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Sarah Ackermann

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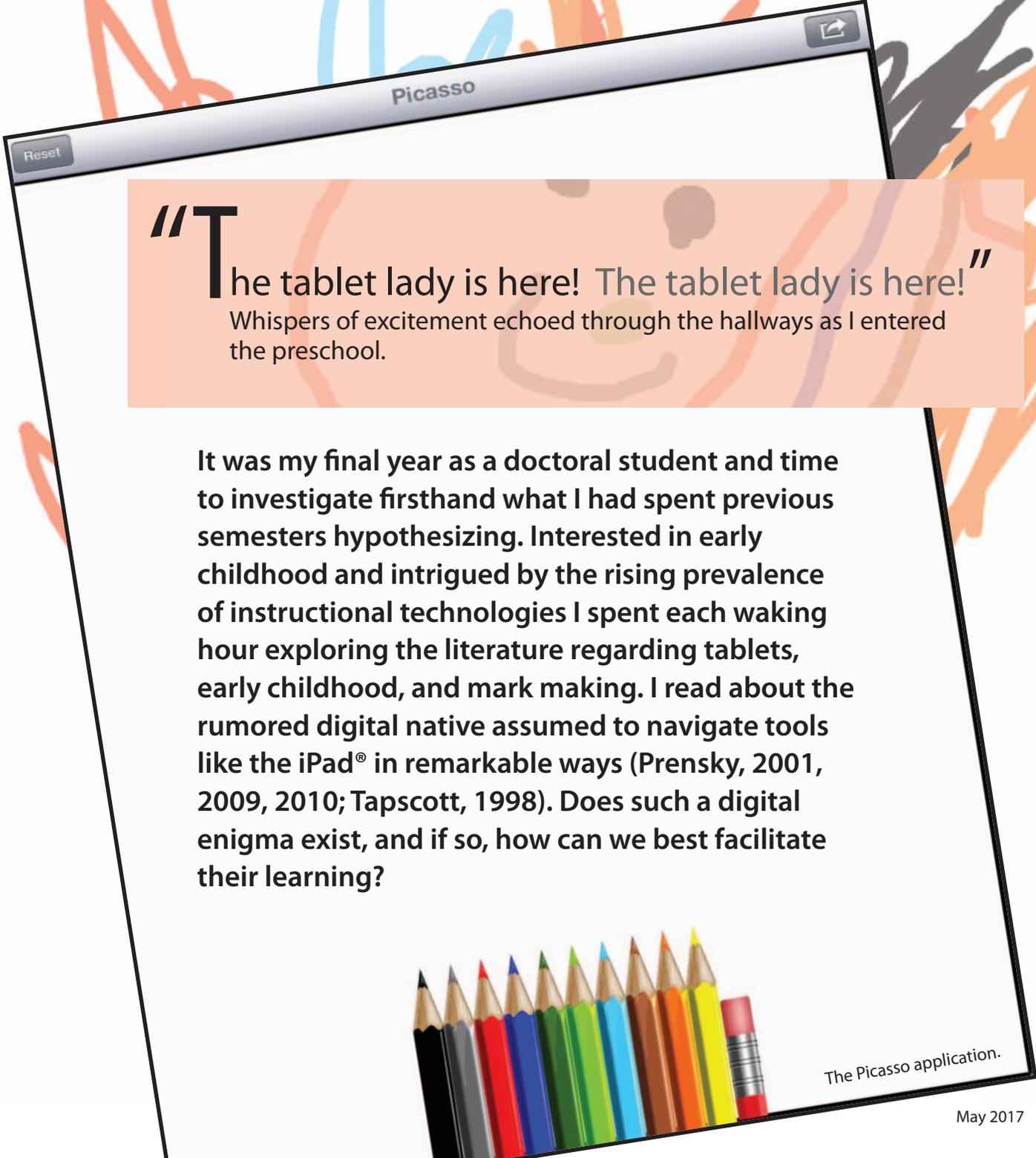
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# To Swipe or Not to Swipe, That Is the Question: The iPad in a Preschool Setting

Sarah Ackermann



**"T**he tablet lady is here! The tablet lady is here!"  
Whispers of excitement echoed through the hallways as I entered the preschool.

It was my final year as a doctoral student and time to investigate firsthand what I had spent previous semesters hypothesizing. Interested in early childhood and intrigued by the rising prevalence of instructional technologies I spent each waking hour exploring the literature regarding tablets, early childhood, and mark making. I read about the rumored digital native assumed to navigate tools like the iPad® in remarkable ways (Prensky, 2001, 2009, 2010; Tapscott, 1998). Does such a digital enigma exist, and if so, how can we best facilitate their learning?



The Picasso application.

Marc Prensky (2010) describes today's digital natives as "deeply and permanently technologically enhanced, connected to their peers and the world in ways no generation has ever been before" (p. 2). Digital natives, according to Prensky (2009) are those born into a technologically rich society and are "fluent in the digital language of computers, video games, and the Internet" (p. 306). Don Tapscott (1998) similarly refers to this population as the Net Generation. He writes that "because N-Gen children are born with technology, they assimilate it... kids view technology as just another part of their environment, and they soak it up along with everything else" (p. 40). He goes on to state that, "for many kids, using the new technology is as natural as breathing" (p. 40). It is perhaps partially a result of these philosophies, and those similar, that we have seen an impact on how we approach technology in the K-12 setting. It is unsurprising then that many schools seek funding to place devices like tablet computers in students' hands. At the same time we must consider the cultural implications of such statements within the literature, as there are many assumptions inherent, including the notion that such digital tools are widely accessible among students and that such populations are naturally wired for them.

"The speed and fluidity of new media to prompt encounters with representations of knowing across time and space has prompted a rethinking of what it means to learn and teach" (Grauer, Castro, & Lin, 2012, p. 141). This investigation was conducted keeping in mind the rapid change in media in the classroom, while also questioning the shifting role of the user. The specific media considered in this case was the tablet computer and the user was the preschool-aged child. This work was also proposed keeping in mind the role of the art teacher as well as the administrator, two important figures who might make decisions concerning widespread integration of such tools, therefore potentially altering how school communities create and learn.

I embarked on a small-scale study in which I introduced the tablet as a tool for mark making. I watched how students engaged with the tablet creatively, I documented their perceptions of the device, and I monitored the motivational power of the tool among participants. Small and focused in nature, this study considered the continuously rising enthusiasm for such tools in schools while exploring their appropriateness for creating in one particular learning environment.

In the following pages I provide details regarding the study and offer several stories, which illustrate the collective experiences of children as they interacted with the tablet. These stories preface and situate overarching considerations regarding the creative use of tablets among young children within this learning community. I reflect upon these findings within my current role as an international art educator working in a one-to-one tablet building in order to provide additional insight on the subject.

## The Study

The Child Development Center targeted for this research was selected because it represents a diverse population of students and teachers. It is also small, so within a short amount of time I was able to build valuable rapport with the center's director, educators,

and students. Additionally, the center has a strong reputation for innovation in teaching and, as a result, the educators involved were enthusiastic and eager to learn about the tablet, becoming valuable partners in my investigation.

An iPad Air (software version 8.3) was used, as well as the free application Picasso.<sup>®</sup> Picasso was chosen because of its simplistic design, with ten colored pencils at the bottom of the screen ranging from black to yellow, and an eraser. Children intuitively took to the program because of its simplistic and easy to use nature, and as a result, an introductory period for the use of Picasso, as well as the tablet in general, proved minimal.

I worked with children ages three to five years old. Of the 30 child participants who provided consistent data over the research period, 14 were girls and 16 were boys. Seven were three years old, 19 were four years old, and four were five years old. Thirteen of the child participants were White, 16 were African American, and one was of Asian descent. A total of 35 parents consented to the research, as well as four educators. Data was collected in the form of field notes, surveys among parents and educators, digital drawings created on the iPad, traditional drawings created on paper with crayons, as well as interviews and focus group discussions with teachers and children. Students' classroom sketchbooks were used as an additional reference point for children's traditionally created drawings.

A majority of the child participants had access to tablets, or similar tools like smartphones, at home. They also had access to one to two iPads in the classroom, as shared by the classroom teachers. Regardless of this accessibility, introducing the tablet in the classroom setting as a drawing tool proved to be somewhat novel and motivating for my young participants.

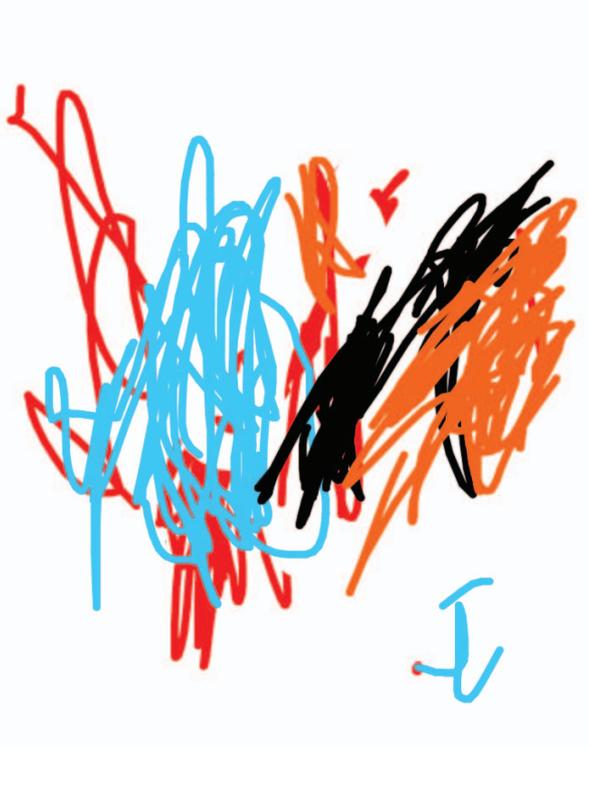
## Children's Drawings

In the following sections I share observations from my 15-week study through stories. The main characters of these stories are child participants engaged in drawing with the tablet. I share their masterpieces and their conversations in an effort to further illustrate data collection measures.

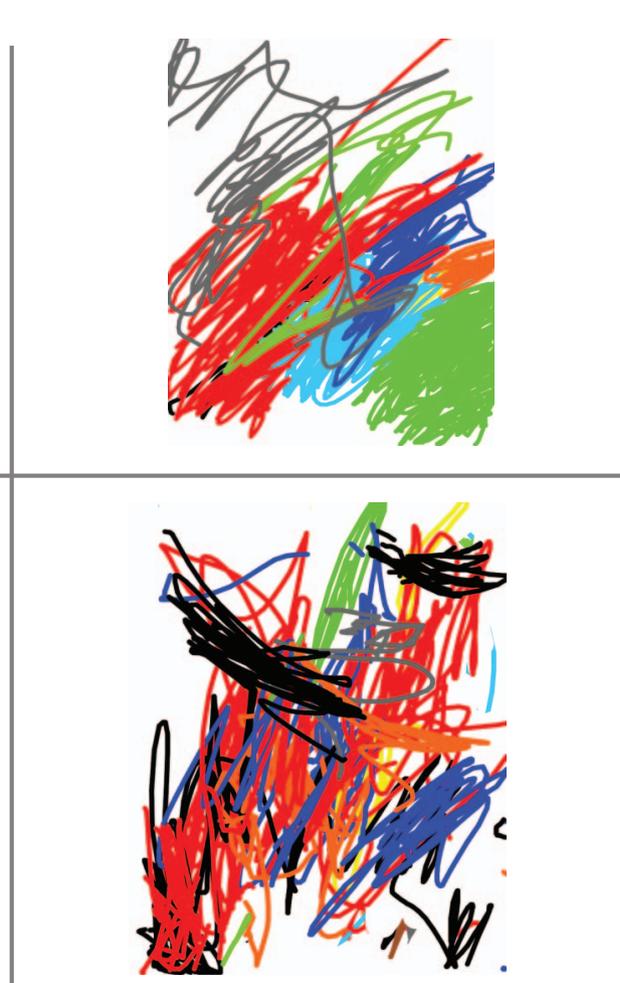
### *Samantha: The Scribbler*

We begin with Samantha. At three years old, Samantha is one of the youngest children in the study. She is small physically compared to her classmates and she speaks little. When she does she is barely audible and difficult to understand. Regardless, she regularly has a smile on her face. She has no problem sharing toys and tools, and is one of the first to offer a friend a warm embrace when they are upset.

During my weekly visits Samantha was always elated to see me with tablet in hand. Samantha created nonrepresentational drawings throughout my course of study. These drawings looked like scribbles to the adult eye with unrecognizable shapes and sporadic color usage. Her mannerisms during the act of drawing also demonstrated that she was still in a scribbling mode, as it was not unusual for Samantha to look up at me and around at her surroundings while still moving her finger in a back and forth motion on the screen (Hurwitz & Day, 2007; Lowenfeld & Brittain, 1987).



Samantha's drawings of her house.



Samantha's discussions during the act of drawing were minimal. When asked "What are you drawing?" or "Can you tell me about your drawing?" Samantha provided succinct responses such as "This is my house," "That is my brother," "That is my dog," and "Those are my toys." Several children, like Samantha, remained in this scribbling modality throughout the research period.

**Cassie: The Representational Renderer**

At four years old, Cassie loves art and regularly produces detailed representational drawings. While Cassie drew an image of a person she said, "I just want to color. This is a letter. This is a pretend letter. It's a letter person! The green part is the lasso. It's a cowgirl." Such a representational rendering, accompanied by detailed verbal description, aligns Cassie with the pre-schematic stage of artistic development (Lowenfeld & Brittain, 1987).

Cassie continued to work in this modality, as did several of her peers during my weekly visits to the center. This included Gavin (five years old) and Taylor (five years old). Gavin's drawing of a princess, as well as Taylor's drawing of a house illustrate recognizable images, as opposed to those drawings made by children chiefly in the scribbling mode of development (Lowenfeld & Brittain, 1987).

**Lyn: In Between Stages**

Lyn is one of the oldest students in the study and very close to turning five. She is an implied leader in the room and others naturally gravitate toward her for mentorship. She is a careful

listener and a skilled communicator. She regularly delegates tasks and has no difficulty sharing objects or classroom responsibilities.

When it came to her digital renderings I was not surprised when Lyn worked in a scribbling mode. Particularly in the beginning, most children experimented with the tablet, producing



Cassie's drawing of a person.



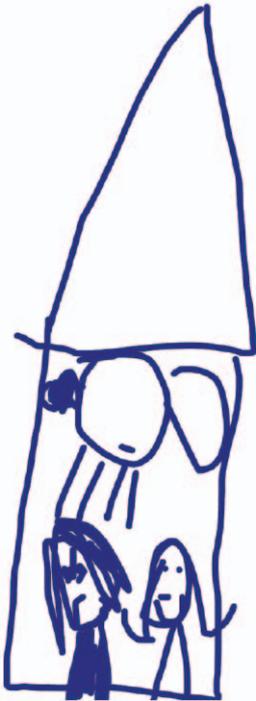
Gavin's drawing of a princess.

unrecognizable drawings, seemingly mesmerized by how the swipe of their finger could render a visual mark. After several visits, and continued nonrepresentational drawings Lyn's classroom teacher expressed concern: "I'm really surprised Lyn isn't drawing representationally. She does regularly for me." Taken aback by the statement, I sat down with Lyn's classroom sketchbook filled with free drawings, all representational in nature and featuring an assortment of objects, places, and people.

There were obvious differences between what Lyn was creating on the tablet and what she was capable of with paper, crayons, and markers. I watched children like Lyn closely during my following visits to the center. Some, like Lyn, continued to work in a scribbling modality, manipulating the tablet in an exploratory fashion, even when there was evidence of representational capability.

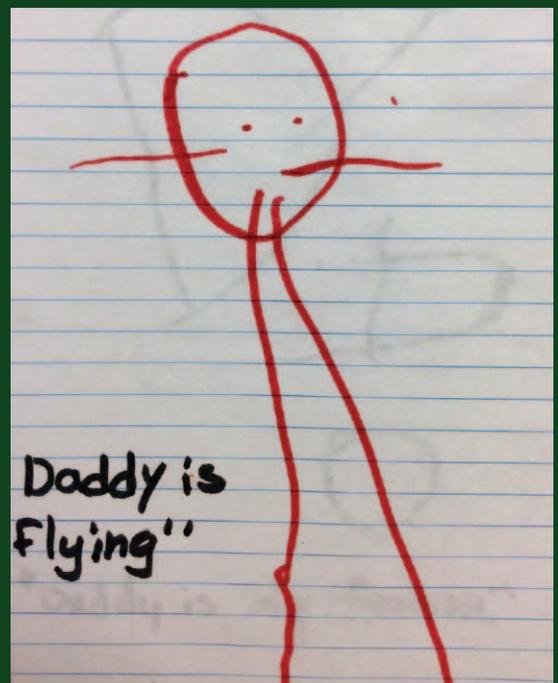
### Diving Deeper Into the Drawing Experience

Samantha, Cassie, and Lyn represent the broad array of artistic encounters during this research. There were children like Samantha, who strictly scribbled, and those like Cassie, who consistently drew representationally. The group that proved particularly intriguing were those in between artistic stages, children like Lyn. These participants consistently scribbled with the iPad but drew representationally on paper.



Taylor's drawing of her house.

Lyn's tablet drawing.



Lyn's sketchbook drawing.

## PARTICULARLY IN THE BEGINNING, MOST CHILDREN EXPERIMENTED WITH THE TABLET, PRODUCING UNRECOGNIZABLE DRAWINGS, SEEMINGLY MESMERIZED BY HOW THE SWIPE OF THEIR FINGER COULD RENDER A VISUAL MARK.

To investigate this further I gave children the option of drawing with the tablet, crayons on drawing paper, or a combination of both. Often children would split their time evenly between media. What proved particularly telling were instances in which children elected to draw the same subject matter with both tools. I share two of Gavin's drawings, featuring the popular visual culture reference Pokémon.<sup>®</sup> The first image created on the iPad featured a centralized composition and minimal detail as compared to Gavin's crayon drawing.

Over time I observed additional encounters of this kind in which children took more care and included more detail in the execution of their crayon drawings compared to their digital drawings. I began to attribute these interactions with the tablet to my participants' overall perceptions of the tool, which were made apparent through their comments regarding the tablet as a media choice as they drew. One child shared that the tablet "is not like crayons. We draw on it with our finger and it is a little different... it is like a marker but you have to use your finger to pick a pencil and then it works." Another child told me that, "it is like drawing

with crayons. Because you pick the first crayon you want. But on the tablet I need to push, I need to push the color I want and with crayons you need to pick the color you want." Such comments offer an informal snapshot of children's simple to more complex understandings regarding media.

In addition to identifying the physical differences between the tablet and the paper and crayons, children seemed to perceive the two media in a different light productively, associating the iPad with gaming and play rather than creative exploration. Children often used gaming language when talking about the tablet, such as "What games do you have?" "Are we going to play that drawing game again?" and "Can we play a different game?" One child stated the following during a particularly enlightening drawing session:

I have lots of other games to do. And I learn my letters and I type on there and I do all kinds of stuff. My iPad isn't for drawing. I don't draw on the iPad. That's how it works. They didn't make a drawing iPad, just a game iPad. So I can just do different kinds of games on there for kids. Typing. All kinds of other stuff.



Gavin's tablet drawing of Pokémon.



Gavin's sketchbook drawing of Pokémon.

Particularly in the beginning of this research, children expressed surprise when I asked them to draw with the tablet instead of play with the tablet. Such a perception is not unhealthy, as play is an important and valued element in education; however, such an observation must be considered during an era in which technologies like the iPad often seem to either accompany or replace former modes of instruction and learning.

### Motivations and Limitations

The participants of this study demonstrated that they were motivated by technology and thoroughly enjoyed using the tablet as a drawing tool. I continue to document the motivating power of tablets in my own classroom today in which every child is equipped with a personal device. When I ask my current art students to power up their tablets they do so eagerly and quickly. Considering this enthusiasm, as well as the continuous push for digital literacy in schools, it is no wonder that institutions are embracing such devices on a regular basis. Yet we cannot simply provide these tools and expect children to utilize them for creative expression on their own, without intervention. In my current teaching practice I have found that modeling is key to helping students understand the creative power of the tablet. Additionally, while the art classroom is a good place to introduce and explore a tool like the tablet computer, the tool should not replace other traditional means of creation.

Case in point, the children in this study who showed great interest in the tablet and its abilities, yet still maintained an appreciation for crayons, paper, and other traditionally considered art media. Participants interacted with each tool differently, inferring with their actions as well as their words that the iPad, for them, was a source of exploration and practice, whereas tools like the crayon are more permanent mark making instruments.

Keeping in mind the importance of modeling, this reaction to the tablet as an artmaking tool could have been partially a result of the way in which it was presented within the research site prior. Before my intervention the tablet had been used sporadically as a supplement to learning, often involving learning games introduced by the classroom teachers. As such, this served as a limitation of this research, as well as a possibility for continued investigation, as it seemed that the notion of the iPad as a gaming tool rather than a serious artmaking tool had been pre-established. Also important to note was the amount of instruction I provided prior to asking children to create with the iPad. This instructional period was minimal, involving brief introduction of how to open the Picasso application, how to make marks, how to change color, how to erase, and how to save images. After this introduction children took to Picasso very quickly and were left to create mostly at their discretion. It is thought then that additional discussion and demonstration among children regarding the use of the iPad as

a drawing tool prior to implementation might provide different types of renderings, variant detail in digital drawings, and perhaps changed perspectives among participants regarding the tablet as a drawing tool.

### Looking Ahead

Limitations in mind, this work points to the significance of the adult researcher within this particular tablet integration, and perhaps more broadly, adults who facilitate artistic experiences at large. Speaking as a researcher and as a teacher I believe there is merit to introducing children to all potential avenues for creative exploration, if available, as varying media can cultivate diverse and rich artistic experiences. We can then guide and facilitate such explorations mentoring children in helping them choose the best tool for their artistic message (Ackermann, 2014). As we move in such a direction, including digital tools right alongside once traditionally considered art media, fruitful are the words of Christopher Schulte (2013) who considers the child/adult relationship as a threshold of “re-articulation” that can “give way to new modes of curricular and pedagogical engagement in early childhood art education” (p. 67) and perhaps beyond.

Also significant is the work of Robert W. Sweeny (2004) who discusses technology’s influence at large and within the construct of art education, noting how current tools have challenged past pedagogy, thus encouraging a rethinking of current practice. Sweeny (2004) describes contemporary life as a series of networks that are interconnected and inclusive of social, cultural, and technological elements. For Sweeny (2004) “Addressing the role that art educators play within these complex networks” and “particularly those that make use of and reference digital forms of simulation” may encourage art education practice that is not only socially powerful but “technologically critical” (p. 75). Within such networks technological tools are being adapted regularly and at an expedient rate, making such insights critical to keep in mind. Additional explorations, like this study, may reveal what can be “gained through the acknowledgement of new technologies” and specifically in regard to “new ways of seeing and making” (Sweeny, 2005, p. 36). Such steps, I believe, are necessary as often, “the simplicity and seductiveness of digital technologies may distract educators from questioning the potential for critical application and creative response” (Sweeny, 2004, p. 81). Within this particular research I myself was not immune to such technological seduction, at first attributing differences in children’s drawings to the appeal and newness of the tablet interface. Novelty proved a motivating factor in my young participants’ endeavors; however, upon deeper evaluation and reflection it is presumed that participants were likely exploring and experimenting with the tablet in similar ways to which they explore and experiment with any new art media. Keeping these observations in mind, I anticipate, that with

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## PARTICIPANTS WERE LIKELY EXPLORING AND EXPERIMENTING WITH THE TABLET IN SIMILAR WAYS TO WHICH THEY EXPLORE AND EXPERIMENT WITH ANY NEW ART MEDIA.

time, young people will become more prepared and more practiced in using such a tool for creative measures like drawing. Only additional exploration of the topic will reveal whether or not this is the case.

I continue such exploration in my own classroom today informally and among students who represent a range of ages, from 1st–8th grade, as well as varied familiarity and exposure to tablet technologies. While all students are equipped with either an iPad or a convertible laptop, they sometimes struggle when associating the tablet with creative output. While regularly tasked with researching, reflecting, and creating with the tool under my guidance, when left on their own, my artists often rely on the tablet to game, watch videos, and engage in social media.

While I hypothesize that one day the tablet will be as paramount as the crayon among learners, I also believe that such a shift in artistic exploration can only occur with continued exposure to such tools as well as meaningful guidance from creative professionals. Just as I model artistically productive uses of the tablet and other media in my classroom today other practitioners can join in the effort, demonstrating how such tools may serve as powerful portals for learning and creating.

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*Sarah Ackermann, PhD, is Art Educator, ZIS International School, Switzerland; Adjunct Faculty, Eastern Illinois University; and Adjunct Faculty, University of Missouri–St. Louis. E-mail: sarahcress@gmail.com. Website: www.sarahcress.com*

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