Digital Video Intervention with Special Populations: Looking for Inherent Qualities

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Introduction

Don Seiden (2001, p. 20) wrote, "[when] approaching materials, [one] must first accept the significance of the nonliving object, matter transformed into some symbolic energy, which is capable of affecting human behavior." He stated that the concept that the art media is the message implies that the canvas, wood, stone, radio, or TV are symbolic messages in and of themselves. When an artist chooses a media, he or she must take into account the inherent qualities of the medium as well as its effect on the artist and the audience. Seiden (2001) stated that when working with children, it is important to consider which materials fit the goals for that individual, because the right choice of material may greatly enhance the therapeutic/ educational process, whereas the wrong material might hinder it. When working with students with special needs the medium itself can have a great impact on whether or not the art project goals, the students IEP or personal goals, and the classroom goals are met. For instance, handing clay to a child with conduct disorder and attention deficit may escalate his or her behavior whereas using colored pencil and stencils may help to contain and guide the behavior.

How do art educators and special educators working with special needs students know what qualities exist in each medium that could set off a student or help them to control their own behavior? How does the educator determine what medium will be the most beneficial for each of their students? Many art educators would state that they know these things through experience in working with the materials and students, through trial and error, and by seeing how different populations respond to and work with these materials. Many art educators work on an intuitive level to make their choices, and some make choices based on what is available to them for use. This study explores a specific

art media, digital video, to better inform special educators and art educators who are working with special needs students the beneficial aspects, drawbacks and educational strengths of digital video production for students with emotional, behavioral and learning disabilities. Through a preliminary survey to determine the inherent qualities of this media and a case study to provide an in-depth look at this media, this study explores how art educators/ special educators make decisions about when, why and how to use digital video with special populations.

The first part of this study consisted of a survey sent to 206 artists working with special populations about their experiences, ideas and thoughts on this subject. Using a framework developed by Peggy Dunn-Snow and Susan Joy-Smellie (2000) to teach students a specific technique during their art training, this article will parse out the inherent qualities and possible uses for digital video with students with disabilities. Dunn-Snow and Joy- Smellie stated when learning about a new media one should: 1) conduct historical research about the technique; 2) determine the populations who might most benefit from a particular technique; 3) determine issues, settings, and approaches where the technique would be the most successful and suitable; 4) experience the technique. In this article, Dunn-Snow and Joy-Smellie were specifically talking about teaching the technique of mask making as an intervention in art therapy practice; however, these steps are applicable when analyzing other techniques, methods or media used in any education setting, but has particular importance in the special art education community.

1) Historical placement of digital video technology in the art education classroom with special needs students.

Interest in the uses of technology within art education with special needs students is justified by looking at current trends for its use among the general population. Today's youth (particularly teens and young adults) find it difficult to live without newer technologies (such as compact discs, graphic-based video games, MP3 players, high-powered computers, cell phones and digital assistants) some of which were not available even five years ago.

Since the advent of digital technology and computers, the possibilities for creating art with technology with special needs populations have increased substantially. Diane Weinberg (1985) wrote about the uses of computers for creating art with clients with physical limitations. In the study, Weinberg found using the computer as an art-making tool stimulated curiosity and motivation, and increased access to the art making process which would otherwise be limited due to the disabilities of her clients. Canter (1989) argued that computers work well with children and adolescents due to their prior knowledge and comfort level with this media. She found that creating art with computers increased concentration and improved self-esteem of this population. Barbara Parker-Bell (1999) and Carol McLeod (1999) have written about using specific software programs as interactive and creative tools in art therapy practice with children and adults. Riner (2005) wrote a case study in which inner-city at-risk youth participate in a digital photography project. In regular art education, many art teachers have written about the use of digital media in the art room (Fionda,2000; Garcia, 2000; Gerrish, 2000; Hunter-Doniger, 2005; Mollhagen, 2004). Other art educators have written about the need within the education field for art educators to teach digital media in order to make art education more current and applicable to student and society needs (Ohler, 2000; Thatcher, 2004).

The debate on digitally based art media in the art room is on-going. This article explores specifically digital video media and its use with special needs students in the art education classroom.

2&3) Determining populations, issues, settings, and approaches

To determine the populations, issues, setting and approaches where technology would be most successful and suitable, a survey was sent out to 500 artists/ art educators/ special educators who are working with children with disabilities. The survey was composed of mostly open-ended questions referring to technology use, ideas and experiences in art revolving around these issues. The purpose of starting this investigation with a survey was to collect base-line data on current uses of technology as an art making tool in art making with special needs and to mine practicing art therapists, art educators and special educators for ideas and experiences with this medium.

Method

Population

Five hundred randomly chosen artists/ educators/ therapists who are working with special needs were mailed a "Technology as Intervention" questionnaire and a reminder card. Of this 500, 206 responses were collected, giving this study a 41% return rate and a +/-6.9% margin of error. Of the 206 responses, 33 stated that they declined filling out the survey because they were no longer practicing or did not use technology at all and felt unable to give informed information for the survey. The remaining 173 respondents filled out and returned the survey.

Findings

Technology use by participants working with special needs

Currently, it appears that the majority of survey participants use technology in some form in their art /education/ therapy practice, but that only a small percentage are actively using technology with special needs children to create art. Of those surveyed, 83.8% indicated that they use technology as a work/ organization and research tool in their practice, while 20.8% use technology as an art-making tool, and 16.2% do not use technology at all (Figure 1-3)

Of those participants surveyed, 34.7 % use technology for photo/ picture archiving, 17.9% use it to create digital artwork, 12.7% use it for digital video or phototherapy, 9.2% create client portfolios and 4% use it for web camera communication (Table 1).

Determining populations

Of course, it is difficult to say that one medium has specific populations for which it is appropriate. The question of population is not so much with whom it should be used, but with whom it appears to work best, and why. The majority of respondents indicated that the primary deciding factor for using technology with a particular student, when it is available, is the student's comfort level with this media. Some responses (77) indicated that in artists' experiences, some populations, such as children and teens, are very proficient and comfortable with technology and thus respond well to this medium, while other populations, such as adults, may not be comfortable, and thus this medium would hinder the art making process. One participant wrote that she thinks technology works well with adolescents "because teens speak tech as a first language (!)." Children and

adolescents are familiar with using technology as a medium so this process stimulates their interest and can increase creativity on both a conscious and unconscious processing level. Some participants wrote that introducing technology as part of art education for special needs can help decrease resistance to the art process and allow for some initial distance from the artist/ educator/ therapist, which many adolescents need. Several participants indicated that adolescents with attention deficit disorder work particularly well with technology because feedback systems are self-reinforcing. The participants who responded to the questionnaire indicated that adolescents, teens and young adults are client populations that, due to familiarity of use, may work well with technology as a part of art education/ education settings.

Another factor for determining use of technology with a particular population is the medium's lack of tactile qualities. For some participants (29), the tactile aspect of art making is a primary ingredient in the art making process, and thus they decide not to use technology at all in their practice. However, a few participants (12) expressed that some clients such as those in hospitals and juvenile prisons, can be tactile resistant, fear contact with art materials, or cannot have contact with art materials. For these populations, using technology as an art medium works because it allows for the art process to begin in a situation where it might not otherwise happen at all. For those students who are tactile resistant or fear art materials, technology's lack of tactile stimulation may be a good starting point for creation and could gradually lead to introducing other more tactile media. For students in settings where contact with art materials may transfer illness or is limited for safety reasons, laptops may be the only or one of few art materials allowed by the facility for student use. Thus, the lack of tactile qualities inherent in technology is an

important factor when determining if technology would be an appropriate and beneficial medium with students with special needs.

A third factor raised by 18 respondents was the medium's ability to increase potential success of the art making process for particular students where other media may not be accessible. Student populations that have limited mobility or functioning, such as clients having special needs, physical disabilities, or brain trauma may, through the use of technology as an art medium build skills and increase potential for success with materials. Because technology can be used as an adaptive tool and can provide easy access into the art making process, it can help empower these students if they are depressed or have low self-esteem.

Ten respondents asserted that other populations with which technology may be uniquely qualified to meet students' needs are students who do not have direct access to education due to distance, disability or incarceration. Education via the Internet is an area in which there are many ethical issues, such as confidentiality, but also which has a lot of potential for reaching clients who otherwise would not be able to participate in art education/education services. In situations where one-to-one interface is not an option (such as in prisons) or where clients are isolated but can use on-line support (home-bound), or where long distances are involved, technology in education/ art education can be critical.

It is impossible to say that artists/ educators/ therapists should use technology as a medium with only certain populations, but through the findings of this survey, we can at least begin to develop a consensus as to which populations benefit from working with this medium. Through qualitative analysis of the open-ended responses, factors that should be

considered by artists/ educators/ therapists when deciding to use or not to use technological media with a particular student were developed: the artist/ educator/ therapist a) should weigh the students' comfort level and interest in the media; b) should determine if the lack of tactile stimulation of this medium will or will not be beneficial for the student; c) should determine if the student has any special needs which may benefit from the easy access technology provides to art making; d) should determine if there are any safety or sterile issues which technology may better address than other art materials; and e) should determine if there are any distance or communication barriers which technology may address to make art education/ special education possible for this particular client.

Determining Issues, Settings and Approaches

To address Dunn-Snow's and Joy-Smellie's third requisite for learning about a new method or medium, the survey asked questions about when and why technology could be used, what the benefits and drawbacks are to using technology media, and what is beneficial or a draw back for students with special needs about technology media use in art making.

The participants in this study indicated that technology media should primarily be used when the student shows an interest in working with such media and when the use of such media meets the goals set for the student. Usually, technology media is used with individual students rather than in-group sessions due to the low number of technology tools available to each art educator/special educator. Some participants felt that technology media use is effective when manipulation or reworking of the art is an important therapeutic process in a session. These participants stated that technology

media can be an efficient and effective way to scan, copy and rework client art; it is easily manipulated; and it can easily be combined with traditional art materials before or after the technology media is used. Some felt that technology media is a fast and efficient way for students who are interested in photography or video to create their images and re-work them and that this process gives immediate feedback to the client.

Other participants placed emphasis on the type of student and that student's needs as determining when technology should be used. They stated that they use technology media with children, particularly those with learning disabilities and attention deficit hyper-activity disorder, due to the multitude of color options, children's familiarity with such media, and technology media's ability to increase their client's success in the art making process. These participants also stated that they use technology media with students who have physical disabilities. Their students may not be able to access regular art materials, and technology media that employ fine motor skills and visual tracking skills often address client functional goals.

A third focus for determining when to use technology in art education/special education practice was in instances when information gathering and student contact were deemed important. Technology can be used as an art media when a student needs to research and find images to collage or rework. It can also be used as a media and communication tool when a student is unable meet personally with the art educator/special educator. In these instances technology can cross the line between an office tool and an art media tool.

Based on this exploration of issues, settings and approaches as expressed by the participants responding to this survey, it is apparent that technology media have both

benefits and drawbacks and are good choices with particular students, but not with others. Similar to other media in the artists' /educators' toolbox, when an educator chooses to use technology, he or she must take into account its inherent qualities and its potential effect on the educational process and its relationship with the student. As Seiden (2001) indicated, when working with students it is important to consider which materials fit the goals for that individual, because the right choice of material may greatly enhance the educational process, whereas the wrong material might hinder it.

4) Experiencing Technology Media

The last step suggested by Dunn-Snow and Joy-Smellie (2000) is to teach students about a specific technique or media during their training is for the student to actually experience working with that technique and media. This last step is represented in the following case study where digital video was used with a group of special needs students.

The Case Study

The case study format was chosen for this action research in order to analyze in-depth the implementation of using portable technology within a program for special needs that had little access to technology. The case study does not have strong generalizability to other art education programs, but enables insight into the implementation and process of such a digital video project for small groups with little access to technology in the art education classroom. The focus of this case study was on teaching a digital video unit which consisted of the study of documentary films, filming and editing documentary films, and then exhibiting and critiquing the films.

Participants in the study.

The special education students participating in this project attended a school where a computer lab existed, but was not used for art production, and a single computer was available within the art education classroom, but was mainly used by the artist/ educator/ therapist for administrative tasks and research. Eight high school students with varying emotional, learning, and behavioral disabilities consisting of three boys and five girls in grades nine through eleven worked in two groups of four. This sample was a convenience sample with voluntary participation taken from a contained classroom. Each group worked as a collective learning community to film, edit and produce their own documentary. The students signed assent forms. Their parents signed consent forms and all video topics were approved by the principal of the school. Students and artist/ educator/ therapists who appeared in the videos signed creative product consent forms for using their images and/ or words in the videos.

Media used in the case study.

One laptop computer with a DVD burner, one digital video camera, and one video editing program were used in this project. The computer, camera, and DVD burner all fit into one over-the shoulder carrying case that was transported to and from the school for each session. The primary investigator tested several video editing programs and determined that *CyberLink Power Director* was the most user friendly. I found that this program had the easiest learning curve while still giving as many options as some of the more complex programs, thus making it the most appropriate for middle school and high school students to learn. The final films were burned to DVD formats and shown on DVD players that were already available at the school.

The lesson plan process.

The eight participants in this study worked for 30 to 40 minutes per session for 18 sessions. In determining the goals for this project, I used Jordan's (2005) Art/Technology Performance Standards as a guiding framework (Chart 2).

Session 1 & 2: Art History and Aesthetics: The first two sessions consisted of an introduction to documentary film history, digital moviemaking and discussion of ethics and social responsibility in the film industry. Students were introduced to "slice of life" factual works of art known as documentaries. Clips from films such as "Frieda" (Kahlo), "Supersize Me," and "The Endless Summer" were used as visual introductions to the media.

Session 3&4: Planning & Brainstorming: Students worked in groups to develop story boards, script ideas, music lists and logistical lists (such as getting permission forms of those video-taped). Students identified knowledge that they would need to learn in order to complete the video designed. Students wrote up a project proposal for their documentary, which was then approved by both the principal and the parents of the participants.

Session 5- 15: Students worked in two groups that alternated technology devices each session. One group concentrated on filming or finding imagery or appropriate music, while the other group worked on the laptop to learn the editing program, capture clips and music from the Internet or work on editing their film. Students in either group could use their time to search for information in the library or computer lab that had been determined by their learning community as necessary to the completion of the project. Each group also worked to get permission from participants in the films, and investigated

ethical issues such as copyrights to music. During the next session the groups would change tasks and exchange devices.

Session 16-17: Students focused primarily on fine tuning their editing and getting feedback from artist/ educator/ therapists and the other group. Students continued to take turns on the laptop.

Session 18: On the last day the films were shown to the larger student body. Participants then separated from the larger group and critiqued the works, discussed what was and was not accomplished, filled out a departing survey and were given copies of their films on DVD format to use for their portfolios.

Case study data collection and analysis.

Throughout the entire filming and editing process, students were observed at work and during discussions. The primary investigator participated in guiding students through the learning process, but allowed them to make all creative decisions, follow their own plan of learning, and do their own technical troubleshooting. The final surveys, finished videos and extra footage were collected and coded for themes.

Findings

Based on this case study, it was determined that one laptop, video camera, and video-editing program were sufficient for every eight students. Working in groups of four was appropriate for the special needs high school and middle school students involved in this study. More than eight students per learning carryall, particularly when special needs are involved, would probably be too many unless managed very well by the artist/ educator/ therapist. With this number of students, the members of the learning communities were able to share roles based upon individual strengths. For instance, each

group found that one student was more comfortable and better at actually filming with the video camera, while others were better suited to the various administrative, planning, editing or creative input phases of the project. In the learning community, students took on several roles and brought information and raw media needed to complete their films.

The main unexpected difficulty that arose during this study is that the session lengths were too short to allow the best learning to occur. The individual sessions lasted only 30 to 40 minutes, which was just enough time for students to learn a new technique or process before closing down the computer and camera. This meant that students would have to remind themselves what they did last session before beginning to use this new technique or process. It increased their learning since they had to repeat steps, but also increased the amount of time needed to finish the project. The original plan was for this project to take 12 sessions, but due to this issue, the total project took 18 sessions. If this project could be done during one- to two -hour increments, instead of 30 to 40 minute increments, I believe it would work better and more efficiently, however students with physical issues may tire with this length of sessions.

On the final surveys, students discussed learning to work in groups, time management, filming process, the slowness and detail needed for the editing process, and learning about legalities such as copyright and permission for filming as some of the important concepts learned during this project.

Overall, students felt that this was a valuable project in their personal use of technology as well as for their future professional lives. The students expressed feelings of accomplishment, pride and enthusiasm about this project and potential future projects with this media. Students who were not part of the video project were curious about what

the special education students were doing and approached them about any future sessions in which they might participate. This gave the special education students who had been traditionally known for making trouble, pride in this new positive status in the student community. The final videos were shown to the entire middle/high school and one was placed on the school website by the administration because they felt it was a great advertisement for their school. In this study, it was determined that this project was beneficial to the participating students in the learning goals that were met. The project had positive reported outcomes for the special needs students who participated by increasing feelings of competence, self-esteem, interest in school, social/ peer interactions, and academic learning of digital video production. It was also determined that this project had unexpected positive effects for the art program and the special education program through increasing the visibility of the art program and the special education program, increasing the importance of the role that these programs play within the entire school. By directly involving persons such as the principal, the instructional technology specialist, parents of both participating students and those in the film brought greater respect, support, and interest in both programs. The project was beneficial to administrators in that they were able to see its public relations value, as well as its usefulness in increasing student skills, behaviors and interest in school. The project also had several special needs/ less traditional students talking about an interest in college entrance for the first time.

Conclusion

Digital video media has benefits and drawbacks for use with special needs populations and it is the artist's/educator's/therapist's responsibility to determine when it is most

appropriate to use this media. Through the use of a survey of professionals working with technology as an art media with special needs students, this research has begun to give artists/educators/therapists some tools to help make these decisions about when and with whom using digital video can be most beneficial. The case study added insight into some special needs students' perspectives on creating digital video projects, its effects on them and their role within the larger school system as a whole. Through the combination of the survey and case study, this research attempts to portray a holistic picture of working with digital video with special needs students.

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Table 1: Ways technology is being used by art therapists

N=173

Use	*Frequency*	*Valid percentage*
Word Processing	134	77.5%
E-mail	130	75.1%
Lecture/ Presentation	101	58.4%
Client research	52	30.1%
Therapist research	65	37.6%
Treatment planning	66	38.2%
Client portfolio development	16	9.2%
Photo/ picture archiving	60	34.7%
Editing/ phototherapy	22	12.7%
Digital artwork	31	17.9%
Web camera Communication	7	4.0%
Billing	6	3.5%
Online chat/ networking	2	1.2%

Website	1	.6%