Creativity and elementary students' multimodal narrative representations

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ABSTRACT

Creativity has been identified by many scholars as a fundamental capability to cultivate in individuals in school and in society at large. Internationally, educators are exploring how to foster creativity in classrooms. A brief review of relevant literature on defining creativity, nurturing creativity in classrooms, and assessing creative products is followed by a description of a study that featured nine-year-old students designing and producing creative products. Two of the main purposes of the classroom-based research were to develop students' visual meaning-making skills and competencies by focusing specifically on elements of visual art and design in picturebooks, and to extend their narrative competence through a focus on metafictive literature. A retrospective analysis of specific activities that occurred during the research with respect to their potential for nurturing habits of mind associated with creativity is followed by the analysis of one student's creative product, her multimodal narrative representation. The discussion includes consideration of the importance of educators deepening their theoretical and practical knowledge of the construct of creativity as they endeavour to teach about, for and about creativity, and to assess creative learning by students.

On page 6, the girl, Vanessa, her hair bow is half orange and half green because she starts out being very, what can I say, mean. But now she's turning good so she has a bit of orange. One, orange is one of the colours of the Phoenix, who is magical and she believes in him now, but also orange can mean encouragement and she's being encouraged to believe in him now [talks about other examples of colour and point of view] … and on page 7, I have a side view because the girl is actually reformed and I want readers to see her hair bow because it's completely orange now. It's orange because she is reformed because she was encouraged to believe in magic and she does now. (Soraya)

The above excerpt from Soraya's (pseudonym) 20:48 minute interview about her multimodal narrative representation features an example of creativity. Considering the task requirements, her intentional use of colour for the character's hair bow is original, effective, and elegant, both externally – visually pleasing – and internally – components fit together (Cropley & Cropley, 2008). Soraya designed and produced her multimodal narrative as the application of learning assignment at the end of a study I conducted in her Grade 4 classroom. Two of the main purposes of the research with

the nine-year-old students were to develop their visual meaning-making skills and competencies by focusing specifically on elements of visual art and design in picturebooks, and to extend their narrative competence, their 'ability to produce and understand narratives' (Prince, 2003, p. 61) through a focus on metafictive literature. Essentially metafictive devices or techniques reveal the 'fictional illusion' of texts (Waugh, 1984, p. 6) by 'self-consciously and systematically' drawing attention to their 'status as an artefact' (p. 2). Within the research context, the introduction of metafictive techniques and the instruction about elements of visual art and design through the study of picturebooks can be considered teaching *about* creativity. During the study, Ms S., the teacher, and myself also taught *for* creativity. In this article, I engage in a retrospective analysis of specific aspects of the pedagogy delivered during the research with respect to their potential for nurturing habits of mind associated with creativity (Lucas, 2016). I also apply criteria developed by Cropley and Cropley (2008) to analyse Soraya's creative product, her multimodal narrative.

A brief review of the scholarship on creativity is followed by an explanation of the theoretical framework of the construct of creativity, and of the study itself. An overview of the research procedures precedes the descriptive analyses of the multimodal narrative assignment and Soraya's multimodal narrative. I then discuss the need for educators to deepen their conceptual and practical understanding of creativity in order to nurture, support and assess students' creative processes and products.

Creativity

In the province where I work, creative thinking is identified as a core competency necessary for all students 'to develop in order to engage in deeper learning and to support lifelong learning' (British Columbia Ministry of Education, 2018, p. 3). Indeed, creativity has been identified as a key 21st century learning skill (National Education Association 2012; Partnership for 21st Century Learning, 2016) for students' success in contemporary globalised economies. The Organisation for Economic Co-operation and Development (OECD) Centre for Educational Research and Innovation (2018) recently completed an international project that explored the teaching and assessing of creative and critical thinking in various curricular areas in schools. The OECD also coordinates the process for the Programme for International Student Assessment (PISA), and according to Lucas and Spencer (2017), creativity will be 'the focus of its [PISA] innovative domain test in 2021 … and will draw on the five-dimensional model of creativity' (p. 21), described later in this article.

Defining creativity

Creativity is a complex and multifaceted construct. Scholars in education, fine arts, sociology and psychology, among other disciplines, have theorised and conducted research about creativity, resulting in a diverse range of publications and at times conflicting ideas and opinions.

Creativity can be 'an individual or collective phenomenon and can be viewed as domain-specific or domain-free (Lucas, 2016, p. 279). Scholars have written about multiple kinds and levels/degrees of creativity across domains (Cropley & Cropley, 2008; Kaufman & Beghetto, 2009; Kaufman, Glaveanu & Baer, 2017), and considered 'the nature of the creative process, the creative person, and the creative product' (Simonton, 2012, p. 98), as well as the social environment (Lucas & Spencer, 2017; Mullet, Willerson, Lamb & Kettle, 2016; Soh, 2017).

According to Gajda, Karwowski and Beghetto (2017), 'creativity scholars generally agree that creativity represents a combination between originality, novelty, or newness *and* usefulness, meeting task constraints, or meaningfulness as defined within a particular sociocultural and historical context' (p. 270). Although a general consensus exists in the field regarding a 'standard definition of creativity' (Acar, Brunett & Cabra, 2017, p. 133), individual, historical, cultural, and social factors need to be considered when exploring definitions, 'judgments and manifestations of creativity' (Runco, 2017, p. 308). Indeed, cultural norms and beliefs affect perceptions of creativity (Simonton, 2012) and there are 'different ways of exercising creative skills and attitudes' (Sternberg, 2018, p. 6) within and across both cultures and domains.

In their historical overview of the standard definition of creativity, Runco and Jaeger (2012) discussed how originality or novelty 'is vital for creativity but not sufficient' (p. 92) because 'original things must be effective to be creative' (p. 92). Effectiveness can take the form of usefulness, value, utility, fit, appropriateness, or adaptability (Acar et al., 2017; Runco & Jaeger, 2012). Acar et al. (2017) noted that 'novelty and usefulness may not be equally important in explaining the creativity of a product' (p. 133). Another 'factor that appears to influence people's evaluations of creativity, but which is not reflected in the standard definition, is the concept of aesthetics and elegance' (Acar et al., 2017, p. 134). However, some assessment tools feature elegance or aesthetics as an indicator of creativity (e.g., Cropley & Cropley, 2008, 2016; Reis & Renzulli, 1991).

Nurturing creativity in classrooms

Kim's (2011) analysis of data gathered on the *Torrance Tests of Creative Thinking* (TTCT) from 1966–2008 revealed a decline in the creative thinking test scores of Kindergarten to Grade 12 students in the United States since 1990, with the major decreases occurring among Kindergarten to Grade 3 students. Specifically, Kim (2011) reported significant decreases in young children's abilities to generate many ideas, and to 'produce statistically infrequent, unique, and unusual ideas' (p. 292). According to Kim (2011), scores on the 'Resistance to Premature Closure' subscale indicated that younger children 'are tending to grow up more narrow-minded, less intellectually curious, and less open to new experiences' (p. 292).

The findings from Kim's data analysis raise questions about the nurturing of creativity in education. Mullet et al. (2016) emphasised how teachers' 'ability to define and recognise creativity is crucial to cultivating it in students through curriculum and pedagogy' (p. 27) and to generating frameworks for assessing the multifaceted construct. Results from a systematic literature review

conducted by Mullet et al. (2016) on Kindergarten to Grade 12 teachers' perceptions of creativity revealed their conceptions were 'limited, vague, and confused' (p. 27) and 'uninformed by theory and research' (p. 9). According to Mullet et al. (2016) the following themes, among others, emerged from their literature review: teachers value creativity; but they experience 'difficulties in recognising an authentically creative student or experience in the classroom' (p. 24); they 'confuse creativity with intellectual ability' (p. 25); they believe 'creativity mainly takes place in the arts' (p. 26); and they do not recognise 'the sociocultural aspect of creativity' (p. 27). This lack of understanding of the construct of creativity effects the actualisation of 'classroom environments rich in creative thinking and practice' (Mullet et al., 2016, p. 9).

Creative dispositions or habits of mind

Creativity is learnable (Lucas, Claxton & Spencer, 2013; Lucas & Spencer, 2017; Mullet et al., 2016; Soh, 2017) and therefore teachable and assessable (Beghetto, 2005; Brookhart, 2013). In order to identify, foster and assess student creativity, teachers need to develop their understanding of the concept of creativity, as well as 'the creative personality, process, products, and environmental factors that promotive creativity' (Mullet et al., 2016, p. 27).

In 2011, the OECD and the international foundation of Creativity, Culture and Education (CCE) commissioned the Centre for Real-World Learning (CRL) to review the literature on the assessment of creativity in schools and to 'establish the viability of creating an assessment framework for tracking the development of young people's creativity in schools' (Lucas et al., 2013, p. 5). When developing the framework, the CRL considered the fundamental importance of 'locating creativity in a broader social and contextual view of learning' (Lucas, 2016, p. 281) so the tool could be used across a variety of contexts both in and out of school. The model has been titled, 'The Five Creative Dispositions Model' (Lucas et al., 2013, p. 16), the 'CRL's Five-Dimensional Model of Creative Habits of Mind' (Lucas, 2016, p. 281), and 'the five-dimensional model of creative thinking' (Lucas & Spencer, 2017, p. 22). In publications about the model (Lucas, 2016; Lucas et al., 2013; Lucas & Spencer, 2017), the terms 'disposition' and 'habits of mind' are used to refer to the 'ways of thinking and acting' (Lucas et al., 2013, p. 281) that constitute the model. Hereafter, I use the terms habits of mind and sub-habits.

Lucas et al. (2013) noted that the model features learnable habits of mind 'over which individuals have a degree of control' (p. 14). Each of the model's five core habits of mind is composed of three sub-habits: (1) *inquisitive*: wondering and questioning, exploring and investigating, challenging assumptions; (2) *imaginative*: playing with possibilities, making connections, using intuition; (3) *persistent*: sticking with difficulty, daring to be different, tolerating uncertainty; (4) *collaborative*: sharing the product, giving and receiving feedback, cooperating appropriately; and (5) *disciplined*: developing techniques, reflecting critically, crafting and improving (Lucas, 2016, pp. 281–282; Lucas et al., 2013, pp. 16–17; Lucas & Spencer, 2017, pp. 24–27). Findings from field trials that featured the use of the model for formative assessment purposes revealed it was 'operationally possible for teachers and students to track the development of creativity with the five habits' (Lucas, 2016, p. 286). Below, I connect the five core habits of mind to the research procedures associated with the multimodal narrative representation assignment completed by the Grade 4 students.

Creative products

Beghetto (2005), like other scholars, emphasised how 'the judgment of creativity depends on the context … and the stakeholders in that context' (p. 255). An important aspect of the social context of classrooms is the nature of tasks or activities because assignment criteria affect the originality, effectiveness, aesthetics, and genesis of the creative products planned and produced by students. Mullet et al. (2016) cautioned against an overemphasis on creative products, but Collard and Looney (2014) stated that too 'much attention to the creative process itself may deflect from efforts to improve the quality of the outcome' (p. 357). Pedagogically, it seems logical for students to receive formative and summative assessment on both their creative processes and creative products.

Although Reis and Renzulli (1991) developed the Student Product Assessment Form (SPAF) to assess the creativity of student products in enrichment programs, it seems appropriate for all students. A 'Creativity & Innovation Rubric' for Grades 3–5 generated by the Buck Institute for Education (2013) designed for project-based learning products includes four qualitative levels of achievement to assess the criteria of originality, value, and style. Informed by the five creative habits of mind model (Lucas et al., 2013), the OECD (2018) has also developed a rubric on creativity (and critical thinking).

Cropley and Cropley (2008, 2016) believe the Creative Solution Diagnosis Scale (CSDS) they developed to assess creative products is suitable for use by teachers. Although their initial work focused on 'functional creativity,' Cropley and Cropley (2008) described how the

notion of a 'useful novel product' (p. 156) was broad and included ideas, processes, techniques, or methods. Indeed, Cropley and Cropley (2008) wrote that 'paintings, musical compositions, poems or novels, or … systems of ideas … are also products that *successfully perform tasks of their own kind* [emphasis added]' (p. 156). They identified four properties of functional creativity: *effectiveness and relevance* ('knowledge of existing facts and principles and satisfies the requirement[s]' (Cropley & Kaufman, 2012, p. 124)); *novelty* ('problematisation, adding to existing knowledge, developing new knowledge' (Haller, Courvoisier & Cropley, 2011, p. 102)); *elegance* (external and internal); and *genesis* (goes 'beyond the immediate situation' (Cropley & Kaufman, 2012, p. 125)). They also delineated 'observable characteristics [or indicators] of products that reveal the presence' of each property (Cropley & Kaufman, 2012, p. 122) and each is assessed with a 5 point Likert scale. Based on their research, Cropley and Kaufman (2012) and Cropley and Cropley (2016) made revisions to the CSDS. The revised scale features fewer and some reworded indicators, an additional property, and the term novelty was replaced with the word propulsion.

I decided to use the criteria from the original CSDS (Cropley & Cropley, 2008) to analyse Soraya's creative product because this tool includes the characteristics of creativity revealed by the literature review and the 'indicators were drawn from the literature of product creativity' (Cropley & Kaufman, 2012, p. 126).

Theorising teaching and learning in the research classroom

As discussed above, 'creativity cannot be separated from the societal and cultural contexts in which it arises' (Hennessey, 2017, p. 343). A sociocultural theoretical perspective, which draws heavily on Vygotsky's work (1978), presupposes the socially situated nature of teaching and learning, and thus recognises the need to contextualise any consideration of creativity. Vygotsky (1978) theorized the social construction of cognition explaining how 'the process of the *internalisation of social speech*' is simultaneously 'the socialisation of children's practical intellect' (p. 27). Indeed, through their social interactions with others, children 'grow into the intellectual life of those around them' (Vygotsky, 1978, p. 88). Gajda, Karwowski and Beghetto (2017) wrote that 'in the context of academic learning, creativity can be thought of as occurring at both' the intersubjective and subjective level (p. 270). At the interpsychological, to use Vygotskian (1978) terminology, or, intersubjective level, 'students who share their unique and academically accurate insights

and interpretations can also contribute to the learning and understanding of others' (Gajda, Karwowski & Beghetto, 2017, p. 270). At the subjective or intrapsychological level, 'students exercise their creativity by developing new and personally meaningful ideas … within the context of particular academic constraints' (Gajda, Karwowski & Beghetto, 2017, p. 270).

The cultivation, development, expression, and assessment of creativity is mediated by the multifaceted semiotic landscape of students' classrooms (and homes and communities). According to Jewitt (2009), a semiotic landscape includes the kinds, extent, purposes, and ways the semiotic resources of modes are used 'in a specific historical and social-cultural setting,' as well as 'people's attitudes towards specific semiotic resources, and the way in which their use is learned and regulated' (p. 304). During the research, the students' learning was framed and shaped by teacher expectations and ideology, classroom discourse, 'the selection of texts, and the pedagogic processes and practices within which' the texts were embedded (Jewitt, 2007, p. 276). When applied to a classroom setting, a sociocultural perspective emphasises the roles of both students and teachers in the instructional process. In order to contextualise the students' creative processes and products, below I provide information about the teaching and learning activities that transpired during the study.

Contextualising the research

The research site was a Kindergarten–Grade 5 independent school, located in a predominantly upper-middle class area of a city in western British Columbia, Canada. All of the 18 students in Ms S.'s Grade 4 class chose to participate in the study. During the Fall term of 2017, Ms S. and I worked collaboratively for approximately nine weeks during time scheduled for Language Arts. Our focused lessons were approximately 50–55 minutes in duration. In addition to the main purposes of the study described at the beginning of the article, an overarching goal of the research was to develop students' critical thinking and aesthetic understanding through our work with the picturebooks.

Elements of visual art and design, and picturebooks

Intentionally designed activities afforded the students with numerous opportunities to learn about particular elements of visual art and design in picturebooks during the research. Specifically, lessons focused on the following elements: (a) physical aspects; (b) layout characteristics; (c) colour; (d) line; (e) visual point of view; (f) framing; and (g) typography. Through their participation in whole class and independent activities,

the students engaged in dialogue with others about the focus elements. Participation in these dialogic interactions was essential to the students' individual, yet socially situated construction of knowledge about the concepts under study, including the learning and using of appropriate metalanguage.

At the beginning of the study, the students learned about and practiced discussion etiquette skills, with the goal of positively impacting their participation in small group, digitally recorded discussions of the literature. The sequence of foci picturebooks used in the study was as follows: *Flotsam* (Wiesner, 2006); *Mr Tiger Goes Wild* (Brown, 2013); *Voices in the Park* (Browne, 1998); *The Three Pigs* (Wiesner, 2001); *Ivan the Terrier* (Catalanotto, 2007); *NO BEARS* (McKinlay & Rudge, 2011); and *Snappsy the Alligator* (Falatkao & Miller, 2016). The students were given topics and/or questions that were mindful of the meaning-making potentials of the picturebooks with respect to the concepts under study to guide their small group discussions.

Metafictive devices and narrative structure

As indicated previously, the students were introduced to metafictive techniques through the study of the picturebooks. To review, texts that are metafictive in nature are self-referential and self-conscious, making explicit their narrative mechanics. Although the students were introduced to a few metafictive devices when working with *Flotsam*, the focused instruction on metafictive devices began with *Voices in the Park*. For the last five picturebooks (see above), the students were given a list of the metafictive devices present in each selection. The students engaged in exploratory talk and critical thinking with peers as they discussed the presence of the devices and revisited the picturebooks to provide evidence for their opinions. Once work with the focus picturebooks was completed, each student was assigned a different and unfamiliar picturebook to read and identify the metafictive devices in that selection of literature. Using either an iPad or a digital recorder, the students recorded themselves, explaining to Ms S. and myself the metafictive devices in their picturebook. Although classroom observations of and interactions with the students revealed that overwhelmingly, the metafictive devices and terminology were unknown to the students, they adeptly learned the metalanguage to talk about the devices and identify them in the picturebooks and other multimodal texts.

Some metafictive techniques not only draw reader attention to the fictional status of a text but also collapse or obscure the boundaries between reality and fiction (Pantaleo, 2016, 2018). The breaking of the boundary of a storyworld or diegetic is a significant narrative structural feature. Indeed, another layer of pedagogy during the study focused on narrative structure. With the goal of developing conceptual understanding of the writing trait of organisation, the students brainstormed examples of organised and disorganised things in the world, as well as ways/techniques/methods for organising items. The term chronological was introduced to the students, and a discussion ensued about the role of this concept as an organisational structure in life. In addition, this concept served as a standard for students to consider when discussing the narrative structures of the picturebooks.

The students created visual representations of the narrative structures of the last five focus picturebooks. The students were led through an example of visually portraying the narrative structure of *Voices in the Park*. Emphasis was placed on the multiple possibilities that could successfully accomplish this task. The students produced visual representations on whiteboards and/or paper of the narrative structure of four other picturebooks. Importantly, the students had opportunities to talk about the narrative structure of each selection of literature prior to drawing their representations. As well, the students either explained the rationale for their visual depiction to peers or wrote about their portrayal.

Writing and multimodal composing

The students' text-based writing about the picturebooks focused on elements of visual art and design and metafictive devices. When writing responses, the students needed to engage in evidentiary reasoning as they were to provide evidence to support their opinions and inferences, and to explain the greater significance of their examples to the particular picturebook (i.e., justify their thinking).

Finally, the students were required to apply their knowledge and understanding of elements of visual art and design, metafictive devices, and narrative structure and design and create their own multimodal books. Each student received a criteria sheet with information about the number and types of metafictive devices and elements of visual art and design to be included in this application of learning assignment. As well, the students needed to design a narrative structure that featured the breaking of the storyworld boundary in some way. Through the work with the picturebooks, the students had learned about nine ways to break a storyworld boundary, and these techniques were also listed on the criteria sheet. The students were instructed, and reminded regularly, to refer to the assignment criteria when designing their multimodal work. They were given a spiral bound sketchbook for planning and drafting their stories and they took home

these books to work on their compositions during this phase of the project. Overall, the explicit assignment criteria allowed for individual expression and required students to monitor and self-evaluate their creative process and product.

High quality, letter size white paper was used for the pages of the students' books. The artwork was drawn in pencil, outlined in thin black marker, and coloured with pencil crayons. Most students printed the written text in their books, although a few word-processed the text. In total, approximately 11 Language Arts classes were allocated to the creation of the books and several students worked on their stories at home. The students created covers for their books and the final products were spiral bound. In addition, the students' stories were scanned, compiled, and published into a compendium. Each student purchased a copy of the anthology of metafictive tales, and a book launch was held to celebrate the students as authors. During an individual, digitally-recorded interview with me the students described and explained how their work met the assignment criteria.

The multimodal narrative assignment and habits of mind

The teaching and learning activities described above afforded the students with opportunities to develop the five creative habits of mind identified by Lucas et al. (2013). I discuss how one specific component of the study, the designing of the multimodal narrative representations, had the potential to cultivate students' creative habits of mind. As is evident by the following analysis, the nature of the assignment did not uniformly encourage the development of each habit of mind or nurture all of the sub-habits identified in the model.

Overwhelmingly, the focus of the habit of mind of *inquisitive* is generating and exploring questions (Lucas, 2016; Lucas et al., 2013). The nature of the multimodal narrative representation assignment did not require the students to generate and pursue 'interesting questions' per se. However, they needed to 'think things through and develop new ideas' (Lucas, 2016, p. 281) in order to successfully complete the assignment. Since the metafictive techniques and the concept of breaking the storyworld boundary were novel to the students, meeting the expectations for these aspects required the development of 'new ideas' for the students. As they intentionally planned how to meet the criteria, the students needed to 'think through' the generation of their ideas and images.

With respect to the habit of mind of *imaginative*, the open-ended nature of the assignment afforded the students with opportunities to play with possibilities (Lucas, 2016) as they planned and drafted the text and artwork of their stories. The students needed to make connections to work completed throughout the study as they synthesised and applied their learning about metafictive devices, elements of visual art and design, and narrative structure. Many of the students borrowed textual and visual ideas from picturebooks explored throughout the research, transforming these appropriations in various ways, as well as setting them into new contexts.

Throughout the process of creating their multimodal narratives, the students needed to be *persistent* (Lucas & Spencer, 2017). They had to generate ideas and engage in purposeful planning in order to successfully address the multiple and sophisticated criteria of the assignment. The nature of the task encouraged students to dare to be different and to take risks (Lucas et al., 2013) because their stories could be about any topic and they could address the criteria in various and flexible ways. During the research, the students received instruction about and had experience with generating multiple ideas and considering the latter in a critical manner based on particular criteria (e.g., response writing).

With respect to the habit of mind of *collaborative*, throughout the planning and creating of their narrative representations, the students shared their work with others and offered and received feedback (Lucas, 2016). For example, part way through the process, the students were organised into dyads, and they explained how their work met the assignment criteria and offered comments and suggestions to each other. The students read each other's books, and opportunities were arranged for them to share their work with other students and adults.

Finally, the application of learning assignment nurtured the habit of mind of *disciplined* as the students needed to use 'their knowledge and craft in shaping' their creative products (Lucas, 2016, p. 282). The students had to reflect critically during the planning and production of their work to ensure they were accurately and effectively meeting the assignment criteria. They also needed to evaluate their crafting as the students were expected to take pride in their work, attend to details, correct any errors, and overall, ensure their finished product was aesthetically pleasing (Lucas, 2016, p. 282; Lucas et al., 2013, p. 17).

In the next section, I describe Soraya's multimodal narrative representation. Subsequently, I analyse her creative product using the criteria proposed by Cropley and Cropley (2008).

'Believe' by Soraya

On page 2 of Soraya's 12-page book, including the front cover, readers are directly addressed by a phoenix named Gwydion, who is looking for a 'world to go into' because as he explains, his job is 'to help others believe in magical creatures because *some* people do not, and that is just depressing.' Soraya, the narrator, interrupts him with 'HEY!' but Gwydion continues with his discourse. After considering travelling to various historical contexts, Gwydion chooses the actual world because, 'No phoenix has ever been there before and this obnoxious person really needs help.' Narrator Soraya replies with, 'SO NOT TRUE!'

On page 3 Gwydion flies into the frame of the story, which is set at a school (Soraya's school). Soraya took photographs of the outside and the playground of her school and these images depict the storyworld entered by Gwydion. On the pages of the book that feature the photographic images, Soraya glued her own artwork on the pictures and extended images in the photographs to the edges of the pages.

Gwydion ignores Soraya's warning about the possibility of not being able to leave the storyworld and tells her to, 'let ME tell the story.' Soraya replies, '**NO WAY!** I'm the real narrator of this story, not *you*!' Page 4 features Gwydion in a school hallway gazing at the artwork and print text on the walls that indicate the children already believe in magical creatures. On page 5 Gwydion meets Amy in another school hallway. He explains his mission and she conveys to him that a student named Vanessa does not believe in magical creatures.

Figure 1. Page 7 of Soraya's Book

Page 6 depicts the children playing outside at recess and, when Amy asks Vanessa why she does not believe in magical creatures, she replies, 'Well, I've NEVER, *EVER*, seen one, so therefore *I* am right.' On the following page (see Figure 1), Gwydion confronts Vanessa about being a non-believer. She is utterly surprised by Gwydion's appearance and apologises for not believing in magical creatures and for teasing Amy about being a believer. Page 8 features Gwydion in the bottom left hand corner observing Vanessa and Amy agreeing to be friends and Vanessa apologising to Amy about her behaviour. A close-up image of the girls' faces on page 9 reveals their disappointment that Gwydion is departing their world. On the next page (see Figure 2) he states, 'I am sorry, but other worlds need me. Goodbye.' The flames that precede his departing flight break the rectangular frame of the storyworld.

Figure 2. Page 10 of Soraya's Book

On page 11, Gwydion and Soraya engage in argumentative discourse (again). She asks him if he got into any trouble and he accuses her of being rude. She warns him, 'Stop talking like that to me or else I will shut out all of your worlds.' Gwydion agrees, as long as she stops as well. He suggests Soraya end the story, and when she assents, he replies, 'Ha! See I *am* right!' She 'warns' Gwydion and he responds, 'Fine. End the story here, *please*.' On page 12, after Soraya writes/says, 'THE END,' Gwydion continues talking! She tells him to stop talking, he agrees, and she writes/says, 'This is the *last* **THE END**.'

Creative indicators

Next, I engage in a descriptive analysis of Soraya's creative product using the four criteria of the CSDS (Creative Solution Diagnosis Scale) developed by Cropley and Cropley (2008): novelty; relevance and effectiveness; elegance; and genesis.

'Believe' is an original creative product for Soraya because she applied her learning of existing facts and elements in a novel way. As stated previously, the metafictive devices were new to the students and Soraya included 12 in her multimodal narrative. Soraya engaged in 'conceptual redirection' as she transferred the known (i.e., the metafictive devices) to her

narrative, 'a new setting' (Cropley & Kaufman, 2012, p. 123). Furthermore, 'Believe' can be viewed as an 'extension' of existing work because her multimodal product shows readers how to take the known, such as story structure elements, and extend them 'in a new direction' (Cropley & Cropley, 2008, p. 158). For those individuals (including most of the Grade 4 students' parents/guardians) who are unfamiliar with meta-fiction and the concept of transgressing storyworld boundaries (i.e., metalepsis), the students' metafictive tales are fundamentally new (Cropley & Cropley, 2008, p. 158). By reading Soraya's book and understanding and appreciating her use of metafictive devices, her pastiche illustrative style (photographic images and her own artwork) and her layout and design of typography, among other aspects, individuals can be inspired to imagine the possibility of generating such a product.

According to Cropley and Cropley (2008) relevance and effectiveness refer to 'knowledge of existing facts and principles' (p. 158) and consideration of how the creative product fits the purpose. Soraya's story correctly and appropriately met, and in some areas exceeded, all of the assignment criteria with respect to the inclusion and use of metafictive devices, elements of visual art and design, and narrative structure. During Soraya's interview, her explanation of her use of elements of visual art and design correctly (and effectively) achieved the purposes she described to me. Indeed, Soraya's book 'does what it is supposed to do' (Cropley & Cropley, 2008, p. 158) when considering the task constraints as defined within the particular context of the research classroom (Beghetto, 2017). Like the picturebooks studied throughout the research, Soraya used the modes of written language, image, and layout to tell the narrative in her book.

For Cropley and Cropley (2008) elegance refers to the effect of a product on others – external elegance – and how well the ideas are worked out and 'hang together' – internal elegance (p. 158). The aesthetic quality and style of Soraya's book is immediately evident by a quick flip through her well-designed pages. The finished product is visually pleasing as the artwork (drawing, outlining, and colouring) and printed and hand-written text are 'well-finished … neat, [and] well-done' (Cropley & Kaufman, 2012, p. 125). She effectively designed the layout of images and written text on the pages in the book. Soraya's unique use of photographic images contributes to her work having 'a certain some-thing' (Cropley & Cropley, 2008, p. 158). With respect to internal elegance, completeness and harmoniousness are proposed as indicators of this aspect. Soraya's book is complete because she did what she was supposed to do, met the assignment criteria, and everything is

'well worked out' (Cropley & Cropley, 2008, p. 158). With respect to harmoniousness, the narrative makes sense and the 'elements of the product fit together in an internally consistent way' (Cropley & Cropley, 2008, p. 158).

'Genesis,' the fourth criterion of the CSDS, refers to the generalisability of the creative product, the notion that 'ideas go beyond the immediate situation' (Cropley & Cropley, 2008, p. 158). Most of the indicators for genesis refer to solving a problem or issue, but the assignment completed by the students did not involve the generation of solutions. However, I believe the indicator of 'foundationality' is applicable because Soraya's book provides a basis for further work – for herself or for others. Furthermore, Soraya's narrative representation, like all of the students' stories, draws attention to the importance of educators developing a broad under-standing of story structure when teaching and assessing narrative organisation. Although important, a chrono-logically organised narrative with a logical sequence of events where the problem is resolved in the end is only one type of plot structure (Caldwell & White, 2017). In addition to encouraging educators to reflect on the standards they use to judge story structure, Soraya's narrative representation emphasises the impor-tance of understanding the complexity of students' artwork when assessing their multimodal work, and of providing students with opportunities to describe and explain their multimodal creative products.

Discussion

As emphasised previously, consideration of the socio-cultural context is fundamental when theorising, researching, nurturing, and assessing creativity. The descriptions of the teaching and learning activities that transpired during the study convey information about how the semiotic landscape (Jewitt, 2009) of the research classroom afforded Soraya and her peers with opportunities to develop creative habits of mind and creative products. The analysis of the multimodal narrative representation assignment revealed how the criteria and the production process, to varying extents, nurtured the students' five creative habits of mind as outlined in the CRL model (Lucas, 2016; Lucas et al., 2013; Lucas & Spencer, 2017). Furthermore, although the research conducted with Soraya and her peers did not explicitly focus on developing creative habits of mind, the retrospective analysis demonstrated how the habits of mind can be infused into curriculum without adding or eliminating academic knowledge and skills.

Based on her extensive work on motivation and crea-tivity, Hennessey (2010) noted how 'intrinsic motivation is conducive to creativity' (p. 341). During the designing

and producing of her multimodal narrative representation, observations of Soraya's behaviours conveyed she was internally motivated by and engaged in the application of learning assignment. Her participation in the research provided her with opportunities to develop the necessary knowledge to design and complete the creative product. As emphasised by Sternberg (2010), 'one cannot think creatively with knowledge unless one has the knowledge with which to think creatively' (p. 395). Furthermore, the nature of the assignment criteria and the classroom ecology encouraged students to take risks and play with ideas. As Soraya wrote in her final reflection, 'My favourite part [of the research] was creating the story because I realised that I could make anything happen.' In Brookhart's (2013) opinion, 'assignments that require students to produce new ideas or reorganise ideas in a new way are likely to foster student creativity' (p. 31), and such was the nature of the multimodal narrative representation task.

While I did not assess Soraya's multimodal narrative representation using a 5 point Likert scale, applying the criteria from the CSDS (Cropley & Cropley, 2008) in a descriptive manner provided specific information about how her creative product met the assignment criteria. Furthermore, the four criteria of the CSDS used to analyse Soraya's book are consistent with the five creative habits of mind. For example, the *imaginative* habit of mind is connected to all four criteria in some way, and the *disciplined* habit of mind can be connected to novelty, relevance and effectiveness, and elegance. However, although the criteria of the CSDS reflect the literature on creativity, in my opinion, both the number and descriptions of the indicators on the original and revised scale need to be modified for these tools to be used by elementary teachers and students. I also believe the deletion of the word novelty as a criterion in the revised version is unfortunate since this term is ubiquitous throughout the research literature on creativity. Additionally, the creators of the CSDS claim it can be used for all types of creative products, but I question the universality of the criterion of problematisation in the revised scale. Nevertheless, as well as the above suggestions for revisions, teachers could choose to focus on specific criteria and indicators of the CSDS for particular creative products, or identify those most applicable to a specific assignment.

Conclusion

As discussed by Lucas et al. (2013) and Lucas (2016), the creative habits of mind model has the potential to serve as an overall framework for teachers to use to infuse and nurture creativity in their pedagogy. Lucas et al. (2013) believe teachers' use of the CRL model can

enable them to 'become more precise and confident in their teaching of creativity' and for students, the model can be 'a formative tool to enable leaners to record and better develop their creativity' (p. 26). However, educators need to understand the multifaceted nature of the construct of creativity in order to plan for and develop students' creative habits of mind, as well as to assess the extent students possess and display these habits of mind. Indeed, in order to effectively and appropriately use the framework, teachers need to develop their conceptual and practical knowledge of creativity, and of creative learning and teaching. Furthermore, a broad understanding of creativity is necessary for teachers to appreciate how 'the classroom environment plays a key role in determining whether creative learning will be supported or suppressed' (Gajda, Beghetto & Karwowski, 2017, p. 262). An 'ecological approach to fostering student creativity' (Soh, 2017, p. 60) recognises the classroom as a particular sociocultural context, and highlights how teacher attitudes, behaviours, and interactions can contribute to nurturing creativity in students (Gajda, Beghetto & Karwowski, 2017; Soh, 2017).

The assessment tools developed for creative products need to reflect the literature on the construct of creativity and be 'rigorous enough to be credible and user-friendly enough' to be actually used by educators (Lucas, 2016, p. 278). Indeed, the language used for criteria and indicators needs to be understandable and assessable for both educators and students. The rubric created by the Buck Institute for Education (2013) referred to earlier seems to have strong potential as an assessment tool for creative products, although based on the literature review, I would add a few indicators to each criterion before using it with learners. Both formative and summative feedback regarding students' creative processes, actions, and products is fundamental to their development, learning, and academic achievement. Furthermore, learners need opportunities to reflect on and monitor their own progress with respect to creativity.

Lucas and Spencer (2017) write that 'across the world there is growing evidence that creative thinking should and can be assessed' (p. 159). They describe multiple approaches being used by schools in Australia and England to assess creative thinking. Interestingly, Lucas and Spencer (2017) purposefully use the phrase tracking progress 'rather than assessment to encourage those who might see the assessment of creative thinking as undesirable' (p. 160). They also share numerous examples from schools that have used the five-dimensional model of creative habits of mind/creative thinking to effectively and innovatively inform

their approaches to 'curriculum planning, pedagogy, and assessment' (Lucas & Spencer, 2017, p. 120).

Ideally, the brief literature review on creativity, the reflective analysis of the multimodal narrative representation assignment, and the descriptive assessment of Soraya's work will inform educators' understanding of the nature of creativity, and develop their knowledge as they consider how to nurture and support the creative process in their students, and to assess creative products.

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