stories (Sladyk & Sheckley, 2001).

Narrative and Storytelling in OT

Storytelling is of great significance in OT.

Stories are a valuable way to develop clinical reasoning skills in OT students (McKay & Ryan, 1995). Definitions of the central concepts of narrative and story vary. The main characteristic of narrative or story is:

[the] cognitive organizational scheme through which the narrator subjectively organizes, shapes, and structures experiences into a coherent whole, which clarifies how each event contributes individually to the whole. Conflict is an inherent factor and narrative's hallmark is a distinct beginning, middle, and end. (Schell & Schell, 2008, p. 446)

In this article, based on our overview of the literature (Bruner, 1986; Hamilton, 2008; Polkinghorne, 1988), we will use the terms story and narrative interchangeably. This is also in accordance with Hamilton (2008), who uses narrative and story as if the two words have the

same meaning: "We live narrative by making occupational choices based on our life stories. We summon, evoke, tell, and make stories as part of our daily lives so that each day is a weaving of the warp and weft of narrative and occupation" (p. 126). Storytelling is furthermore described by Schell and Schell as:

an inherently therapeutic process linking past to present that includes the teller's personal interpretation of experience.

Throughout the OT process, storytelling helps reform identity, provides safe reexperiencing of events without consequences, and provides hope. (2008, pp. 447-448)

Mattingly and Fleming (1994) describe how finding the story of each situation and comparing this story to other stories from similar situations can help the occupational therapist make sense of the situation and decide on practical interventions by placing events in a temporal context. Narratives and stories are powerful aids to understanding and reflection; they give attention to feelings, thoughts, and emotions in professional life (McCorquodale & Kinsella, 2015). Furthermore, reflection on how to deliver a client-centered practice is of importance in establishing the therapeutic relationship according to the client's wishes (McCorquodale & Kinsella, 2015). McKay and Ryan (1995) highlight the importance of reflection in education and practice for OT students to become professional experts or artists. They recommend encouraging students to share personal, professional stories with their

peers, to think beyond the medical context, and to be personal (McKay & Ryan, 1995).

Digital Storytelling in OT Education

Hardy and Sumner (2014) describe how digital storytelling has contributed to health care education and practice by allowing all involved to share and listen to each other's stories, and by inviting students as well as experienced practitioners to reflect on their values and placement experiences. Lal, Donnelly, and Shin (2015) take as their point of departure the idea that storytelling is an established vehicle for reflection, and that technology has elevated this practice to new heights, although they do note that there is limited documentation of peer-reviewed studies using the digital storytelling method in the OT literature. However, there is a growing body of peer-reviewed literature internationally discussing digital storytelling projects building on the CDSmodel in professional education programs (Anderson, Kinnair, Hardy, & Sumner, 2012; Benmayor, 2008; Clarke & Adam, 2012; Fletcher & Cambre, 2009; Hardy & Sumner, 2014; Stacey & Hardy, 2011; Walters, Green, Wang, & Walters, 2011). In addition, the lack of peerreviewed articles does not mean that there are no previous records of digital storytelling used in OT education. For instance, Julie Walters (2014) describes how she introduced digital storytelling to service users and carers involved in supporting teaching and learning activities at Sheffield Hallam University. She found that "making a digital story can bridge the personal and professional, and allow us to bring everything that we are to our professional roles" (p. 152).

Digital Storytelling as Poetic Reflection in OT

This literature review reveals that reflection and clinical reasoning are central dimensions of professional OT education and practice. There seem to be several pathways to develop such skills, and digital storytelling has the potential to combine both clinical and personal reflections. Even though digital storytelling is well developed and used across sectors and nations, there is currently a need for empirical studies of its use in OT education. The aim of this study, therefore, is to evaluate whether and how digital storytelling can contribute to OT students' learning through reflections on experiences from placement in OT practice.

Method

In this study, a cross sectional survey design is used with both quantitative and qualitative questions (Creswell, 2014). This section covers an introductory description of the context and participants; a description of the actual intervention, that is, a digital storytelling workshop; and the methods of data collection and analyses.

Participants

The study was conducted at the OT education program at HiOA in Oslo, Norway. Approximately 250 students are enrolled in the program, and approximately 70 students graduate on an annual basis (Bonsaksen, Kvarsnes, & Dahl, 2015). The education program is an undergraduate program lasting 3 years (HiOA, 2013). In the second year of the program, two modules are placement based: one module in

somatic health care and one module in mental health care. The students enrolled during the time of this study were in the second period of placement—half of the cohort in mental health placement and the other half in somatic health placement. Placement institutions covered both community services and hospitals. Experienced occupational therapists connected to the placement institution supervised the students.

Intervention Procedures

The workshop took place in the seventh week of the 10-week placement period and required the students to be present at the university for 2 days. The students were asked to bring to the workshop a memory of a critical incident during practice placement—an experience that made them consider or reconsider their preconceptions or values (an example is a student doing an observational assessment of a person with symptoms of paranoid psychosis and the ethical and relational issues experienced in this situation [see Appendix]). On the first day of the workshop, the students were invited to use clinical reasoning to find and develop a narrative and a plan for producing a finished story. Building on a creative model moving from idea development through idea concentration and text development to the finished script (ideally 200-300 words), the students were led through a structured process of writing, listening, and giving feedback (see Appendix). The most important sharing and feedback opportunity was the story circle where the students shared reflections on their experiences (Hardy & Sumner, 2014; Lambert, 2009).

In order to preserve the intimacy and safety of the story circle when working with large groups of students, it is necessary for students to work in small groups of three or four. Instead of professional facilitation, the students are equipped with precise instructions. Each participant had the full attention of his or her peers for a defined period of time (10-15 min) to receive help identifying the core issues of the story and the relationship to developing his or her professional identity. Then, during the process of writing the finished story, the teachers gave short lectures. The first lecture introduced the narrative form, stressing the need for the story to have a plot and a conscious construction with a beginning, middle, and end. In addition to making the story more interesting to an audience, the main point of introducing a dramatic structure is to help the students identify the core learning from the experience, the conflicts played out, and how they were resolved. Taking the story from a purely written presentation a step further into a multimodal production includes combining voiceover, pictures, and music. We encourage students to be conscious of how each layer is used, where its potential is best realized, and how the layers interplay to make a meaningful whole (Tønnessen, 2012). Finally, before transferring their story ideas onto a storyboard that describes a plan for the production, the last short lecture stressed legal and ethical issues related to privacy and copyright protection.

The first part of the second day consisted of finishing the storyboard, recording the voice-over, and editing the digital story. We rearranged the students into production groups based on

which editing software they had access to on their devices, mainly Moviemaker for PC and iMovie for Macs or iPads. In the grand finale, the last part of the second day, the students shared the finished stories and received feedback and comments from their peers and teachers. Due to privacy and copyright issues, we are not able to provide an OT student example of a finished story from HiOA (see an example from a public health student at http://film.hioa.no/en-jobb-som-girmening). During this process, the teachers, in addition to commenting on each story in its own right, had a responsibility to point to themes of general interest and relevant references to theory.

Instruments

The questionnaire has been used across programs at HiOA since 2010. Building on the three dimensions of poetic reflection as described above—narrative, multimodality, and creativity the questionnaire was developed to evaluate the students' experiences of learning outcomes concerning reflection and learning in general. In developing the questionnaire, the issues of learning outcomes were operationalized through 19 statements, where students were invited to consider their responses on a 6-point Likert scale (Bowling, 2014). The statements were formulated with the aim of capturing the students' experiences of (a) the importance of the process in the workshop, including the story circle; (b) the importance of a narrative approach as opposed to a traditional report; and (c) the importance of images and sound as opposed to a purely written text. In addition, the students were asked to answer open-ended questions about what was the most important learning outcome, what was the

greatest challenge, and what advice they would give for organizing even better workshops for future groups of students. The questionnaire was first tested in a pilot group and later modified based on feedback on face validity and content validity from the students and teachers (Bowling, 2014). The questionnaire now in use contains 17 statements on a 6-point Likert scale, including both positive and negative formulations in order to cross-check student responses and enhance reliability of the questionnaire (Bowling, 2014), and three open-ended questions similar to the ones described above.

In the present study, student responses to 12 statements (see Table 1) and two open-ended questions relevant for the research question were analyzed. The questions omitted from the analysis were ones not related to the aspects of poetic reflection; they deal with technical issues and perceived learning outcomes on a general basis, like "I learned a lot from making a digital story," "Technical issues were a challenge," and "We might have learned more about images and sound." The 12-item scale was evaluated based on data from 243 students across programs at HiOA. First, the scale was subjected to exploratory principal components analysis in order to examine the internal and underlying structure of the indicators. Factorability of the data was supported by a Kaiser-Meyer-Olkin value of .80 as well as Bartlett's test of sphericity reaching statistical significance (p < .01). Following Kaiser's rule, initial eigenvalues indicated a three-component solution explaining a total of 56.5% of the variance. Kaiser's rule, however, tends to overestimate the correct number

of components to extract (Hubbard & Allen, 1987). Based on parallel analysis and inspection of the scree plot, it was decided to retain only two components. The two-factor solution with oblimin rotation displayed a simple structure and explained 47% of the variance (C1 = 33%, C2 = 14%). Second, Cronbach's α was estimated to .87 with a mean inter-item correlation of .34, which was considered satisfactory (Bowling, 2014). Elimination of one or more items did not improve internal consistency.

The students answered the questionnaires immediately after the presentation and discussion of their digital stories, and the questionnaires were collected when the students left the workshop.

Ethics

All of the assigned students were informed about the study and volunteered to participate. All data were collected anonymously; therefore, approval from the Norwegian Data Protection Agency was not required.

Data Analysis

Quantitative analysis. The software IBM SPSS for Windows was used in the data analysis (IBM Corp., 2013). The statements had possibilities of scores from 1 (*do not agree*) to 6 (*totally agree*) in the questionnaire. In the analysis, the variables were recoded into two categories where the full scale were split in two, and answers from 1 to 3 were coded as disagree and answers from 4 to 6 were coded as agree. Prior studies have suggested that having dichotomous categories makes interpretation of data simpler and more clearly identifies trends

while not affecting reliability (Grimbeek, Bryer, Beamish, & D'Netto, 2005). The decision to collapse these response categories was also made to help minimize respondent ambiguity (Grimbeek et al., 2005). Doing this creates a more consistent response category set, which makes a clear distinction between agree and disagree. The data were then analyzed using descriptive statistics to measure frequency and percentages. The threshold for agreement or consensus was set to at least 70% in this study (Kazdin, 1977).

Qualitative analysis. The students gave their responses to two questions: (1) "The most important thing I learned through making a digital story was...," and (2) "The most difficult thing was...." The analysis was done separately for the two questions. The data were analyzed by qualitative (manifest) content analysis as recommended by Graneheim and Lundman (2004) and carried out in in the following steps:

- 1. The text was read through several times to provide an overall impression.
- 2. Data were systematically condensed without changing the original meaning.
- 3. The meaning units/condensed data were labelled with a code, stating their content.
- 4. Themes were created.

Special attention was paid to establishing clear differences between (external homogeneity) and similarities in (internal homogeneity) codes

and themes (Graneheim & Lundman, 2004). Two of the authors did the data analysis, and the codes and themes were presented to both for agreement. They were discussed and refined until both authors reached consensus. Trustworthiness was increased through the use of two analysts (Mays & Pope, 2000) through their ongoing discussions regarding the findings (Lincoln & Guba, 1985). Finally, all of the authors discussed the themes and some minor changes were made until reaching consensus.

Results

There were 61 students in the cohort (28 in the somatic health care module and 33 in the mental health care module). At the start of the workshop, 57 students were present and 34 students completed the 2-day workshop and filled out the questionnaire. In the cohort, 74% were women and their mean age was 24 years (min.-max. 20-41, SD 4). Due to missing values by those completing the questionnaire, the presented cohort statistics of the OT students (n = 61) are based on the student database at HiOA.

The analysis revealed a high degree of consensus among the students in most statements. Table 1 gives an overview of the statements and the degree of agreement. The highest agreement with full consensus ($\geq 90\%$) was the statement "Listening to my fellow students' stories contributed to new reflections on my own experiences" that reached 94.1% agreement.

Table 1Statements from the Questionnaire with Level of Consensus

Theme	Statement	Disagree %	Agree	Total
		(N)	% (N)	N*
Reflection	Producing the digital story resulted in	26.5 (9)	73.5 (25)**	34
	more in-depth reflections on placement			
	Awareness of my own personal feelings is	17.2 (5)	82.8 (24)**	29
	an important aspect of my role as an			
	occupational therapist			
Creative Process	Peer feedback contributed to new	21.9 (7)	78.1 (25)**	32
	reflections			
	I did not learn anything from feedback in	81.8 (18)**	18.2 (4)	22
	the session sharing the finished stories			
	Listening to my fellow students' stories	5.9 (2)	94.1 (32)**	34
	contributed to new reflections on my own			
	experiences			
	Free-flow writing opened up associations	38.2 (13)	61.8 (21)	34
	and ideas			
	The use of images encouraged creative	24.2 (8)	75.8 (25)**	33
	thinking			
	Peer feedback was not helpful	90.5 (19)**	9.5 (2)	21
Multimodality	Using images did not add value to my	80.8 (21)**	19.2 (5)	26
	reflections			
	Images represent my feelings more than	18.2 (6)	81.8 (27)**	33
	written text alone			
	It would have been equally useful to	80.0 (24)**	20.0 (6)	30
	produce just a written text			
Narrativity	Applying a dramatic structure helped me	60.7 (17)	39.3 (11)	28
	identify the most important learning			
	points in my story			

Note: *N varies due to missing values. **The statement reached consensus $\geq 70\%$.

From the theme Reflections, the statement "Awareness of my own personal feelings is an important aspect of my role as an occupational therapist" reached 82.8% agreement. In addition, the statement "Producing the digital story resulted in more in-depth reflections on placement" reached consensus of agreement. All of the statements in the theme Creative Process reached consensus except for "Free-flow writing opened up associations and ideas." There was full consensus for disagreement with the statement "Peer feedback was not helpful," and the statements concerning sharing stories and giving

and receiving feedback all reached consensus in favour of digital storytelling. In addition, the students agreed that the use of images encouraged creative thinking.

Furthermore, the statement "Images represent my feelings more than written text alone" from the theme Multimodality reached 81.8% agreement. From this theme, the negatively formulated statements "Using images did not add value to my reflections" and "It would have been equally useful to produce just a written text" both reached consensus of disagreement.

However, the statement from the theme Narrativity did not reach consensus.

Qualitative results. From the first openended question, "The most important thing I learned through making a digital story was...," the main body of the students' comments concerned themes like Reflections, Sharing and Learning with Others, The Process of Getting the Message Across, and Theory. With more than 30 statements, Reflections contained the largest number of comments from the students. Many of the students highlighted the importance of reflecting on their own experiences from the placement period, as one student expressed: "[to reflect on] what one does and experiences in practice." Another student said, "[reflect to] be aware of own role, own views and own actions."

When responding to the theme Sharing and Learning with Others, many of the students highlighted the importance of sharing reflections on their own story, both during the process of developing the story and after the presentation of the film. One student expressed; "I reflected more after sharing with others." Another student said: "[It is] useful to hear other [students] thoughts and feelings." A few of the students also highlighted the importance of reflecting together with the class after the presentation. Some of the students commented on The Process of Getting the Message Across; for instance, one student said, "[The most important learning was] how to clarify the message by using pictures and text." Only a few of the students commented that they had learned something connected to Theory, such as "[connecting] theory to practice" and "[grounding] the practice in the theory."

With respect to the second open-ended question, "The most difficult thing was...", most comments addressed process issues and technical issues. With more than 30 statements, process issues received the largest number of comments from the students. Many of the students expressed the challenge of creating a story, as one student said: "[the most difficult thing was] about finding ideas, writing down and shortening." Some of the students also commented on the challenge of finding appropriate pictures, and some expressed the difficulty of recording their own voice. One student said, "[the most difficult thing was] recording my own voice and getting it to sound natural at the same time." A few of the students commented on their own lack of motivation and highlighted that it was difficult to understand the purpose on the first day and also difficult to get started. Furthermore, a few of the students said that showing their film to others was scary.

Discussion

The aim of this study was to evaluate whether and how digital storytelling can contribute to OT students' learning through reflections on experiences from placement in OT practice. The main findings show that (a) the students emphasized reflection as a main outcome of the digital storytelling process; (b) the students highlighted the importance of sharing thoughts and reflections with peers; and (c) of the three elements of poetic reflection, the students clearly confirmed the importance of the creative process and the use of multimodality but were less clear about the use of the narrative approach as a dramatic structure. These findings will be discussed in turn.

The students reached consensus in agreeing that making a digital story deepens their reflections from placement and acknowledging that awareness of their own feelings is important in their professional development as occupational therapists. We find it interesting and promising to see how the importance of reflection reached consensus in the quantitative data. Moreover, the students highlighted reflection qualitatively when they were invited to express in their own words what they found to be the most important learning outcome.

However, reflection is not a precise and unambiguous concept. Schön (1987) distinguishes between phases and foci of reflections. Reflection-in-action describes the inherent, and often not verbalized, reflections that steer our actions, similar to what Polanyi (1967) describes as tacit knowledge. What we are looking for in education is, in addition, what Schön describes as reflection-on-action (Schon, 1987). An example is Karina's story when she says: "We cut the cake in two, put the filling in between and serve on a nice plate. Everybody is smiling. Was it a success after all?" (see Appendix). According to Dewey (1997), a conscious reflection demands a continuous reconstruction to gain insight into the complexity of the situation. The value of experience and reflection in an educational setting depends on the quality of this reconstruction. Eikeland (2006), referring to learning in organizations, introduces the concept that "on-stage-performance" needs to be combined with "back-stage-reflections" to facilitate learning (p. 229). As educators, we try to create this space for back-stage-reflections by

offering counselling throughout placement and postplacement seminars. However, considering OT education's frequent emphases on procedures (Mattingly & Fleming, 1994), there is a concern that these reflections tend to support the theoretical and evidence-based aspects of knowledge (Bannigan & Moores, 2009). Having students reflect on their personal experiences and emotional and social aspects of learning from placements demands alternative approaches to a traditional report. Grounding in theory is necessary but not sufficient for the pursuit of professional practice and the application of appropriate clinical interventions (Bannigan & Moores, 2009; Mattingly & Fleming, 1994). Theoretical reasoning differs from practical reasoning: "The very power of theory is that it is general; but this is also its drawback. Any particular situation is always more subtle, and in some way different, from the complexities of the general case" (Mattingly & Fleming, p. 11). What we try to offer in a digital storytelling workshop is a way to reflect on what seasoned clinicians speak of as the "art of therapy" or of "getting a feel for what works" (Mattingly & Fleming, 1994, p. 10).

We believe that the students' acknowledgement of the workshop as a different experience of reflection has to do with the narrative approach. There is support for our view that working with the narrative—the story—of the placement experience is an important threshold for this reflective process. Bruner (1986), who introduces narrative learning and narrative knowledge as basically different from but complementary to generalized and theoretical knowledge, stated: "a good story and a well-

formed argument are different natural kinds" (p. 11). While the logical argument aims at determining general truths and causal relations, the purpose of a story is to find meaning and illuminate how situations may be understood and interpreted as unique incidents. These discussions are what Dewey (1997) claims are necessary for making connections and meaning in the concrete situation explicit and contributing to new knowledge and new understanding through reflection. We believe the process of reconstruction Dewey is referring to coincides well with the construction of story and plot. The digital storytelling process offers opportunities for reflection on at least three steps. One is the story circle. Many have pointed to the story circle as the major arena for reflection (Hardy & Sumner, 2014), and some describe it as magical and sacred (Lambert, 2009, p. 86). The second is the actual writing process, including designing a storyboard and finding images, which also invites students into a reflective space. They need to think and rethink about what is at the core of their experiences and what knowledge they might draw from it. They are asked to tell not only what happened, but also to dwell on what the experience was really about and then go further to consider what it was really, really about.

The third, and in our experience the most magical, is the moment of reflection that happened in the sharing session where each storyteller had his or her protected time for receiving comments and feedback. This sharing session also constituted an opportunity to connect the students' personal knowledge and developed through reflection on experience in placement with the

theoretical knowledge base (Bannigan & Moores, 2009).

Making such connections is primarily the responsibility of the teachers, but we also experienced a number of curriculum references from the students, including comments on how the stories gave added understanding to theory. In fact, reference to theory has been described as a challenge in developing digital storytelling as an approach to reflection in higher education. The immediate references to theory in the sharing session are in line with previous experiences at HiOA (Jamissen & Skou, 2010). Benmayor (2008) describes how students, building on their own reflective digital stories, completed the learning process by writing a reflective note "theorizing" their own stories. The quality of the workshop model for the students' reflections and learning outcomes lies in the totality and in fulfilling all three phases of reflection. We have no data explaining why some students chose to leave during the process—some before completing the story and some before the sharing session. But it may indicate that we failed to inform them of the importance of this totality and that it is difficult to understand this before it is experienced.

The qualities of digital storytelling as a tool for reflection found in this study are in line with other research outcomes reported in the literature (Corry-Bass, Critchfield, & Pang, 2014). Our contribution to the literature lies in the field of study, OT education, and in connecting the qualities of the three dimensions of poetic reflection to the focus on developing students' skills in clinical reasoning. As discussed above,

clinical reasoning, in addition to theoretical and experiential knowledge, implies a personal dimension, and we find, like van Gils (2005), that personalized education is one of the main advantages of digital storytelling. He argues that students present their experiences and reflections and evaluate their achievements while creating digital stories. Walters et al. (2011) compared levels of reflection in journals written by preservice teacher students on a study trip abroad with digital stories from the same students. They found that the digital stories gave a better understanding of the international experience: "While the journals recorded a catalogue of events, the digital stories, even at the lowest level of reflection, were more indicative of the impact of the experience on teachers' level of intercultural competence than the journals" (p. 49).

All of the statements concerning the social aspects of the digital storytelling process, like sharing stories and giving feedback to peers and receiving feedback from peers and teachers, reached full consensus among the students. The way we organized the storytelling workshop is based on a combination of individual reflection, sharing thoughts, and receiving feedback from peers and teachers. Thus, it constitutes an arena where learning is situated in a social context, as described by Lave and Wenger (1991). Other studies, like Fletcher and Cambre (2009), also describe the value of the social construction of knowledge inherent in digital storytelling: "Like storytelling generally, the digital story calls on the intersubjective process of collective meaning making. Digital stories are a form of invitation

open to considering possibilities of mutual endeavour" (p. 122). Mattingly and Fleming (1994) believe that sharing stories forms a bond between therapists, and we find this just as relevant for students in placement. Furthermore, this sharing teaches them more than they could learn in a classroom or through their own personal experiences. Storytelling plays an important part in building and enlarging meanings that comprise the culture: "The clinical experience of one therapist becomes part of the collective experience of the group through storytelling" (Mattingly & Fleming, 1994, p. 19).

The students clearly acknowledged the value of multimodality, where images add more creativity and expression to their stories than a reflective text would do alone. As suggested by Fletcher and Cambre (2009), we also find that the process of combining voice-over and images adds to the reflective work: "The tensions between the visual and the narrative are intrinsic to the digital story product, and these are zones of productive encounter" (p. 122). Kress (2003) describes how the two modes of writing and of image are governed by different logics and have distinctively different affordances. While a spoken or written text is organized and received as a sequence, the image is organized spatially and may be read simultaneously. In addition, the use of images and music speak to other senses; hence, they often make a more profound impact than a written or spoken text. More important, in our context, is the cultural move from the dominance of text to the dominance of image, and the way that the multimodal text allows students' everyday language into their professional lives.

Furthermore, the creative process of working on the stories through sharing and giving and receiving feedback is confirmed as being a valuable part of the reflective process. The learning outcome, both for the individual and the group, is enhanced by the reflection inherent in constructing and illustrating the plot and in sharing the finished products. And it is significant that this sharing happens through a personal digital story, which is easily understood and responded to: the stories "are immediately relational and have an implicit pedagogical significance" (Fletcher & Cambre, 2009, p. 122).

However, in this group of students, the statement relating to the narrative tool of dramatic structure was not considered helpful. Hence, we see a need to improve the tools and tutoring in the story construction process. This lack of consensus is not enough to conclude that the students failed to appreciate the importance of the narrative approach as such. The way the questions were verbalized may have been unclear to the students, and they may not have been aware that the narrative forms the foundation for the whole workshop and involves more than the concrete tools. Through the 2 days of the workshop, the development of a personal story rather than writing a theory-based report guides the overall aim and all of the tasks. Through the process of narrative reconstruction of a critical incident in placement, in a context where we create a safe space for sharing, we invite the students to explore the broader meanings and implications for professional practice. Thus, we may see the students' positive responses in relation to reflection and an appreciation of this process.

According to Ricoeur (1984), this reconstruction takes place in several phases, where one of the phases is the configuration included in the creation of the plot. Another is the reconfiguration that happens as the finished story is shared and received by peers and teachers in a context where new meaning may be added (Ricoeur, 1984). We have found it beneficial to spend time teaching students to work on their narratives, as narrative thinking is central in OT professional practice and a valuable tool in clinical reasoning. Mattingly and Fleming (1994) make the connection between narrative thinking, through "emplotment," and clinical reasoning in what they call "storymaking": "Telling stories is always retrospective – a way of considering past events – whereas story making is largely prospective, playing out images" (pp. 268-269). Another value in digital storytelling that we find relevant to helping students develop a professional OT identity is that it not only allows but also invites students to dwell on their subjective experiences. Ochs and Capps (1996) argue that deeper levels of authenticity can be obtained through narrative: "While narrative does not yield absolute truth, it can transport narrators and audiences to more authentic feelings, beliefs, and actions and ultimately to a more authentic sense of life" (p. 23). They define and discuss two basic dimensions of narrative: temporality and point of view. When discussing temporality they note how "the telling of past events is intricately linked to tellers' and listeners' concerns about their present and their future lives" (p. 25). Schell and Schell (2008) also describe how storymaking links the present to the future by making prospective stories

using imagination of future occupational contexts. Furthermore, they see storytelling as a therapeutic process that may form identity through linking past and present and provide hope (Schell & Schell, 2008). As Karina (see Appendix) ends her digital story: "So what is the role of the occupational therapist? It is to enable and provide opportunities for patients to take part in occupations. And to show that it does not have to end perfect to be a success."

Limitations of the Study

This study relies on a relatively small group of students in one cohort. Although the findings are supported by similar studies with other groups of students at HiOA (Jamissen, 2012), a number of issues remain. One of these issues targets the instrument, which is not validated. However, the explorative factor analysis shows promising results, which should be further analyzed in another study. It will also be necessary to replicate this study in a larger cohort and discover whether these results are valid in another cohort.

Another issue is the timing of the data collection immediately after the sharing of the stories. Collecting the data while the students were still present in the room, on the one hand, results in a high response rate. On the other hand, we need to be aware of the impact of the immediate experience on the students' answers (Kirkpatrick, 1998). In our case, most of the students considered this workshop as a positive experience. Also, as a number of the students chose not to take part in this sharing session, we do not know anything about their experiences. In

further research, we need to include responses and feedback a week or more after the sharing. In addition, widening the focus from how the students experienced the workshop to what they learned may show if and how they see their learning experiences having a long-term impact (Kirkpatrick, 1998). This evaluation should include both those who took part in the whole process and those who left the workshop during the process.

The students wrote short answers in the qualitative part of the questionnaire; therefore, development of the questionnaire in further research would be warranted, as well as doing qualitative interviews individually or in groups. This approach would probably give more insight into the students' experiences with the digital storytelling process, in addition to their thoughts on learning and reflection in such a workshop.

Conclusion

This study reveals that the creation and sharing of a personal professional digital story had positive benefits for OT students. The process itself resulted in a greater appreciation of the value of reflection and how this could be skilfully expressed through the multimodality of a digital story, with a recognition of the value of sharing and learning from others' experiences. The results of the study suggest the need for more in-depth research into the possibilities of employing digital storytelling with the same and other professional student groups, with a view to investigating the longer-term impact of the process on both learning and practice.

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Appendix

A Digital History: Karina Heggeli

I am on a low secure psychiatric ward. The patients are forced to stay. They are ill. Really ill. They have dual diagnosis, personality disorders, schizophrenia, and schizoaffective disorders.

I am about to do an observational assessment, but he does not know this is an assessment. We are going to bake a cake, and my supervisor has told me that I have to complete this occupation with him. There are only the two of us in the kitchen. And I, I am the worst baker you have ever met. The session has to go well, but I'm not so sure it did.

The patient starts to laugh. We are in this together. A student and a patient with a schizoaffective disorder and manic depression. We cut the cake in two, put the filling in between, and serve it on a nice plate. Everybody is smiling.

Was it a success after all? I am smiling. The patient is laughing! But he doesn't know that it was an assessment. He does not know that I am about to write down everything. Is that right? I do not know. Does it feel like a betrayal against the patient? A little bit. We had fun. But how would the patient feel and act if he knew it was an assessment? Would he reject baking with me? Most likely. The emerging gap between us, professional and patient, may be too large; he might not want to.

So what is the role of the occupational therapist? It is to enable and provide opportunities for patients to take part in occupations.

And to show that it does not have to end perfect to be a success.