Art Therapists' Emotional Reactions to the Demands of Technology

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Abstract

Art therapists increasingly are turning to educational and presentation technology to expand awareness of their field and to inform others in mental health care. This trend supports inquiry into how art therapists interact with and emotionally respond to the demands of technology. This paper presents a qualitative study that used 3 art-based focus groups (N = 13) to explore art therapists' reactions to technology. The phenomenological data analysis identified the dynamics and experiences that activated the participants' emotional responses to technology, which were most frequently cited as fear and anger. Results suggest a conflict between the desire to promote art therapy and engage in technology and the desire to remain loyal to the field's origins in traditional methods of communication and art media.

Introduction

Art therapists often feel an urgency to present their clinical work in ways that expand awareness of the field and inform their colleagues in the larger mental health community. Over the last decade, educational and presentation technology increasingly has been utilized to meet this need, and this technology has become integrated into art therapy education. Faculty, students, and graduates alike are expected to use technology both in the learning process and also in presenting clinical work. This trend supports inquiry into how art therapists interact with technology and, more specifically, their emotional responses to its demands. Throughout this paper the general term technology is utilized to mean educational, library, and presentation technologies.

Concern for attitudes and emotional reactions to technology can be found in the literature of other disciplines. In the field of educational technology, many studies focus on correlations between computer attitudes, computer self-efficacy, and computer anxiety (Compeau, Higgins, Christopher, & Huff, 1999; Hill, Smith, & Mann, 1986, 1987; Parish & Necessary, 1996; Thatcher & Perrewe, 2002). Most are quantitative studies that examine these correlations rather than seeking to reveal the nature of the underlying emotions or presenting options for overcoming obstacles.

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The use of technology in art therapy has been discussed in the literature for over 20 years and the discussion has covered a range of issues; however, an exploration of emotional reactions to technology is absent. Creswell (1998) asserted that the "strongest and most scholarly rationale for a study…follows from a documented need in the literature for increased understanding and dialogue about an issue" (p. 84). Thus, expanding the dialogue on the emotional obstacles that art therapists face when engaging technology can increase the understanding of these barriers and can develop interventions to bridge the digital divide.

Literature Review

Emotion Theory and Emotion Activation

Attitudes and reactions to technology are covered by the research on emotion, which has evolved from many different disciplines. It may be due to this interdisciplinary evolution that the study of emotions has been described as controversial, confusing, challenging, and mysterious (Izard, 2002; LeDoux, 1995; Plutchik, 2001; Russell, 2003) despite the fact that emotions are fundamental to the development and adaptation of human beings. Drawing from psycho-evolutionary theory, Russell described two interconnected dimensions of emotion as core affect: pleasure–displeasure and activation–deactivation. He differentiated core affect, which resides within the person, from affective quality, which exists in the stimulus. He asserted that these primitive processes, which can be combined with information processing and behavioral planning, account for all emotion. According to Ekman (2004), "Emotions influence our lives all the time. They can shape the quality of our relationships and they motivate most of our activities" (p. 5).

The suppositions of cognitive theory also have implications for understanding emotional reactions. Ellis (1962), for example, asserted that changing the ways in which people think about events brings about a change in emotional reactions. Cognitive therapies are based on a model known as appraisal theory (Lazarus, 1991). Appraisal theory assumes that two cognitive processes, knowledge and appraisals, occur prior to emotional activation. Knowledge refers to what a person believes about how things work; appraisals are the evaluation of the significance of this knowledge. Knowledge is necessary but not sufficient for the activation of emotion until its personal significance is appraised. Other theorists postulate that negative expectations about results and the inability to affect these outcomes

serve as the trigger for emotional reactions (Abramson, Alloy, & Metalsky, 1989).

There are several different theoretical perspectives in the literature on individual reactions to technology. These perspectives include the social cognitive model (Compeau & Higgins, 1995; Hill et al., 1986, 1987), which centers on the concept of self-efficacy or an individual's belief about his or her ability to perform a specific behavior; the diffusion of innovations model (Moore & Benbasat, 1991); and the technology acceptance model (Davis, Bagozzi, & Warshaw, 1989; Venkatesh & Davis, 1996), which focuses on beliefs about technology and user outcomes.

Parish and Necessary (1996) studied computer attitudes and the theory of cognitive dissonance, which posits that the personal commitment made when individuals take a position on a specific issue shapes their future attitude or belief about that issue. They found that participants who owned or voluntarily used computers were less likely to experience computer anxiety than those who did not. This suggests that computer confidence and an absence of anxiety result from an adjustment of attitudes and personal commitment to computer use. Thatcher and Perrewe (2002) found a positive correlation between computer anxiety and trait anxiety; individuals with higher rates of trait anxiety experienced anxiety when faced with a specific challenge or problem such as using technology.

Art Therapy and Technology

The literature on art therapy and technology illuminates the enormous potential for computers to bridge the techno-digital divide in our field. A dialogue on the use of technology by art therapists was initiated over 20 years ago (Weinburg, 1985). In 1999, *Art Therapy: Journal of the American Art Therapy Association* devoted a special issue to the synergy linking computer technology and art therapy. The continuous need to update the literature is evidenced by this 2009 special issue on art therapists' responses to the techno-digital age. Several themes are consistently present, including the use of computer hardware and software communication, the computer as a medium of treatment, and the continued encouragement to integrate technology into art therapy (Canter, 1989; Hartwich & Brandecker, 1997; Malchiodi, 2000; Thong, 2007; Weinberg, 1985).

Peterson, Stovall, Elkins, and Parker-Bell (2005) noted that "with the ever-increasing presence of DIT (digital imagery technology) and HIT (health technology), art therapists will need to educate themselves, their colleagues, and their students about ethical applications and implications of technology" (p. 146). In a survey of 195 art therapists they found that one of the reasons participants were not utilizing technology was its high cost (63% of the respondents). This finding supports the idea of a "digital divide" that emerged from studies conducted by the National Telecommunications and Information Association (NTIA; 1999). According to the NTIA, there is a growing inequity between information "haves" and "have-nots" due to disparate access to computer resources at home, work, and school, as well as gaps in computer liter-

acy. In addition to high cost, 50% of the art therapists in the Peterson et al. survey reported that they did not use technology because they were unfamiliar with the software or hardware. Although unfamiliarity was found to be a deterrent to the use of computer technology, the survey did not inquire into possible underlying emotions.

Another theme in the literature speaks highly of the relationship between art therapy and technology. Kapitan (2007) asserted that in order to participate as artists in the techno-digital culture, art therapists must broaden their definitions of art materials and contexts across a wide spectrum (p. 51). She believed that "we must be willing to move beyond historically validated media and offer our work in new contexts" (p. 51). McNiff (1999) stated that art therapy is especially synergistic with new technologies and that one only needs to expand one's ability to imagine the potential they offer. Malchiodi (2000) identified the Internet as a forum for communication that has broadened the reach of art therapy more than any other form of technology, media, or organization.

Less evident in the literature is the consideration of gender in how art therapists relate to technology. The Peterson et al. (2005) survey cited that 94.85% of its respondents were female and 5.15% were male. These demographics suggest important implications when considering affective responses to technology. Gussak and Nyce (1999), for example, suggested that technology may be underutilized because programmers do not design user friendly software that corresponds with art therapists' needs. It may be that the software is not user friendly to art therapists, who are typically women, because software designers are typically men (Ben, 2007). Gendered meanings in the field of information technology have long been explored and authors such as Ben have concluded that "the de-gendering process expected during the software boom has still not come to fruition" (p. 327). Although women work in information technology, they are less often employed in the design and development of software (Ben, 2007). Art therapists, as well, are rarely consulted in the process of creating software designed for the flexibility and intuitive processes that they value. This has many nuanced implications for the field of art therapy related to gender and affective responses to technology.

Wajcman (2007) believed that "early second-wave feminism generated a fatalism that emphasized the role of technology in reproducing patriarchy" (p. 287). She asserted that it is "not simply a question of acquiring skills, because these skills are embedded in a culture of masculinity that is largely conterminous with the culture of technology" (p. 289). Nahl (2001) also believed that affective reactions to technology are not related to lack of motivation to learn but rather that "many users who struggle to become technologically literate in the current information environment have experienced information overload, information anxiety, technophobia, computer aversion, library avoidance, depressing uncertainty, and even information rage" (p. 73). With an expanded dialogue on the emotional obstacles that art therapists face when making sense of technology, an understanding of these barriers can lead to interventions to assist art therapists in bridging the digital divide.

Research Methods

The purpose of this study was to explore art therapists' reactions to educational and presentation technology. A qualitative research paradigm was chosen because it allows for an exploration of phenomena and their meaning within the natural settings in which they occur (Denzin & Lincoln, 1994). Focus groups were selected because they are flexible and stimulating for respondents, they aid in recall as well as in elaboration, and they are a rich source of diverse data (Fontana & Frey, 1994, p. 365). The format allowed participants to respond to one another's artwork and engage in a nuanced, in-depth discussion of what was presented by participants individually and as a group.

Sampling

Participants (*N* = 13) were divided into 3 focus groups to keep the number in each group small enough to encourage dialogue and intimacy. All participants were either second-year students or alumni of the Marital and Family Therapy program at Loyola Marymount University. Two groups were composed of participants in their second year of the graduate program and the other was a mixed group of alumni and second-year participants. The composition of the groups was randomly determined by participant availability.

Alumni were invited to participate because of their unique perspective of having experienced a transition from traditional to technologically adapted "smart classrooms." As practitioners, they used technology to present cases and to record progress notes and reports. The second-year art therapy students were invited because most expectations for using technology, such as in library research and case presentation, occur in the second year of the Loyola Marymount program.

Group A (*n* = 4) was composed of alumni and second-year part-time students. There were 2 male and 2 female participants with an age range of 22 years to 52 years. There was 1 Latino male and 3 Caucasian participants in this group. Both group B (*n* = 4) and group C (*n* = 5) were composed of female participants ranging from 24 to 35 years. In group B there was 1 African-American female and 3 Caucasian participants; all members of Group C were Caucasian. The ethnic diversity of the sample was reflective of the art therapy field in Los Angeles, which is mainly comprised of Caucasian female practitioners. All groups contained participants with various degrees of information and computer literacy.

Data Gathering

There were several considerations made in data collection. To provide psychological safety, the data were gathered on two consecutive weekends when no other faculty or participants were present. The focus group sessions were held in the art therapy studio, which the participants considered a place to gather, socialize, and make art. All groups were audio and videotape recorded.

Figure 1

After introducing the participants and having them sign consent forms, a variety of art media were presented, including paints, markers, chalk and oil pastels, different sizes and types of paper and surfaces, and collage material. The art studio was designed to support traditional art media and therefore no technology was used in the art-making process. The participants did not bring their laptops nor was there other technology available.

After the participants had selected their art materials, the researcher asked them to recall a time or times when they had a reaction to technology. The participants were to visualize this time and then to represent it in art in any way they wished. After completing their artworks, each participant described his or her creation and its personal meaning. All of the focus group members were invited to ask questions about elements in the art images and to connect them to statements about technology. After all group members had shared their artwork, participants posted their pieces on the wall and the researcher facilitated a group discussion of the art as a whole. The participants made many observations about the meanings and inter-connections among the group's artwork.

Data Analysis

Once all 3 of the focus groups were completed, the sessions were carefully transcribed; each transcript was read and each tape was replayed and rechecked several times. The transcription and artwork became qualitative data that were interpreted from a phenomenological perspective (Creswell, 2003; Miles & Huberman, 1984). Phenomenological data analysis seeks to understand the experience of a phenomenon by interacting with the data in a dialectic process—in this case, with the transcribed text and the imagery. Using this approach, the researcher searched the transcripts for
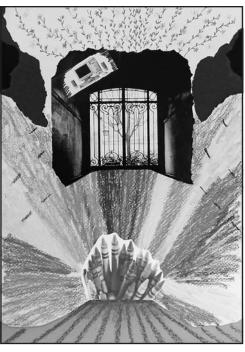
Figure 2

Figure 3

statements that reflected the participants' emotional reactions to technology. Words and phrases that the participants used frequently were highlighted and then grouped according to shared meanings. Repeated use of certain references to the art was clustered into themes. The clusters of thematic words were found to align with either of two categories, one of which corresponded with fear and the other with anger. Elements of the art were then explored and clustered into themes that were related to the themes that had emerged from the transcribed text. In the search for meaning, the 12 specific steps designed by Miles and Huberman (1984, p. 215) were utilized to drawing meaning from the data. Once the themes were established, member checking was employed to validate the findings. Eight of the 13 participants were selected from the study for this article (each focus group was represented), however, all of the participants' responses were considered in the findings.

Results

Group A Data

Participant A1 discussed her decision to create a vertical piece instead of a horizontal one, which was the original orientation. The artwork in Figure 1 depicts her emotional reactions on the day of her case presentation. Recounting the story of that morning, she recalled feeling confidently prepared for the presentation. However, when she went into the classroom to check the technology, the computer would not read her compact disk. She said, "I freaked out…and had a visceral reaction to the situation…my whole body got hot, my face got hot, and I felt like I was going to pass out." She felt out of control, as if the computer had taken over and there was nothing she could do to fix the problem. In Figure 1, the blue lines

emanating from both sides of the lower part of the central image represent the rational experience that surrounded her "explosion of emotions." She had originally intended the image to symbolize fire leading into a black hole to signify her anger in the moment. She reported that her use of color corresponded to her emotions, with anger indicated by orange and red, and fear depicted with yellow. She explained that the blue and purple represented her rational cognitive side, which created a boundary around her volatile emotions.

Participant A2 summarized her artwork by saying that it was not about a specific time but rather was a general response to her experience with technology in doing library research and case presentation (Figure 2). "The overriding experience," she said, "was that I felt that the technology was a block to creative expression." She asserted that she was surprised by this reaction because she did not think that she had fear of computers, given her level of computer literacy, but something was blocking her nonetheless. She reported that the crayons in her drawing represented raw creativity and the rainbow stood for creative excitement. Moving up the page, there is a dark space or hallway with a tree behind a gate, which represented her experience of technology. "It was a huge technological road block!" she said, and then clarified that the obstacle was more like a series of roadblocks surrounded by places where technology worked for her. There was a tension of opposites in her artwork that showed that her encounters with technology were at times very frustrating but eventually she would experience a breakthrough, depicted at the top of the image, which she declared represented her sense of mastery. "I got through the barriers…I did it."

Participant A3 also shared his experience of using technology in his case presentation. He said that initially he felt joy and excitement, which he represented by drawing lines

emanating from the left side of the head in his artwork (Figure 3). The right side of the head illustrated his fear of compatibility issues between operating systems and of not having the most current software programs. His previous experience with a computer virus had caused him to lose a final project, which engendered more fear. His anxiety over compatibility issues is indicated by horizontal and vertical lines at the bottom right side of the page.

Group B Data

Participant B1 explained that her artwork focused on her ability to connect her laptop anywhere and to use an LCD projector. Figure 4 depicts her laptop screen (the black square at the bottom right of the page) and the projection screen (the larger gray square in the center of the page). The swirl at the top of the page is the cord that connects the two devices. She drew black smears on the right to indicate her feeling that that interacting with technology might not always be inviting but can be rewarding when she perseveres. She noted that there is always a chance that technology won't work, which can be frightening.

Participant B2 reported having many technical difficulties in preparing her case presentation. She said that her creativity was symbolized by the spherical shape in the center of her drawing (Figure 5), which also represents her vision for the case assignment. The semicircles on the left represent her feelings of aggravation and anger when she experienced technical problems. She claimed that she depicted these problems in the shape of a spider web because of how frustrating they were. When asked about the blended colors on the lower right of the sphere she drew, the participant said that they stood for her hope and joy when things came together.

Participant B3 included several elements in her artwork that related to accessing technology and library resources. She began her collage (Figure 6) with an image of a stone sculpture next to the word "angst," which she said portrayed her frustration. A baby crying in a crib expressed the insight that her fear of technology made her feel childish. "I extended the bars on the crib to give a feeling of being trapped," she related. As the participant reflected on this image she realized that there was a deeper sense of shame involved. She explained that the first three images in her collage illustrated her struggle with using library technology in research. The little boy in the computer screen represented her sense of mastery. She wrote the words, "I tried to get away from it," to express her experience of having left the field of graphic design because it had become more computer oriented and had less emphasis on the craftsmanship she valued. She expressed her concern that art therapy would take a similar path.

Group C Data

Participant C1 initially stated that she was perplexed by the image she had created. As she focused on the imagery, it became evident to her that the various graphic symbols represented different aspects of technology. In
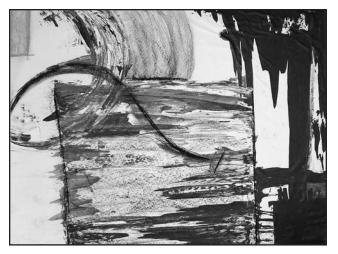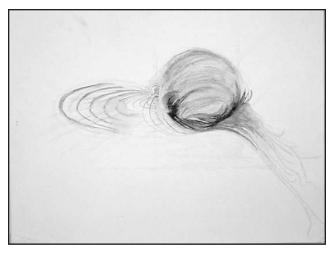

Figure 4

Figure 5

Figure 6

Figure 7, the dots moving across the canvas reminded her of animation software. She conveyed her affinity for using presentation technology and the enjoyment of being immersed in the process. As she looked at her piece, she could not decide if the figure she had drawn was being chased by the bullet points or if it was running along on
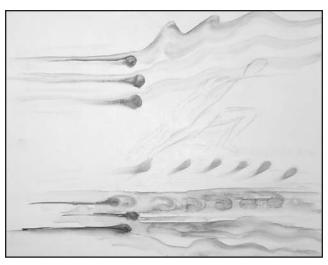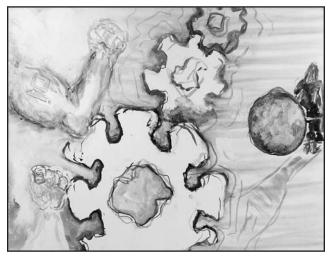
Figure 7

Figure 8

top of the bullet points in an effort to keep up with the daunting speed of changes in technology. Upon further reflection, she understood the conflict more clearly. The water at the bottom of her piece represented the softer, more comfortable side of technology, whereas the wavy lines at the top of the page depicted its more stressful aspects. The wavy lines seemed like the beeping sound that a computer makes, one that reminded her of a pulsating heart monitor. She acknowledged that her artwork clearly represented her ambivalence toward technology.

Participant C2 said that her emotional reaction to technology was positive, which made her think of power and influence when using technology. In her artwork, these associations to technology were depicted with a flexing arm that contains a computer image inside the center of the muscle and shows a finger pointing at the viewer (Figure 8). Gears growing larger illustrated the growth and proliferation of technology. She explained that the spherical shape represented the connectivity that technology provided in terms of information and communication. She acknowledged that technology does not always work, and

yet the thrust of her artwork revealed that using technology gave her a sense of power and confidence.

Discussion

Nine major themes emerged from the qualitative analysis of the text and the artwork of the 3 focus groups:

1. *Emotional Reactions:* The two main clusters of expressions of emotions that emerged were fear and anger. A significant pattern was that fear and anxiety presented prior to engaging with technology, whereas frustration and anger were felt after engaging the technology.

2. *Self-representation:* All of the participants consciously or unconsciously included self-representations in the artwork they created.

3. *Unknown:* All of the participants in Group A expressed the concept of the unknown at some point in their discussion of their artwork, which created a sense of vulnerability related to many different emotions such as fear, anxiety, anger, and frustration.

4. *Mastery:* The participants expressed their abilities to think creatively as a way of gaining mastery, giving them feelings of confidence and determination. Feelings of mastery assisted them in their interactions with technology, which is consistent with the findings of Compeau and Higgins (1995).

5. *Duality:* An important theme was the experience of duality, which mirrored a formidable tension in the field itself: the desire to promote art therapy and engage in technology while remaining loyal to art therapy's origins in traditional methods of communication and art media. One participant felt conflicted about using digital imagery to show artwork in case presentations.

6. *Transition:* The discussion in Group A continually returned to the event of moving to the new "smart classrooms." Participants reminisced about the old classrooms and expressed feeling as though technology was being integrated merely because it was available.

7. *Technology Representation:* Many of the participants included some visual reference to technology in their artwork, which provided a frame for a dialectic exploration of their emotional reactions.

8. *Mandatory Compliance:* The energy in Group B's artwork, as noted by the participants, represented their feelings of being forced to utilize technology. One participant wrote, "I tried to get away from it," implying that she could not avoid using technology. This reaction evokes the metaphor employed by Kapitan (2007) that technology is a steamroller: one must either keep ahead of it or become the road (p. 50).

9. *Professional Stance:* Members of Group C debated how several aspects of technology affected their professional stance. Several participants felt satisfied that they had created a professional presentation that would assist them in communicating art therapy to others in the larger field of mental health.

These results provide a clear image of the dynamics and experiences that can activate art therapists' emotional responses to technology. The participants were very open to the process and identified a significant range of primary emotion (Plutchik, 2000)—from anger, disgust, anxiety and fear to joy, acceptance, and surprise. A significant finding, based on the numerical analysis of the word clusters, was that expressions of anger and fear were reported more than any of the other emotional reactions.

The age range of the participants was 22 years to 52 years old. With this large an age range it might be expected that the emotional reactions to technology would mainly be evident in the older, less technologically experienced participants, but this was not the case. Some of the younger participants with extensive computer experience and previous positive experiences with technology nonetheless felt fearful with technology that was unfamiliar to them. This directly related to the conclusion made by Peterson et al. (2005) that unfamiliarity is a key reason for not using technology, as well as Nahl's (2001) observation that technological uncertainty actually increases with emergent complexity. General computer literacy does not necessarily translate into feeling competent in all areas of technology and is not necessarily differentiated by age as one would expect. Previous negative experiences with technology also may negatively influence a person's desire to become more computer literate, as well as generating fear of the possibility that such problems could occur again.

The participants in this study reported feeling general fear and anxiety toward educational and presentation technology in anticipation of events, whereas feelings of anger and frustration occurred in the aftermath of specific events or situations involving technology. As Wajcman (2007) stated, "technologies also yield unintended consequences and unanticipated possibilities" (p. 294). This finding illuminates the need to address emotional reactions both prior to and following from technological engagement. An intervention to decrease anxiety in advance of engaging with technology might be useful in supporting art therapists' participation in the techno-digital culture.

The participants used the art media in a variety of ways to express their reactions to technology. Color was very important in expressing several themes; black or dark areas were related to the theme of the unknown, whereas red and orange often depicted anger. Spatial qualities in the art dynamically represented various themes including duality and mastery. Many of the pieces were mixed media; a single medium often was used to represent one thought or feeling while another medium conveyed a different experience.

Conclusion

The greatest obstacle illuminated by this study was the participants' emotional response of anxiety to technology. This fear manifested in many different forms. Some participants were afraid of damaging their computers or that viruses might delete their files or even destroy their hard drives. Others feared not being in control, as they did not have a full grasp of the technology and when a malfunction occurred it would send them into a panic. Even the participants with extensive computer knowledge experienced anxiety when learning new software programs. Finally, some participants expressed fearfulness for the field of art therapy; they worried that technology would remove what art therapy holds sacred, which is the art. It is evident that technology holds many possibilities yet resistance still grips some art therapists.

The struggle with technology in this study focused on educational technology and specifically library and presentation technology. Such technology has become one of the primary tools in educating art therapists and communicating important information about art therapy to other professionals. Nonetheless, the intensity of emotional reactions to this technology by the participants was extraordinary. Many of the participants reported intensely negative or visceral reactions to situations that occurred when they were interacting with presentation technology. Because of the significant trend toward utilizing presentation software to expand awareness of the field, it is essential to develop interventions for reducing anxiety related to its use. Art-based experiential interventions would create a metaphoric bridge that could transcend the states of fear and anxiety while engaging presentation technology. These considerations have led to the design of a subsequent pre-experimental study that involves three sequential exploratory modules. I anticipate that the interventions developed from the subsequent study will be applicable to other forms of computer software and hardware. With an expanded awareness of how to implement art-based interventions to reduce anxiety to technology, art therapists will be more capable of bridging the digital divide, and become active members in the techno-digital culture.

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