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## The Art of Thinking: Using Collage to Stimulate Scholarly Work

Nicola Simmons

*Brock University, nesimmons@cogeco.ca*

Shauna Daley

*Brock University*

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# The Art of Thinking: Using Collage to Stimulate Scholarly Work

## **Abstract**

Integrating the arts into higher education pedagogy provides an opportunity for cultivating rich ideas and high-level thinking, capitalizing on the creativity that every person already possesses and uses (Livingston, 2010). As Newton and Plummer (2009) note “the use of the creative arts as pedagogical strategy enables individuals to better understand themselves, [and] to stimulate thinking” (p. 75).

We extend that premise to examine the impact of an arts activity on scholarly thinking. Our exploratory study examines academics’ (graduate students and educators) identity and role constructs (Kelly, 1955) to understand to what extent engaging in arts-based activities supports meaning-making and conceptualizing research questions. We asked participants to reflect on collages they created, how the collage process supported their research conceptualization, challenges they encountered, and their overall reflections on the process as an adjunct to written scholarly work. We show that the process of creating collages supported participants in making their tacit knowledge explicit, in reflecting at meta-cognitive levels, and in transforming their thinking, often in ways they anticipated would affect their future practice.

L’intégration des arts dans la pédagogie de l’enseignement supérieur offre l’occasion de cultiver de riches idées et rend possible une réflexion d’ordre supérieur qui permet de capitaliser sur la créativité que chaque personne possède déjà et utilise (Livingston, 2010). Comme le font remarquer Newton et Plummer (2009), « l’usage des arts créatifs en tant que stratégies pédagogiques permet aux gens de mieux se comprendre et de stimuler la réflexion. » (p. 75)

Nous élargissons cette prémisse pour examiner l’impact d’une activité artistique sur la pensée savante. Notre étude exploratoire examine l’identité d’universitaires (étudiants de cycles supérieurs et éducateurs) et les constructions de rôles (Kelly, 1955) pour comprendre la mesure dans laquelle le fait de s’engager dans des activités artistiques appuie la conceptualisation de questions qui portent sur la recherche de la signification. Nous avons demandé aux participants de réfléchir aux collages qu’ils avaient créés, à la manière dont le processus de création de ces collages avait appuyé leur conceptualisation de la recherche, aux défis auxquels ils avaient été confrontés et à leur réflexion générale sur le processus en tant qu’activité d’appoint à leurs travaux académiques écrits. Nous montrons que le processus de création de collages a aidé les participants à rendre explicites leurs connaissances tacites, à réfléchir à des niveaux méta-cognitifs et à transformer leur pensée d’une manière qui allait souvent, comme ils l’avaient anticipé, affecter leur pratique future.

## **Keywords**

arts-integration, meta-cognition, identity construction

## **Cover Page Footnote**

We thank the two anonymous peer reviewers for their thoughtful feedback.

## **Introduction: Creating Constructs**

There is a significant body of literature around arts-based activities as a means of accessing, exploring, and making explicit various aspects of unconscious, embodied knowledge (e.g., Higgs & Titchen, 2007; Leitch, 2006). In addition, researchers have examined the integration of creativity into curricula (e.g., Kleiman, 2008; Knight, 2002) and academics' perspectives of creativity (Jackson & Shaw, 2005). Rather less work, however, has examined the impact of creative activities in supporting scholarly thinking in higher education. While authors such as Newton and Plummer (2009) and Herteis and Simmons (2010) outline using summative creative activities to help students reflect on their learning, in this study we explore how an arts-based activity, such as creating collages made from magazines, can support scholarly meaning-making in post-secondary contexts. In this instance, we define scholarly meaning-making as the ability to reflect at a meta-cognitive level on identity development as scholars and the construction of research on this topic. In this paper we present findings and insights about the impact creating collages has had on students' and faculty members' thinking in regards to conceptualizing their research questions about role constructs and identity.

## **Background: The Canvas**

According to Aristotle, "the soul never thinks without an image" (cited in Arnheim, 1969, p. 13). Image-making and our perceptions of it serve as a way for us to make sense of the world (Arnheim, 1969). Through art, people are able to create conceptualizations of their understanding about the specific ways they see the world (Efland, 2002).

Arnheim (1969) articulates a connection between artistic experience and its benefits to thinking, viewing visual perception as a cognitive activity. He argues artistic activity serves as a form of reasoning and a way to think with the senses. Arnheim further maintains that "the arts are the most powerful means of strengthening the perceptual component without which productive thinking is impossible in any field of endeavor" (p. 3). Art can serve as a catalyst for engaging the imagination and exploring novel possibilities as part of the creative process.

This creative process involves making connections, considering relationships, and constructing new ideas. Such divergent thinking is critical to creativity; as Blythe and Sweet (2011) discuss, creativity "demands applying, analyzing, and evaluating - the higher-order skills of Bloom's taxonomy" (para. 2). In fact, when Bloom's taxonomy was revised in 2001 by Anderson & Krathwohl, "create" was placed as the new pinnacle of the cognitive taxonomy, thus joining other levels that characterize graduate level work: analysis and evaluation. Creativity can thus be thought of as the highest form of thinking, and is necessary for innovation, particularly in scholarly work.

Not only are higher level mental skills needed for academic work; the increasing complexity of the issues of modern life has created what Homer-Dixon (2000) refers to as an ingenuity gap. As one of us has noted elsewhere, "in the 21<sup>st</sup> century we do indeed need innovations in framing and solving problems and a significant mental shift may be required to ... develop innovative habits of mind" (Simmons, 2013, p. 90). This is echoed by Pink (2005), who argues that a creative, right-brained perspective is needed to deal with real-world problems that require solutions dependent on lateral divergent thinking.

There is evidence that giving right-brain thinking (problem-solving, synthesis, artistic and creative expression and passion) (Bolte-Taylor, 2008) equal importance to left-brain thinking

(analysis, logic and computational literacy) (Bolte-Taylor, 2008) can sustain a high level of student engagement (Sloan & Nathan, 2005) and result in integrated approaches to thinking and scholarship and new ways of seeing relationships in scholarship and identity construction. This can lead to bringing hidden knowledge to the surface.

Artistic representations can be a way of “transforming the contents of consciousness within the constraints and affordances of a material” (Eisner, 2002, p. 6). In this way, tacit knowledge can be made explicit, as the act of creating art “stabilizes what would otherwise be evanescent” (Eisner, 2002, p. 11). As Ritchhart and Perkins (2008) note, “fostering thinking requires making thinking visible: Thinking happens mostly in our heads, invisible to others and even to ourselves. Effective thinkers make their thinking visible, meaning they externalize their thoughts through speaking, writing, drawing, or some other method” (p. 58).

The notion of using art and creative play to make unconscious thoughts explicit is of course not new. Jung (1961/1997) used the method for stimulating his own thinking:

Any time in my later life when I came up against a blank wall, I painted a picture or hewed stone. Each such experience proved to be a *rite d'entrée* for the ideas and works that followed hard upon it. (p. 24)

Embodied knowledge can be thus accessed through arts-based inquiry and writing (Leitch, 2006).

Through art creation and accompanying written explanations, opportunities may be created for participants to make new meanings and connections amongst ideas. As Gauntlett (2007) writes, people have been

producing visual and artistic expressions of the self and their existence, stretching back over thousands of years ... these research methods are not ‘alternative’ in a random, illogical or pointlessly ‘novel’ way, but rather they connect with a deep pool of long-existing human expressive practice. (p. 92)

### **Methodological Assumptions and Approach: Selecting Images**

In this study, we wanted to understand how creating collages would help graduate students and academics with their explorations of identity and development and in formulating research questions related to these topics. As Gauntlett (2007) cites Hegel,

making ‘external things’ upon which a person inevitably ‘impresses the seal of his [sic] inner being’ gives that person the opportunity to reflect upon their selfhood; ‘the inner and outer work’ is projected into ‘an object in which he recognizes his own self’. (Hegel as cited in Gauntlett, 2007, p. 28)

We believed that engaging in rip and paste magazine collages would provide a catalyst for thinking about the topic and might allow new mental representations and research questions to emerge about identity development.

### **Creative Work as Data**

Gauntlett (2007) advocates for collecting creative products as data, noting that “researchers often start with their own sense of a topic or problem... and then are frustrated when their pesky subjects do not seem to think that this subject-matter is as important as the researchers do” (p. 3). Rather than use such a deductive method, in this study, the activity came first and was followed by an opportunity for participants to reflect more deeply on what they had

created. We followed Gauntlett's recommendations of an approach that "allows participants to spend time applying their playful or creative attention to the act of making something symbolic or metaphorical, and then reflecting on it" (p. 3). Finson and Pederson (2011) argue in order for something to be visual data, we must be able to record and analyze and manipulate the information and derive some reasonable meaning from it. Understanding this and through the participants' analyses of their collages, we show how themes, interpretations, and new understandings arise from artistic visual images and discuss how these elements can be seen as data for aspects of experience (Leitch, 2006).

## **Process**

Knight (2002) argues that one condition for integrating creativity into the curriculum is "novel tasks .... fresh tasks that require [students] to draw from their learning in several modules and when these are not convergent tasks but ones that allow a variety of good responses" (p. 3). The relatively quick magazine collages created by participants along with the participants' responses to brief questions about their meaning-making served as such data. We asked participants in two graduate classes on identity development and in a national conference workshop on the same topic to create collages using magazines (mostly sailing themed), a single sheet of 8.5 by 11 inch card stock, and a glue stick. Directions were very loose; we asked them to create a collage about the research topic they were considering. Part way through the activity, we asked them to create a research question based on that topic and the collage. The collages and questions were then collected for scanning and were summarized to the class. The formal research process began approximately three months later, at which time, after receiving ethics approval, we emailed participants to ask if they would like to have their collage included in the study and respond to some questions reflecting on their creative piece.

## **Participants**

Participants were invited by email from amongst those who had already submitted collages and comprised graduate students at or near degree completion and some university faculty and teaching staff. Participants were females between 30 and 60 years, which was reflective of the mostly (95%) demographic of the classes and conference session. All were educators working in some way with adults, both in the academy and outside, and several bring other disciplinary perspectives to their work (e.g., health care and languages). The total potential participant pool was 43; ten participants volunteered for the study.

## **Questions for Participant Reflection**

The following questions were emailed to participants, who in turn emailed us their written responses.

1. What did you represent in the collage you created?
2. What themes do you identify in your collage?
3. Did you find creating the collage contributed to your thinking and understanding about the key concepts you were working on? If yes, in what way?

4. Do you feel that creating the collage enabled you to consolidate your thinking in a way that was different from doing so in written form? If yes, please explain.
5. When you look at your collage now, what does it cause you to think about?
6. What challenges did you experience with creating the collage?
7. What are your general opinions around your experiences in depicting thinking in a visual way?
8. Is there anything else you'd like to tell us about the collage-making and reflection process?

## **Analysis**

Following Gauntlett's (2007) advice, data were not initially analyzed by the researchers; rather, participants were asked to analyze their own work and the researchers summarized themes identified by participants in their reflections. The study followed a process of *verstehen*, or seeking to understand the meaning the participants made of their own work. In the next section we present the collages and captions representing the participants' research questions, though not all are framed as questions along with the participants' accompanying summaries of them (see Figure 1).

## **Findings: Collage Reflections**

Responses to the collage activity were overwhelmingly positive. While the findings are limited by the self-selection of the participants, the experiences of those who participated were strongly encouraging and indicated the activity helped them make previously unseen connections. Overall, 10 of 10 participants responded positively to the experience of using collage to depict their thinking, 9 of 10 found the collage helped consolidate thinking in a way that was different from writing, and 9 of 10 found the collage contributed to their thinking about concepts they were working on. Overall, participants reported to have strongly positive experiences with the collage activity. One participant said, "It is an excellent way to communicate thoughts, concepts and allows the learner to further explore connection between concepts and ideas."

Participants created collages about academic roles, identity, and development. For example, a participant who works in a post-secondary teaching and learning support centre defined aspects of her varied role in the following way:

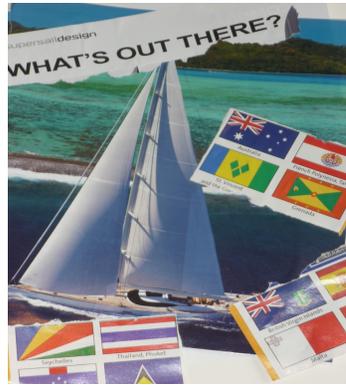
It represents the facets of my work and the sort of things that I am involved with, such as sharing practice, being flexible to respond to different needs and expectations, being the people who see the impact of institutional policies on staff and having the opportunity to feed these to those who are responsible, having to assess and record others' achievements, using qualitative data (interviews) to report on people's experiences and navigating through the plethora of technology that is available.

Another said,

I wanted to represent the image of development based on life experiences and the meaning that we attach to those experiences" while another commented that her collage was about "life changing events and how we make meaning from them and whether we are able to move on or not.



How can personal interests/ talents drive innovation in the classroom/ workplace?



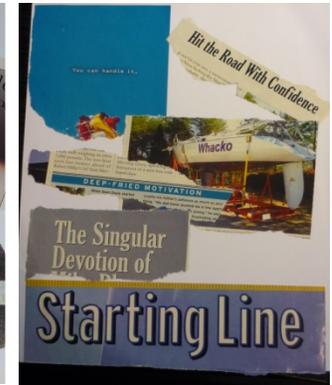
How does culture influence how we adapt to situations?



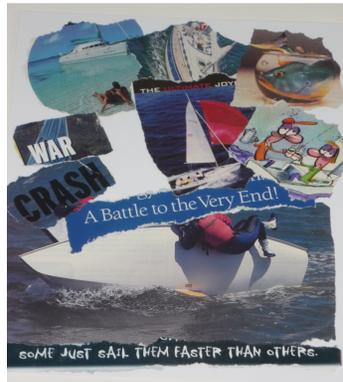
How does one stay resilient and focused when going through life changing events?



There isn't enough autonomy in our structured lives.



I tried to represent the excitement and motivation that I feel about teaching.



Is it necessary to experience extremely negative life events ("waves", "crashing") to reach the highest levels of development? Can we get there by "smooth sailing"?



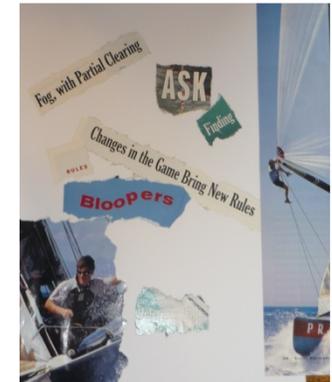
Has the advancement of technology served as a change agent positively or negatively on human development?



Does memory impact our life-span development? or How does memory impact our life-span development?



How does working in an oncology/hematology healthcare setting affect a health care worker's movement through developmental stages?



How does one navigate through the politics, the disciplines and the approaches, while feeling more and more distant from my original research interest in technology use in education?

Figure 1. Participants' collages and accompanying research questions/reflections

In the remainder of this section, we outline the participants' perspectives of the activity and its support to their thinking processes. We describe their reflections on their collages and the meaning they made through the activity, how their thinking was transformed, challenges they experienced, and their recommendations for future use of collage work. We outline two main themes: the notion of visual thinking as a way of freeing their thinking, and the notion of the activity as fostering meta-cognition. While the distinction between the two is subtle, in the first we show how the visual activity allowed ideas to flow; in the second we refer to the quality of those meta-ideas.

### **Positive Pedagogy: Getting Unstuck**

Many participants referred to the benefits of moving away from writing in terms of freeing their thinking. One said "it was easy to convey my thinking and understanding with the collage - much easier than trying to write it out." Another found she enjoyed it and believe it is a productive exercise because not everyone is a great writer - or great at explaining in words what they 'see' in their mind. The collage allowed for movement, thought, reflection, and awareness to be experienced.

Another reflected,

My greatest challenge of the entire program is writing - I am very much an oral being - I can explain the entire paper but to put it on paper it then becomes a struggle. This assisted me in finding words to put to writing.

While the participants ultimately incorporated their ideas into a written paper, the collage seemed to help them overcome the beginning inertia of getting started.

Some participants referred directly to the benefits of working with visual images as prompts to their thinking. For example, one noted that "being able to look at images and words that I had not anticipated allowed me to conceptualize some of my feelings." Another said, "I think, for me, it is a great way for me to see connections and themes that may not have occurred to me." Another agreed, "I prefer both reading and seeing visual depictions. I feel like my learning is consolidated through creating visuals for myself and others."

One participant commented that

The collage helped to make me solidify my thinking. I tend to be more of a pictorial person anyway. The act of creating something makes me step back and approach issues differently. In that process, I think I discovered things that I didn't see before or consolidated what I already knew. It was then easier for me to write about it, as my thoughts were then more organized.

The visual and hands-on collage activity, in combination with the opportunity to reflect on the work, helped participants consolidate their thinking and conceptualize new understandings.

### **Transformed Thinking: Seeing with New Eyes**

A dominant theme in participants' reflections was how the collage activity assisted them in developing and making explicit their thinking. A participant noted how the collage helped her focus her research question. She said, "I enjoyed the exercise, it also reminds me of the challenge it was to create a collage when I didn't first have a question. The question evolved from my perceptions during the exercise of looking through magazines."

One participant noted her surprise that something enjoyable would contribute to her academic work, saying

It surprised me how much it contributed since on the surface it seemed to be a very playful activity. But maybe because of this freedom of mind, it actually allowed you to do some free associations and make connections with the work. This activity helped me to reflect on what I considered were the key concepts of this course.

In these ways the activity seemed to foster meta-cognitive thinking. In creating the collages and reflecting on them, participants seemed able to access hidden knowledge or make new meaning of existing explicit knowledge. In this respect, the collage process seemed to act as an interactive Rorschach ink blot. She said,

When I chose the pictures, at first I didn't understand why I was choosing them. As I began to assemble them on the page, I realized what they represented. On the other hand, if you had said "start writing about what you're thinking" I would have been stuck. The visuals were easier to find than the words. The visuals came first, then the realization of what I had created, and then the deeper understanding of what I had done. The deeper understanding came perhaps a week or so later when I looked at it again when I had time to just sit and think about it.

Another participant noted the meta-cognitive supports of the collage process. She said, "It helped me understand that I am always learning and always moving forward ... even when it feels as though I am stuck. Thus, I became much more aware of my thought processes and learning processes."

Participants noted the ways in which the collage activity moved them past cognitive blocks, pushing them forward in their thinking and their ability to reflect at a meta-cognitive level.

## Challenges

Not everyone, even amongst our self-selected participants, found the collage activity to be a positive experience. One participant described the constraints she experienced: "I wanted to develop the idea some more but did not have enough time or materials to do so." Another noted that "it may not work that way for people who are more musical or verbal. Perhaps for them playing music or talking does the same thing." One participant, in response to the question about whether creating the collage contributed to their thinking about key concepts replied simply "no."

Other responses, however, suggested that most participants moved past initial difficulties. One participant described the challenge of "first finding either the right pictures or words - in the end I decided upon words to create the collage." Another participant said, "I think the only challenges were finding the right images. Sometimes the images created jarred the memory and at times I was looking for the right image to explain my thought."

Others found the open nature of the exercise difficult. One commented,

My first thought was, "Oh, no! You want me to do what?" But then I just stopped thinking about what I was supposed to do and let it happen. So the hardest part was getting over the initial "How am I going to do this?"

Another commented on how different this kind of activity was from her normal routines and described her resulting struggle:

I like to process things and get in the “zone” when doing thoughtful work. So it felt challenging to do this collage with a short deadline in the classroom after a full day of work with limited resources (magazines that I normally wouldn’t read)... I also recognize that I am forced to use my analytical left brain thinking mode most of the time in my professional life and activities like this force me to not “over-think” and self-censor my work. So although something like collage work should feel really relaxed, I found I had to almost give myself permission midway through to just go with my creative impulses and not try for the “perfect collage.”

While participants refer to their initial difficulties in beginning the activity, they all described moving past these early challenges. In the end, most described how their thinking benefited from a process they found freeing.

### **Arts into Practice**

Some participants extended their meta-cognitive thinking about the process to the ways in which a collage activity could be used in other educational settings. For example, one participant stated, “I’m all for it and have only had positive experiences. Not enough attention is given to learning in experiential ways or giving students/employees the ability to express themselves in these ways.” Another student acknowledged “it was like instant therapy with an ‘ah-ha’ moment at the end ... I’d like to find out more about visual learning and then add that technique into my teaching/facilitating toolbox.” Another participant commented, “I wish it was used more. I think it is a great way to stimulate thought and can be used as a learning/assessment tool.” Similarly, another participant noted

Adults should be allowed to do this more often - it helps adults to express themselves and to communicate and identify nuanced concepts, to make connection and meaning. For adults with learning disabilities this may be a key learning strategy for them.

Another participant mused

Honestly, I probably haven’t done visual stuff like this since elementary school. Like Sir Ken [Robinson] said in his famous TedTalk, creativity is slowly taken away from us as we move through the school system. Now I’ve been reintroduced to it, I’d like to look into visual teaching techniques for adult learners. I can see this being a very powerful learning tool because it’s based on emotion. For some learners who have problems expressing themselves in writing, this would be a fabulous tool.

It was clear that not only did participants personally benefit from the activity, but it also stimulated their desire to incorporate something similar into their own future teaching. We also noted their comments reflect a sense of pleased surprise at what the activity helped them achieve.

### **Summary**

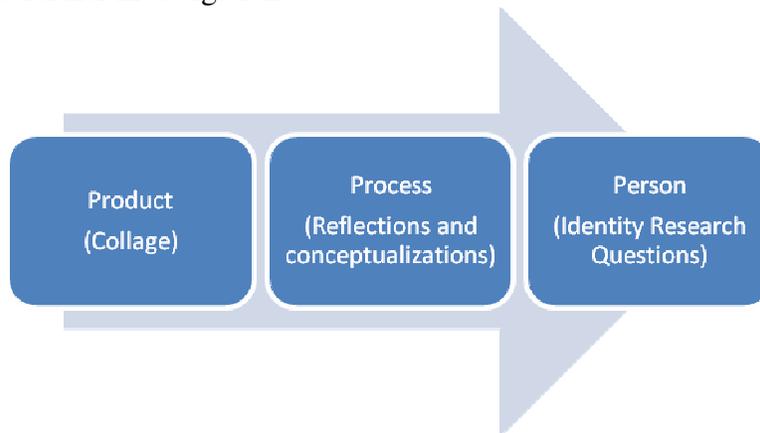
Overall, the collage activity provided visual prompts to free participants’ thinking, helping them consolidate and conceptualize their scholarly ideas. Creating collages helped participants access previously hidden knowledge and create new understandings, and moved participants to meta-cognitive levels in their reflections.

### Discussion and Future Thoughts: Framing the Work

We undertook this exploratory study to explore the usefulness of arts-based activities such as collage as prompts for scholarly thinking about academic identity and research. While we anticipate engaging in future research with a larger group to further understand the precise ways in which such activities catalyze meta-cognitive processes, we find substantial evidence in the participants' reflections to encourage us to continue to use and expand these kinds of activities in post-secondary teaching and scholarship.

Eisner (2002) notes that “concepts and the meanings they acquire can be represented in any material or symbolic system that can be used as a proxy for it” (p. 23). While Eisner's focus tends to be on children's experiences, his ideas and justifications for creating as well as how one attaches meaning to those creations can be extended to adults as well. People continue to develop their thinking skills and negotiate their environments throughout their lifetime (Kelly, 1955) and therefore the arts can be a way to help a person at any age or level of education think and learn.

While Groch (1969) emphasizes “person – process - product” (p. 20) as elements of creative processes, we saw these in reverse order, whereby creating the collage (product) engaged the participants in reflections and conceptualizations about the activity (process) that led to the creation of new connections, meanings, and research questions about their identity (person) (see Figure 2). It is possible, of course, that a cyclical process is in effect, such that the product and process prompt new understandings, which are then integrated into the collage product. This bears further investigation.



*Figure 2.* Identity construction through collage: Product, process, person

In response to our participants' positive reflections, we would certainly argue for integrating the arts into post-secondary courses, particularly at the graduate level. One of us conducts a writing workshop for graduate students and faculty that offers arts-based activities as a way of prompting students to make connections and think deeply about their topics, conceptualizing their scholarly work for future writing, with much success for participants.

We had initially hoped the collage activity would create an opening where control and regulation disappear (Irwin, Springgay, & Wilson Kind, 2005). While participants self-selected and, therefore, were likely to have positive recollections, their accounts of their experiences exceeded our expectations. We heard from participants about their own transformed conceptualizations and found in response our own thinking about arts in pedagogy was transformed. What began as a hopefully interesting diversion to prompt student thinking has

caused us to consider additional and expanded future applications of arts-based pedagogy in higher education.

### Conclusion: Gallery Statement

Efland (2002) describes a work of art as a “cognitive landmark” (p. 164), and indeed we found the collages helped the participants weave together and make explicit their tacit knowledge and create new understandings. We affirmed through this work that “visuals and artistic behaviors contain, fabricate, formulate, and carry information and knowledge that can greatly enrich our understanding of meaning construction” (Suominen, 2006, p. 142). Importantly, these advantages can be equally seen in post-secondary settings, where the focus is more typically on expressing thinking in written form. While we do not wish to position one over another, we do see opportunities for integration of arts and written work. As Knight (2002) notes, “creativity constructs ... new embodiments of knowledge” (p. 1). Engaging in creative work and reflecting on that work can provide valuable opportunities for transformed thinking and meta-cognitive reflections. We completely agree with the words of one participant, “It was a very freeing process. I would do it again.”

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