INSTRUCTORS' ATTITUDES TOWARD ONLINE VISUAL ART COURSES:

IMPACT OF TECHNOLOGY EXPERIENCE AND INCENTIVES

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Impact of Technology Experience and Incentives

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ABSTRACT

The general purpose of this quantitative study was to review university visual art instructor attitudes toward online visual art courses, instructor perspectives toward online education instructor incentives, and instructor experience with five main technologies in accredited higher education institutions in the United States.

The general findings indicate that 1) respondents show a high percentage of visual art instructors have negative attitudes toward visual art online courses; 2) visual art instructors find instructor incentives to be an important aspect for visual art online courses; 3) visual art instructors have a high percentage of technology experience; 4) visual art instructors working full-time at a 4-year institution have more experience with five main technologies than instructors working full-time at a 2-year institution ; 5) visual art instructor technology experience and visual art instructor attitude towards online visual art courses have a significant correlation, suggesting that instructors with technology experience are more likely to have positive attitudes toward distance education than instructors with less technology experience; 6) instructors are interested in learning more regarding visual art online courses; 7) visual art instructors support non-materialistic professional development in preparation for visual art online course instruction.

Research suggests that technology experience and professional development both sustain importance for positive instructor attitudes toward visual art online courses.

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DEDICATION

I would like to dedicate this project to my wonderful and loving family. To my husband, Jeremy, who has whole-heartedly supported me throughout this learning experience. To my beautiful children who made the journey enjoyable and worthwhile. To Monica and Dewaine Gjovig for teaching me dedication. To my siblings, BryAnna and Steph, for giving me the strength to follow thru. To my parents who believed in me throughout my educational endeavors and inspired me to follow the journey. Finally, to Christ for showing me the path.

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CHAPTER 1. INTRODUCTION

Visual arts such as drawing, painting, printmaking, sculpture, design, crafts and photography are courses ordinarily offered in a face-to-face studio at an educational institution. These hands-on courses utilize a teacher disposition with hands-on assistance for learning and incorporate the physical act of creation. New trends with technology scope distance education, impacting educational course offerings and challenging the traditional learning environment for the visual arts (Allen & Seaman, 2005, 2010; Johnson, Aragon, Shaik, Palma-Rivas, 2000; National Art Education Association, 1994; Neuhauser, 2002; Rovai & Jordan, 2004; Sewart, Keegan, & Holmberg, 1988; Volery & Lord, 2000; Webster & Hackley, 1997).

Distance education opportunities have advanced, evolving from correspondence courses offered through mail to a highly interactive distance learning process incorporating a variety of technology platforms (Gold, 2001; Kimble, 1999; Palloff & Pratt, 2001; Tapscott, 1998; Webster & Hackley, 1997). There is a debate questioning the quality of education offered through distance education courses. Some researchers explained the drawbacks of distance education courses in that distance education courses do not measure up to the quality of traditional (face-to-face) courses (Hirumi, 2005; Mehlenbacker, Miller, Covington, & Larson, 2000; Palloff & Pratt, 2001; Valentine, 2000; Webster & Hackley, 1997). However, some researchers have found no significant difference in student learning between distance education and traditional classroom courses but have found differences in quality for a variety of educational aspects such as communication techniques, learning strategies, time response, and technology platforms supporting the distance education learning environment (Johnson et al., 2000; Neuhauser, 2002; Rovai & Jordan, 2004; Webster & Hackley, 1997).

Despite the debate of traditional education versus distance education, ever-evolving technologies offer a platform for both educational institutions and also for students involved in these educational endeavors. Institutions are able to attain student participation by offering courses to students outside their current region. Student numbers support institution program continuation and also institution support for local and government funding. Many educational institutions have joined in this educational phenomenon by offering distance education courses as they have seen the possible benefits for the institution and also the educational competition for student retention. Institutions that do not participate in offering distance education courses will be left behind (Sewart et al., 1988; Volery & Lord, 2000).

Distance education offers students opportunity in learning anytime and anyplace. This convenience connects students within and outside a regional area, connecting students internationally (Stella & Gnanam, 2004; Stewart et al., 1988;Whitesel, 1998). This wide aspect of participation supports students with an enriched learning environment that shares students' experiences, views, and ideas where students may gain a wide variety of information from each other and their individual backgrounds (Steward et al., 1988). This enriched learning environment may even offer more than a traditional (face-to-face) course through international connection and communication.

The convenience of distance education extends beyond the traditional student body, conveniently supporting non-traditional students in gaining educational degrees. Through distance education courses, non-traditional students may work part-time or full-time, have families, and other priorities, and be able to participate in distance education through convenience of time that fits with individual schedules (Palloff & Pratt, 2001).

Technology advancements are enhancing educational offerings. Communication software, audio, writing, and visual software provide a well-rounded technology enhanced course (Carter, 2001; Twigg, 2001; Volery & Lord, 2000). As it was once hard to understand that distance educational courses could progress "beyond the role of substitution" (Stewart et al., 1988, p. 158), distance education may offer more to student learning through convenience, connection, and enriched learning (Stewart et al., 1988). Phipps and Merisotis (1999) stated that "Distance learning, which was once a poor stepchild within the academic community, is becoming increasingly more visible as a part of the higher education family" (Pallof & Pratt, 2001, p. 29).

Distance education advancement is becoming engrained as part of the educational society, re-adjusting the focus of the debate from traditional versus distance education to distance education effectiveness in itself and how to gain quality in teaching and learning aspects in providing quality distance education. (Palloff & Pratt, 2001; Stewart et al., 1988; Twigg, 2001). Palloff and Pratt (2001) explained that distance education effectiveness is similar to traditional course effectiveness due to instructor attitude, educational background, course planning, and institutional support.

Research literature in online education revealed faculty and students' attitudes and perceptions of online education, suggesting a possible relation with technology support and also administration support (Betts, 1998; Carter, 2001; Gold, 2001; Stella & Gnanam, 2004). Faculty attitudes and perceptions of the online learning environment have been researched in-the-round; however, the visual art online environment has had minimal research (Allen & Seaman, 2010). Further investigation of online education is important in scoping the future of distance education and in designing courses to meet both instructor and student needs (Liaw, Huang, & Chen, 2007)

Statement of the Problem

It is important to understand visual art instructors' attitudes toward online visual art courses, art instructors' perspectives toward online education instructor incentives, and also instructors' technology experiences in preparing instructors toward moving forward with technology and online visual art course offerings. Research regarding the online learning environment is extensive; however, research regarding the online visual art learning environment is minimal. Further investigation of visual art faculty attitudes, perspectives, and technology experience is necessary in laying a foundation for understanding the online visual art environment and providing insight of faculty needs for the online visual art learning environment.

Purpose of the Study

The purpose of this quantitative study is to review university visual art instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructors' incentives, and instructors' experience with five main educational technologies in higher education institutions in the United States accredited by the National Association of Schools of Art and Design (NASAD).

Research Questions

1. What are the visual art instructors' attitudes toward online visual art courses?
2. What are the visual art instructors' perspectives toward online education instructor incentives?
3. Do visual art instructors have experience with five main technologies that support an online classroom? Categories include:
    A. Education Social Software

B. Social Networking Software

C. Communication Software,

D. Video Software

E. Electronic Grading Software

This study also compared means between the instructors' types of institution employed and instructors' attitudes toward online visual art courses (attitude), instructors' perspectives toward online education instructor incentives (incentives), and instructors' experience with five main technologies (experience). It was hypothesized that instructors' types of institution employed will not have a significant difference with each of the three dependent variables which include instructors' attitudes, incentives, and experience.

> Null Hypothesis 1: There is not a significant difference between the composite mean of the independent variable including instructors' types of institution employed and each of the composite mean of the dependent variables including instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main technologies.

This study also examined correlation between visual art instructors' attitudes, experience, incentives, and visual art instructors' level of education.

> Null Hypothesis 2: There is no correlation between the composite mean for visual art instructors' attitudes toward online visual art courses, visual art instructors' technology experience with five main technologies, visual art instructors' perspectives toward online education instructor incentives, and visual art instructors' level of education.

This study also analyzed the composite mean of each of instructors' incentives and instructors' technology experience and their potential predictor relationship with the composite mean of instructors' attitudes.

> Null Hypothesis 3: The composite mean of visual art instructors' perspectives toward online education instructor incentives and visual art instructors' experience with five main technologies does not have a predicting relationship with the composite mean of visual art instructors' attitudes toward online visual art courses.

Limitations of the Study

Online courses is not a well-defined term and changes according to computer technology utilized. It is possible that participants may have had different views of what "online" means while completing the online survey.

Definition of Terms

Asynchronous Online Learning Tools: supports communication through messaging and chatrooms without real-time communication.

Communication Software: software that supports instructor and student sharing and interaction. Communication software is categorized into first generation and second generation web tools. First generation communication software includes email, chatrooms, and discussion boards which allow written communication among participants. Second generation web tools include weblogs, wikis, interactive websites, and podcasts. Second generation web tools have further sharing applicability for participant interaction.

Distance Education Courses: multiple modes of education and instruction to students who are not physically present in a traditional setting such as a classroom.

Education Social Software: sometimes called platform software or Course Management Systems (CMS), is software that may manage course instruction and communication.

Medium Richness: a variety of communication technology applications.

Online Courses: transfer of learning and skills via computer where instructor and students are not confined to a single geographical area or classroom.

Social Networking Software: connects learners through synchronous or asynchronous technology with inclusion of photo sharing, video sharing, messaging, and an informational bridge that connects learners on a common interest.

Synchronous Learning Tools: real-time communication that incorporates a notification system of online peers for real-time messaging or face-time communication.

Video Software: a visual component for lectures and demonstrations, catering to a variety of learner needs for further understanding. Video software supports visual and audio lectures and demonstrations without real-time course restraints.

Visual Arts: forms of art that are visual in nature and are created in a classroom studio including drawing, painting, printmaking, sculpture, design, crafts and photography.

Technology Opportunity

Business, communication, and education are finding both opportunities and challenges with technology advancements. Online communications support professional opportunities of many sorts (Banerjee, Madaus, & Mckeown, 2010; Education Week, 2012; Oliver, 1999; Picard, 2000; Poe, n.d.). Many educational programs are working towards online environment offerings to meet online learning needs. Allen and Seaman (2005) reviewed higher education online course offering growth to accommodate online learners. “The conclusion is that growth in online course offerings is occurring at all levels -- undergraduate and graduate as well as Continuing

Education" (Allen & Seaman, 2005, p. 6). Table 1 shows the percentage of online courses offered from institutions out of 100% of courses offered face-to-face. Allen and Seaman (2014) explain that each level of institution offers undergraduate level, graduate level, and continuing education level courses. "The 100% figure indicates that there are very small but equal numbers of Associates institutions with face-to-face and online graduate-level offerings" (Allen & Seaman, 2005, p. 6).

Table 1

Percentage of Institutions Offering Courses Online-Fall 2004

	Doctoral Institutions	Master Institutions	Baccalaureate Institutions	Associates Institutions	Specialized Institutions
Undergraduate Level	64.3%	67.6%	33.9%	77.5%	31.7%
Graduate Level	78.9%	65.8%	32.2%	100.0%	58.2%
Continuing Ed. Level	74.1%	48.5%	29.1%	70.8%	26.3%

Allen & Seaman, 2005, Sloan Consortium Report, p. 6.

Allen and Seaman (2014) found a growth from 1.6 million students participating in online education Fall 2002 to 7.1 million students participating in online education Fall 2012. Table 2 shows student online enrollment growth in degree-granting postsecondary institutions.

Table 2

Student Online Enrollment Growth in Degree-granting Postsecondary Institutions

Year	Total Enrollment	Annual Growth Rate Total Enrollment	Students Taking at Least One Online Course	Annual Growth Rate Online Enrollment	Online Enrollment as a Percent of Total Enrollment
Fall 2002	16,611,710	NA	1,602,970	NA	9.6%
Fall 2003	16,911,481	1.8%	1,971,387	23.0%	11.7%
Fall 2004	17,272,043	2.1%	2,329,783	18.2%	13.5%
Fall 2005	17,487,481	1.2%	3,180,050	36.5%	18.2%
Fall 2006	17,758,872	1.6%	3,488,381	9.7%	19.6%
Fall 2007	18,248,133	2.8%	3,938,111	12.9%	21.6%
Fall 2008	19,102,811	4.7%	4,606,353	16.9%	24.1%
Fall 2009	20,427,711	6.9%	5,579,022	21.1%	27.3%
Fall 2010	21,016,126	2.9%	6,142,280	10.1%	29.2%
Fall 2011	20,994,113	-0.1%	6,714,792	9.3%	32.0%
Fall 2012	21,253,086	1.2%	7,126,549	6.1%	33.5%

Allen & Seaman, 2014, Babson Survey Research Group, p. 15.

Online education continues to grow toward becoming part of the mainstream education in the United States. Student enrollment continues growth in meeting student learning needs (Jaschik, 2009). However, visual art online educational opportunities in the United States are minimal. Allen and Seaman (2010) reviewed online penetration by program discipline Fall

2003. They found that business program offerings had a 43% online penetration rate while Liberal Arts and Sciences, General Studies, and Humanities had a 40% online penetration. Computer and Information Science had an online penetration rate of 35.1%. Social Sciences and History had a 28.4% rate, right above education with a 24.9% penetration rate. Psychology had a 23.6% online penetration rate. All other programs combined had an online penetration rate of 36.2%.

Visual art courses are an important part of a generalized, well-rounded education (The College Board, 2005; U.S. Department of Education, 2010; Vaughn & Winner, 2000). The College Board (2010) reviewed secondary student course subjects in relation to SAT Mean Scores. The results indicated that students who engaged in arts and music scored higher on the SAT in Critical Reading, Mathematics, and Writing.

Table 3

Secondary Student Art and Music Years of Study in Relation to SAT Mean Scores

Arts and Music Years of Study	Test Takers number	SAT Mean Scores		
		Reading	Mathematics	Writing
More Than 4 Years	87,857	527	539	519
4 Years	242,564	536	539	528
3 Years	169,760	506	514	499
2 Years	270,096	501	515	493
1 Year	317,607	498	517	488
½ Year or Less	195,876	477	496	466
No Response	264,230	476	502	470
AP/Honors Courses	101,518	569	573	562

College Board, 2010, Table 18: Arts and Music, Computers

The online environment provides the opportunity for learners to engage in visual art courses. However, the online environment should be similar to the classroom environment in such a way that supports all learners and learning styles. Both the classroom and online environment need to offer a variety of learning opportunities, advancing learners in any field of their choice. Offering educational opportunities for all learning styles takes advanced planning and organizational skills in all learning environments; however, the online environment also involves understanding of technology programs that support a productive online educational environment (Gardner, 1993; Gardner, 2006; Tilton, 2003; Twigg, 2001; Volery & Lord, 2000; Webster & Hackley, 1997).

Moving forward with technology in offering online visual art courses to students will expand participation through the convenience of online education. Before visual art programs move forward in creating productive online courses, it is important to review visual art instructors' attitudes toward visual art online course offerings. Instructors' attitudes hold the key toward productive visual art courses (Gold, 2001).

Instructor experiences with educational platform technology need review in deciding what training may be necessary for full-time visual art instructors in offering productive visual art courses (Liaw et al., 2007). Without proper training instructors may struggle in organizing an enriched experience for students participating in the online environment (Brooks, 2003; Kim & Bonk, 2006; Stammen & Schmidt, 2001; Twigg, 2001). This research literature in online education suggested a possible relation with technology support and faculty attitudes toward online education (Liaw et al., 2007;Twigg, 2001; Webster & Hackley, 1997).

CHAPTER 2. LITERATURE REVIEW

Introduction

The purpose of this quantitative study is to review accredited university visual art instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main educational technologies in accredited higher education institutions in the United States.

Research Questions

1. What are visual art instructors' attitudes toward online visual art courses?
2. What are visual art instructors' perspectives toward online education instructor incentives?
3. Do visual art instructors have experience with five main technologies that support an online classroom? Categories include:
    A. Education Social Software
    B. Social Networking Software
    C. Communication Software,
    D. Video Software
    E. Electronic Grading Software

This study also compared means between the instructors' types of institution employed independent variable and the three dependent variables which include instructors' attitudes toward online visual art courses (attitude), instructors' perspectives toward online education instructor incentives (incentives), and instructors' experience with five main technologies (experience). It was hypothesized that instructors' types of institution employed

will not have a significant difference with each of the three dependent variables which include instructors' attitudes, incentives, and experience.

> Null Hypothesis 1: There is not a significant difference between the composite mean of the independent variable including instructors' types of institution employed and each of the composite mean of the dependent variables including instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main technologies.

This study also examined correlation between the visual art instructors' attitudes, experience, incentives, and visual art instructors' levels of education.

> Null Hypothesis 2: There is no correlation between the composite mean of each variable including visual art instructors' attitudes toward online visual art courses, visual art instructors' technology experience with five main technologies, visual art instructors' perspectives toward online education instructor incentives, and visual art instructors' levels of education.

This study also analyzed the composite mean of each of two independent predictor variables including instructors' incentives and instructors' technology experience and the composite mean of the dependent variable including instructors' attitudes.

> Null Hypothesis 3: The composite mean of two independent variables including visual art instructors' perspectives toward online education instructors' incentives and visual art instructors' experience with five main technologies does not predict the composite mean of the dependent variable including visual art instructors' attitudes toward online visual art courses.

Technology and Education

Technology has become part of our society. Kimble (1999) explained that technology is used throughout the world for many different personal, professional, and business related efforts. Technology has led to personal gains through online information access in a variety of areas including social, medical, and educational aspects (Borgman, 2000; D'Alessandro & Dosa, 2001).

As our society becomes more fluent with technology, more and more we will need to advance with technology integration in education (Kimble, 1999; Takacs, Reed, Wells, and Dombrowski, 1999). Kimble (1999) highlighted the importance of continued efforts in education to prepare learners for a technological world. Takacs et al., (1999) explained that as technology advances in schools, teachers need access to multimedia instructional models. Greenberg (1998) connected technologies with education in reaching learners from a distance and reviewing instructional models for instructor planning in distance education.

Institutions are able to meet under-served populations and also meet varied individual schedules by incorporating distance technology for educational needs. As universities compete for student numbers and public funding, they transform their educational offerings in meeting student needs. "The public's growing acceptance of the value of lifelong learning has fuelled an increased demand for higher education service among people outside the traditional 18-24 age range" (Volery& Lord, 2000, p. 217). Volery and Lord (2000) suggested that distance education may be thought of as the wave of the future.

Beaudoin (2002) suggested that building partnerships with for-profit companies may be an important aspect for growth in networking, providing a global aspect for education growth. A global industry through networking will ensure that education is providing global entities,

sustaining and promoting distance educational needs for the global market. Institutions that do not progress towards distance education offerings will have "significant competitive disadvantage going into the next century" (Haynes & Pouraghabaher, 1997, p.61).

Defining Distance Education

Teaster and Blieszner (1999) explained that distance education is differentiated from traditional learning by the characteristic that "the teacher and the learner are separate in space and possibly time" (p.741). Distance education has been implemented for years through a variety of formats in reaching learners. Valentine (2002) listed Europe as offering the first distance learning through correspondence courses over 100 years ago. The International Society for Technology in Education (ISTE), the National Foundation for the Improvement of Education (NFIE), the National Education Association (NEA), and Bill Gates(CEO of Microsoft Corporation) collaborated in *Learning Communities: Findings from the Road Ahead Program,* and explained that correspondence education has long been in use to serve students from distant locations. The Road Ahead Program defined the new form of distance education (Online Education) as that which consists of "computers and computer connectivity bringing new learning opportunities to students at school, home, and elsewhere ((Bielefeldt, Moursund, Underwood, & Underwood, 1999, p.3). Interest in online distance education has increased for personal interest, professional needs, and student course access (Project Tomorrow & Blackboard Inc., 2011).

Online Distance Education Technologies

Online distance education consists of a variety of technologies and may utilize technology that provides audio, video, graphics, and other sources to provide communication for learning (Webster & Hackley, 1997). Online distance education technologies may support an

interactive environment where the student engages in learning environment. The impact of technology in education is steadily transforming distance education. Webster and Hackley (1997) stressed the importance of technology characteristics that influence technology-mediated distance learning and focuses on three main influences. These influences include technology reliability, quality, and medium richness. Reliability of technology is crucial in that distance education courses run smoothly and work properly. The quality of technology focuses on blended technologies that provide functional communication. Last but not least, medium-richness of technology provides distance education courses with a variety of technologies to effectively teach and learn course material through audio, visual, and communication platforms.

Literature suggested a variety of technology software included in a blended distance education course. An online distance education course may include, but not be limited to, five basic software technologies: education social software, social networking software, communication software, video software, and electronic grading software (Abromitis, 2002; Anderson, 2005; Beaudin, 1990; Beldarrain, 2006; Boyd, 2006; Dede, 1996; Downes, 2001; Foertsch, Moses, Strikwerda, & Litzkow, 2002; Hiltz & Turoff, 1993; Jones, Gohen, Dub, Leyvetta, Kastens, & Amanor-Boadu, 2007; LeNoue, 2012; Levin, 2004; McIsaak & Gunawardena, 1996; McKimmy & Leong, 2004)

Education social software, sometimes called platform software or course management systems (CMS), is software that may manage course instruction and communication. Education social software (ESS) provides an online environment that connects distance learning in a learning community by incorporating multi-format instruction in a one-software format. Multi-format instruction may coincide with social networking software, providing a home-based

learning environment for instructor and learner connectivity (Abromitis, 2002; Anderson, 2005, Cooper, 2002; Levin, 2004; Ubon & Kimble, 2004; Wikipedia, 2013).

There are two types of education social software, synchronous and asynchronous. First Class System, WebCT, and Moodle are educational social software that may be synchronous ESS, incorporating a notification system of online peers for real-time messaging. ESS may also be asynchronous software, allowing learners communication through messaging and chatrooms without real-time communication (Anderson, 2005; Dede, 1996; Fernandes, 2009; Moodle Trust, 2011: Ubon & Kimble, 2004). The choice of ESS depends on the course learning needs. Research regarding education social software highlights the importance of "social presence" for learner connectivity. Synchronous and asynchronous ESS provides multiple options for communication and connectivity, offering students "social presence" support (Dede, 1996; McIssak & Gunawardena, 1996; Swan, 2002; Ubon & Kimble, 2004).

Social networking software may be an added component to education social software to enhance learner connectivity and develop a sense of community through active participation. social networking software connects learners through synchronous or asynchronous technology with inclusion of photo sharing, video sharing, messaging, and an informational bridge that connects learners on common interest (Dede, 1996; LeNoue, 2012; Swan, 2002; Ubon & Kimble, 2004).

There is a variety of social networking software including Ning, elgg, Facebook, MySpace, CyWorld, Bebo, and more. Since 1997 when SixDegrees.com originated, social networking software began its competition for user-friendly environments that offer the user connectivity with other online participants. Social networking software was looked at in new ways, ever-evolving to meet the needs of the participants. Social networking software intended

for participant connectivity was a new endeavor for education and industry. Education incorporates social networking software to connect learners for sharing ideas and advancing knowledge. A timeline of social networking software with date of origin is shown in Figure 1.

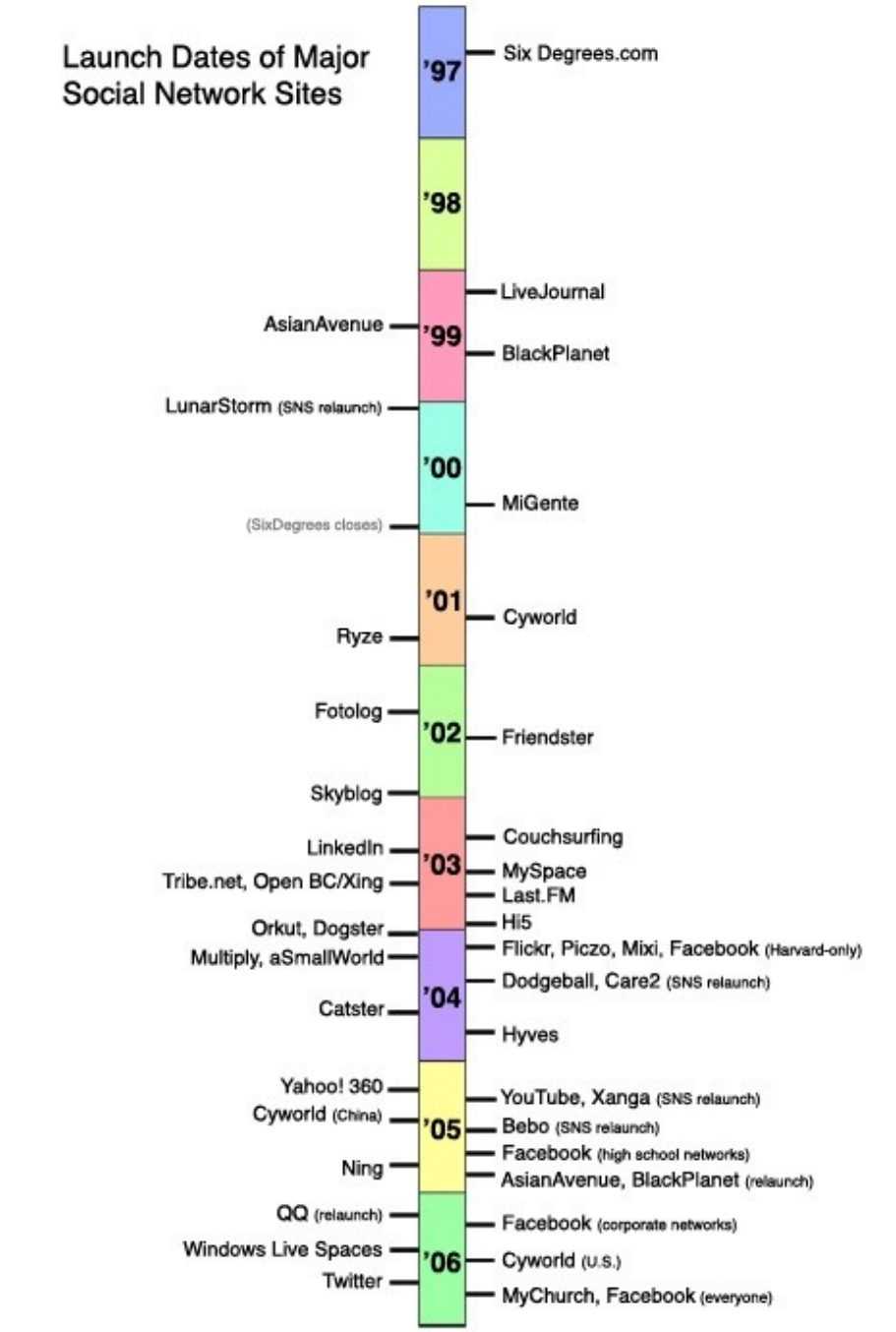

Figure 1. Timeline of Launch Dates of Many Major SNSs and Dates When Community Sites Re-launched with SNS features by Boyd & Ellison, 2007, Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*(1), p. 5.

There are many types of social networking software, however, for educational purposes it may be necessary to differentiate open social software and closed social software. Open social software allows all participants to add friends and allow them to join the online community. Facebook and MySpace are examples of open social software. Ning is an example that may be used as closed social software and is created by the account holder. The account holder becomes the administrator of the Ning site, choosing participants in the community. The administrator is the only participant that may allow or block participants in the community, restraining participants joining without authority under administrator program functions (Boyd & Ellison, 2007; Ning, 2012; Wiki, 2012).

Social networking software connects individuals for collaboration regarding similar interests, motivating participation. Beldarrain (2006) stated "The versatility of social software and other collaboration tools available today support constructivist environments that seek to motivate, cultivate, and meet the needs of the 21st-century learner" (p. 140).

Communication Software is another addition to Education Social Software that may be included in the platform ESS or incorporated as additional technology software to enhance participants learning. There are many formats included in communication software which is categorized into first generation and second generation web tools. First generation communication software is content that a person can read and includes email, chatrooms, and discussion boards which allow written communication among participants. Second generation web tools have user-created content with user interaction and includes weblogs, wikis, interactive websites, and podcasts. Second generation web tools have further sharing applicability for participant interaction. These web tools connect synchronous group activity for learning (Beldarrain, 2006; Pascopella, 2008). Podcasting is a second generation asynchronous

technology with a combination of both audio and video (Beldarrain, 2006). Beldarrain (2006) explained that "even though podcasting is an asynchronous activity, it provides students with information that will help them feel connected to the learning community" (p. 141).

Technology advancements have progressed from separated tools toward merging applications, supporting connectivity from any place. Both first and second generation communication software support learner connectivity in a variety of formats. Web tools provide a communicative atmosphere for information (Beaudin, 1990; Beldarrain, 2006; Jones et al., 2007; McIsaak & Gunawardena, 1996; Pascopella, 2008).

Video software is a visual component for lectures and demonstrations, catering to a variety of learner needs for further understanding. Video software supports visual and audio lectures and demonstrations without real-time course restraints. Face-to-face course lectures are presented as a one-time flow of information. Foertsch et al. (2002) stated that the "problem with lectures has more to do with their timing than their content or the way that content is conveyed" (p.1). Video software provides the learner a visual and audio lecture that may be viewed multiple times and reviewed by sections of the video segment for further understanding or further studying of information. Another attribute video software has is that it allows the learner to view the information at any time and/or any place, meeting the learner's schedule.

Technology enhancements have progressed video software to meet the needs of the viewer. Tegrity, Youtube, vlogs, and eTeach are a few examples of web streaming video software that may be incorporated in blended distance education courses. Video software is similar to other communication software in that it may be an attribute of Education Social Software or it may be an additional component in meeting learner needs in distance education

courses (Beldarrain, 2006; Dede, 1996; Fernandes, 2009; Foertsch et al., 2002; Hiltz & Turoff, 1993; Jones et al., 2007; McKimmy & Leong,2004).

An online grading system is another technology component necessary for effective online distance technology. An electronic grade book provides an online storage system for participants' grades. Electronic grade book software is pre-written for grading purposes, an organization of evaluation. The administrator, or instructor, utilizes data entry to add participants in the grading system. The instructor utilizes data entry to add assignment titles, assignment description, points per assignments, grade weight per assignment, and overall percentage. The grading system provides an overview of assignment and grade information for both the instructor and each learner entered in the system. The online grading system is accessible online for instructor and students to access at any time or any place, similar to other online technologies supporting distance education. Each participant is administered an online login and password to review grades. The administrator is given administrator functions for data entry purposes. Some examples of online grade book software include Aspen, Spiral Universe, Quick-Schools, and GPA Teacher. A few examples of online gradebooks incorporated in platform technology include WebCT, Blackboard, and Moodle.

Literature suggested that the online gradebook supports prompt feedback for student review. Instructors are encouraged to provide prompt feedback, encouraging student engagement and understanding of assignment evaluation (Carliner, 2005; DeMario & Heinze, 2001; Hiltz, 1990; Hiltz, 1997; Hiltz & Turoff, 1993; Jupiter Systems, 2004-12; Pearson Education Incorporation, 2011-12; Stern, 2004; Wikipedia, 2011).

As technology enhances, a variety of technology formats may support a variety of online distance education opportunities. With technology advancements and educational opportunities,

the US Department of Education (2010) explained that enrollment in distance learning courses doubled from 1995 to 1998 and was expected to continue in growth (Wood, 2001). As it continued to grow, technology exposed itself to a variety of distance education opportunities including web facilitated, blended or hybrid courses, and online (Allen & Seaman, 2007). The 2014 Sloan Consortium distance education survey reported that 7.1 million students were taking at least one online course during the Fall 2012 term (Allen & Seaman, 2014). Allen and Seaman (2014) explained that students participating in online distance education in 2012 represent 33.5 percent of total enrollments in higher education. With continuing increase in distance learning, it is increasingly important to understand the impact of technologies and its educational change (Webster & Hackley, 1997).

Online Distance Education Software Environments

Mehlenbacker, Miller, Covington, and Larson (2000) explained that educational changes bring about the debate of effective distance education. Some educators perceive distance education inadequate despite research that suggests no significant difference between distance education and traditional education (Hirumi, 2005; Twigg, 2001). Technology advancement is fundamental in supporting a variety of educational opportunities; however, these advancements do not advance teacher and learner effectiveness (Valentine, 2002). Distance education courses are similar to traditional courses in that they may be done well or not so well, depending on the characteristics and pre-planning of the course. Some researchers explained that distance education and traditional education are similar in student performance and education effectiveness if done properly (Stella & Gnanam, 2004). Hirschheim (2005) indicated that the same material that is presented in the traditional classroom may be presented in an online classroom in a different format. Skeptics may question whether students learn the same amount

of information at equal quality as others argue that course material in a virtual environment may be superior of that of the traditional classroom (Cooper, 2001; Hiltz, 1997; O'Malley, 1999). The United States Department of Education (2010) explained that computer-based course materials vary in effectiveness.

Taylor (1995) stated "there has been a significant expansion in the availability of a wide range of technologies with the potential to improve the quality of teaching and learning in higher education" (p. 1). Volery and Lord (2000) suggested that an effective learning environment would consist of blending choice technologies that provide the learner with a variety of active learning activities rather than passive. Webster and Hackley (1997) found that instructors who incorporated a more interactive teaching style positively affected student learning outcomes, which also supported student involvement, participation, cognitive engagement, attitudes toward the technology, and also attitudes toward distance learning.

Stella and Gnanam (2004) suggested that learning through distance education courses increases responsibility of the student as the student directs his or her learning and the direction of the learning process. It is important to be focused on the learning outcome for quality assurance (Stella & Gnanam, 2004). Alavi and colleagues (1995) suggested that learning through distance education should be active between instructor and students, fully involving students to learn material.

Haynes and Pouraghabagher (1997) stressed the importance of coursework design and suggested that "deliberate care must be given to mitigate potentially passive student interaction" (p. 60). Blended technologies, with inclusion of a learner-centered environment, offers the active learner a variety of activities and interaction that engage the learner, supporting the quality of the learning environment (Volery & Lord, 2000). Stella and Gnanam (2004) defined this concept as

"Distributed Learning". Distributed learning programs should then entail all of these characters but also exist "on a continuum from rather traditional, teacher-led distance learning programs on the one end (e.g., faculty teaching via television, faculty putting their courses on the Web, faculty leading computer-conference-based seminars) to more innovative, learner-centered programs that rely on a combination of high-quality, interactive learningware, asynchronous and synchronous conversations, and individualized mentoring on the other" (Twigg, 2001, p.9). A distributed learning program is learner-centered for a variety of learners and entails a variety of technologies for communication and interaction. Distributed learning is one that may be accessed in the campus or away from campus. It may also be a combination of on-campus or off-campus, along with blended technologies to offer the technology platform to functionally communicate and learn together as a community (Stella & Gnanam, 2004; Twigg, 2001).

Burke and Chidambaram (1996) explained that richer interaction environments do support more interactivity and communication effectiveness compared to an environment that is more restricted. This study stresses the importance of bandwidth and the technologies it supports to offer an interactive and communicative learning environment.

Volery and Lord (2000) suggested the importance of technology "ease of use, navigation, cognitive load, mapping, screen design, information presentation, aesthetics, and overall functionality" (p. 219). Online distance education instructors need to understand how to manipulate technologies to design distance courses for learner ease of use and distributed learning. However, as technology progresses, instructors need continual training to understand these advances and or reforms (Carter, 2001; Volery & Lord, 2000). Stewart, Keegan, and Holmberg (1988) suggested that institutions planning to offer online distance education courses

should develop a strategic plan and infrastructure. Institutional strategic planning should include program development, ownership, and governance as well as faculty roles.

Carter (2001) focused on the planning on part of the department that offers online distance education, the instructor, and the technology staff involved in technical support. An important aspect for pre-planning an online distance education course includes faculty training. Faculty training needs to include interactive teaching techniques, which equally distribute communication among all distance sites. It is also important for the technology staff to provide an online distance education teaching format that includes a variety of interactive and communication technologies, supporting interactive teaching styles.

A few more important aspects that an instructor should pre-plan for online distance education includes adaptation of instructional material to distance education technologies, learning to be prompt with communication methods for both discussion and grades, and also providing technology support. For an instructor to be capable of providing these education aspects, an instructor must understand and adequately use all technology aspects. Faculty training is a key aspect for quality online distance education (Carter, 2001).

A solid distributed learning course offers students access to campus resources such as easily accessible library resources, counseling, and other full-campus options to fully reach students' needs. Distance education course offerings and extended services should be similar to that of on-campus resources including technology support. (Stella & Gnanam, 2004)

A pilot study by Haynes and Pouraghabagher (1997) found that faculty easily adapted to technology-intensive teaching environments with appropriate technology support. However, it is suggested that when using the web for delivering coursework it is complex, which entails additional training for faculty in a variety of technologies.

Online Art Education

The growth in distance education is continuing throughout higher education institutions. Institutions have embraced distance education and student enrollments are rising (Allen & Seaman, 2007; Kim & Bonk, 2006; Wood, 2001).

In online education, distance technologies meet non-traditional student needs through time and space convenience, altering the need to be in one geological area at a specific time (Beaudoin, 2002; Valentine, 2002; Whitesel, 1998). Distance technology education supports access for students through greater flexibility of participation in courses at anytime and anyplace. The convenience of distance education also extends beyond the immediate geographical area, extending across national boundaries. International distance education has grown toward incorporating twinning arrangements in which a course or even a whole degree may be obtained through more than one country by participating in institutional joint programs. The flexibilities of distance education technologies are providing a wide format of student opportunities (Stella & Gnanam, 2004).

Technology-mediated online education provides the opportunity for engagement in a wide variety of education areas, offering learners a well-rounded curriculum (Academy of Art, 2012; Bugbee, 2008). Secretary Arne Duncan, supported by the Obama administration, stressed the importance of a well-rounded education (U.S. Department of Education, 2010). “The truth is that, in the information age, a well-rounded curriculum is not a luxury but a necessity” (Duncan, U.S. Department of Education, 2010, p.1). In the *Well-Rounded Curriculum* speech delivered at the Arts Education Partnership National Forum, Secretary Arne Duncan suggests the importance of a well-rounded education including arts and humanities. Duncan also expressed First Lady and President Obama’s beliefs about art education as he stated that they believe “strongly that

arts education is essential for building innovative thinkers who will be our nation's leaders for tomorrow" (U.S. Department of Education, 2010, p.3).

Online visual art courses will provide the opportunity for learners to engage in visual art courses and share expertise without limitation of geographical constraints, offering learners options in obtaining a well-rounded education (Academy of Art, 2012; Beaudoin, 2002; Bugbee, 2008; U.S. Department of Education, 2010). Learning facilities will benefit in obtaining higher student numbers and share of instructor expenses (Haynes & Pouraghabaher, 2997; Volery & Lord, 2000). However, minimal online visual art courses are offered through accredited universities in the United States (Allen & Seaman, 2010). Visual art courses incorporate hands-on learning through creating or producing artwork (Butterfly Edufields, 2010; Davis, 2008; Dorn, 1999; North Dakota Department of Public Instruction, 2000; Wright, 1997). It is necessary to review distance education technologies and whether these technologies will provide a medium-rich environment that supports the visual art hands-on learning environment.

Liaw, Hauang, and Chen (2007) suggested that as distance education technologies are revolutionizing education, they also bring about challenges that need to be addressed for quality teaching and learning. A variety of education technology platforms is necessary in providing a productive learning environment (Alavi & Colleagues, 1995; Burke & Chidambaram, 1996; Haynes & Pouraghabagher 1997; Twigg, 2001; Volery & Lord, 2000; Webster & Hackley, 1997). Research suggested that the online environment may have a variety of positive entities in providing a medium-rich environment, but the key to a productive learning environment is an effective instructor (Stella & Gnanam, 2004; Volery & Lord, 2000; Whitesel, 1998).

Instructor training and support in a media-rich teaching and learning environment is a critical component in supporting the quality of online distance education (Brooks, 2003; Kim &

Bonk, 2006; Stammen & Schimdt, 2001; Twigg, 2001). Stammen and Schmidt (2001) explained that media or technology services need to provide rich resources for educational aspects. Engagement in multimedia instructional development may be necessary in training teachers to develop instructional models that meet their multimedia needs, possibly supporting teachers in increasing multimedia instruction (Bates, 1999; Bennet, Priest, & Macpherson, 1999; Brooks, 2003; Stammen & Schmidt, 2001).

Instructor multimedia training will not be sufficient as a one-time training model. Instructors need continuing technology training to facilitate and utilize evolving advancements in technology (Kimble, 1999; Takacs, Reed, Weels, & Dombrowski, 1999; West Valley College, 2010; Yoakam, 2001).

Stammen and Schmidt (2001) explained that using electronic media as a course tool involves more pedagogical responsibilities than basic classroom instruction. Webster and Hackley (1997) found that instructors needed more time planning for technology delivered courses. It is suggested that these factors could lead to negative attitudes toward teaching online distance education courses (Betts, 1998; Carter, 2001; Lee, 2002; Webster and Hackley, 1997).

Many research studies suggested "no significant difference" between traditional educational learning and distance educational learning (Carr, 2000; Rivera, McAlister, & Rice, 2002.; Russell, 1999; Schoech, 2000; Sonner, 1999; Spooner, Jordan, Algozzine, & Spooner, 1999; Twigg, 2001). Some of these studies included suggestions that tailor course success such as teacher attitudes and also teacher technology training. However, to move beyond "no significance difference" and advance towards effective distance educational learning, online distance educational focus needs to shift from comparison to effective transfer of information. Transfer of information focuses on student learning needs and incorporates a variety of

technologies in meeting learning needs. To advance online distance education learning it is important to keep in mind that classes do not consist of a homogeneous population, but rather individuals with a variety of learning needs (Gardner, 1993; Gardner, 2006; Tilton, 2003; Twigg, 2001; Willis & Dickinson, 1997).

Incorporating a variety of instructional aspects is important in focusing on differentiated learning and meeting student learning needs. Twigg (2001) explained that teachers need professional time, training, and creativity to collate learning needs and technology. This will support delivery of information in a variety of learning opportunities to align with student learning needs.

A variety of instruction is important in distance learning as well as a variety of communication techniques. Brooks (2003) explained that instructors need to adapt new communication methods for teaching. Instructor-student communication in distance learning is necessary for teaching, learning, feedback, and assessment. This is different than classroom instruction where communicational needs are met in the immediacy of the classroom and assessment is visual and immediate. Haverila (2012) stated that "e-learning environments are collaborative in nature" (sec. 16). Social media technology provides opportunity for collaboration in the education environment, however, technologies that support interactive communication should be reviewed for further collaboration and learning in the distance education learning environment (Anderson, 2012; Beldarrain, 2006; Tam, 2000).

Online distance education is an important entity for universities. Some advantages for universities include expanding access for training needs, alleviate capacity constraints, sharing of costs to decrease public funding, and sharing of expertise (Volery & Lord, 2000; Webster & Hackley, 1997).

Technology-mediated online education provides the opportunity for engagement in a wide variety of education areas, offering learners a well-rounded curriculum (Academy of Art, 2012; Bringham, Conner, & Pink, 2010; Bugbee, 2008). Including visual art in the curriculum supports benefits in developing a wide variety of skills including critical thinking skills, complex thinking skills, spatial reasoning, critical analysis, and abstract thought to list a few. The inclusion of fine and visual arts in the curriculum also supports improvement in student reading, writing, and math. In relation to the more mature level the arts support benefits in learning qualitative relationships, in learning multiple solutions for problems, in celebrating multiple perspectives, and in learning complex forms of problem-solving (Eisner, n.d.; Kronkosky Charitable Foundation, 2011; Walker, 2006).

There are multiple instructional strategies for teachers to incorporate to offer effective distance education courses. When planning for distance education courses, teachers must have education training, technology training, technology support, administration support, creativity, and time to plan for optimal learning. (Bates, 1998; Bennet, Priest, & Macpherson, 1999; Betts, 1998; Brooks, 2003; Carter, 2001; Lee, 2002; Twigg, 2001)

Research suggested the importance in reviewing instructor attitudes toward online course offerings. Instructor attitude withholds the key towards productive online courses (Brooks, 2003; Twigg, 2001; Whitesel, 1998). Generalizing this concept to visual art online courses, visual art instructors' attitudes toward online course offerings withhold the key for understanding the visual art online environment. To move beyond "no significant difference" we must ask ourselves if teachers are prepared for online learning and what their attitudes are toward online education learning.

It is important to understand visual art instructor attitudes and also instructor technology experiences in preparing instructors towards moving forward with technology and online fine art course offerings. Research regarding the online learning environment is extensive; however, research regarding the online visual art learning environment is minimal. Liaw, Huang, and Chen (2007) explained the need for examination of both instructor role and also student attitudes in online distance education, scoping the future of distance education and designing distance education to meet both instructor and student needs. Further investigation of visual art faculty attitudes and technology experience is necessary in laying a foundation for understanding the online visual art environment and for providing insight of faculty needs for the online visual art learning environment.

Faculty Support and Incentives

Gold (2001) explained that successful educational technological reform requires the support of the faculty. "Even though technology may change the way students learn, it will have no impact without teacher support."(Gold, 2001, p. 36) The future of distance education courses lies within the support of student attitudes toward distance education courses, which is affected by instructor attitudes toward teaching and learning through distance education technologies (Cornell & Martin, 1997; Rivera et al., 2002; Webster & Hackley, 1997; Willis & Dickinson, 1997.) Volery and Lord (2000) found that a key success factor for education learning outcomes reflected instructor attitude toward distributed distance education.

Webster and Hackley (1997) found that instructor attitudes toward technology and control over the technology affected student learning outcomes. Instructors with positive attitudes toward technology related positively to student learning outcomes. Instructors with less

patience for the technology influenced student attitudes toward technology and teacher limitations.

To promote positive learning outcomes it is important for administration and faculty to define learning outcomes and how technology may support learning (Twigg, 2001). Whitesel (1998) stated that "technology does not teach students; effective teachers do" (p.2). Members of the Pew Learning and Technology Program suggested a high-level of agreement of five basic structures for effective distance education including institution, program, course, student support, and faculty support (Twigg, 2001). Valentine (2002) explained that administration attitudes influence faculty attitudes toward engaging in distance education. Brook (2003) explained that administration views toward distance education value affects instructor outlook. Hirumi (2005) suggested that "educators feel overwhelmed with the prospects of teaching online" due to the extended attained knowledge necessary in designing effective courses through distance education (p. 1). A national survey of higher education faculty attitudes toward distance education by Clark (1993) found that faculty had a positive attitude regarding distance learning in general but expressed negative attitudes toward their individual use of distance teaching or learning. Liaw et al., (2007) surveyed instructor and learner attitudes toward e-learning. The results indicated that "instructors have highly positive attitudes toward e-learning that included perceived self-efficacy, enjoyment, usefulness, and behavioral intention of use", however "system satisfaction and multimedia instruction are vital factors" in instructor perceived attitude toward quality distance education (p.1076).

Studies by Wang, MacArthur, and Crosby (2003) and Humphries (2008) explained that lack of faculty support may be due to lack of faculty training and preparation. A study by Lee (2002) suggested that there is a difference of perception between faculty and administrators

regarding the need for faculty development regarding distance teaching and learning. Lee's survey conducted through the World Wide Web found a lack of instructional support for distance instructors in higher education institutions. This study also conveyed instructor concerns in receiving instructional support and training, providing a base structure for teaching distance education. Lee (2002) revealed the frustration of faculty when institutions obtain cutting edge technology without focusing on the need for faculty training in utilizing the technology for online distance education. Instructional support varied by departments and colleges, lacking consistent instructional support for distance educators.

Betts (1998) found that inhibiting factors such as training and incentives would support faculty participation in online education. Carter (2001) suggested that multi-media technology takes more preparation time for successful delivery. Engaging in this time-consuming preparation, teachers must be committed to reaching the student's needs through a variety of distance support systems. Faculty has commented regarding the heavy work load that comes with preparing and designing coursework through distance education technologies. One faculty member mentioned that preparing and designing distance education courses "took one and a half times more than the traditional counterpart" (Lee, 2002, p. 31). A study by Webster and Hackley (1997) also revealed that despite the fact that more time is needed to effectively prepare for distance education courses, instructors did not receive additional compensation for the extra preparation time.

Research suggests that online distance instructors incorporating a variety of distance technologies need instructional support but also more incentives regarding time-consuming preparation for distance education (Betts, 1998; Carter, 2001; Lee, 2002; Webster & Hackley, 1997).

Betts (1998) engaged in a mixed study, providing a survey including both quantitative and qualitative survey items regarding faculty education influences. Participants included faculty and deans at George Washington University. This study provided insight regarding faculty influences in online teaching participation at the postsecondary education level and revealed the importance of administration support for faculty participation. A study by Humphries (2008) provided insight regarding needs assessment towards productive online and hybrid learning environments. Participants for this study included faculty teaching online and hybrid courses for the MacEwan School of Business in Canada. Utilizing a survey and also focus groups, Humphries found the need for faculty support and training. The second emerging theme Humphries found was the need for consistency and fairness in remuneration of faculty. (Humphries, 2008)

Incentives for instructors to actively engage in online education may include release time, professional development in an array of areas, and also a reduction in course load per semester to allow prominent time focusing on designing creative courses that serve a diverse learning community (Twigg, 2001). Stewart et al., (1988) suggested that the issue of faculty compensation be agreed upon previous to developing courses and programs, diminishing issues that affect the quality of distance education.

Summary

As technology advances, business, communication, and education opportunities arise. Online communications support professional opportunities of many sorts. Many educational programs are working towards online environment offerings. Multiple schools have already taken advantage of distance education in reaching learners needs (Hanna, 1998; Kimble, 1999; Valentine, 2002).

Online distance education is not a new endeavor in education. However, online education may now be supported through a variety of technologies to serve learners at any time and any place. (Bielefeldt et al., 1999; Valentine, 2002). The US Department of Education (2001) explained that enrollment in distance learning courses doubled from 1995 to 1998 and was expected to continue in growth (Wood, 2001). However, visual art educational opportunities through accredited universities in the United States are minimal (Allen & Seaman, 2008; Allen and Seaman, 2010).

Visual art courses are an important part of a generalized, well-rounded education (U.S. Department of Education, 2010; Vaughn & Winner, 2000). As a classroom environment supports a variety of learning styles, the online environment must also support learners. Does a media-rich learning environment provide a hands-on learning environment for visual art courses (Butterfly Edufields, 2010; Davis, 2008; Dorn, 1999; North Dakota Department of Public Instruction, 2000; Wright, 1997)? Both the classroom and online environment need to offer a variety of learning opportunities, advancing learners in any field of their choice. Offering educational opportunities for all learning styles takes advanced planning and organization skills in all learning environments. However, the online environment also involves understanding of technology programs that support a productive online educational environment (Brooks, 2003; Gardner, 1993; Gardner, 2006; Tam, 2000; Tilton, 2003; Twigg, 2001).

Moving forward with technology and offering online visual art courses to students will enhance participation in the convenience of online education. Before visual art programs move forward in creating productive online courses, it is important to review visual art instructor attitudes toward visual art online course offerings. Instructor attitude holds the key toward productive visual art courses (Clark, 1993; Gold, 2001; Valentine, 2002).

Literature suggested it necessary in reviewing online distance education instructor incentives in regards to the need for administration support, professional development, and release time for proper teaching preparation. It is also suggested that online distance education instructors may need additional compensation for additional workload and that the benefits and compensation should be consistent among distance education faculty (Betts, 1998; Brooks, 2003; Humphries, 2008; O'Quinn & Michael, 2002; Twigg, 2001; Valentine, 2002; Wang, MacArthur, & Crosby, 2003).

Literature investigation focusing on visual art online learning environment concludes a conceptual framework for this research study. Literature suggests three focus topics, instructor attitude, instructor perspectives of incentives, and technology experience, necessary in laying a foundation for understanding the online visual art environment and providing insight of faculty needs for the online visual art learning environment.

Conceptual Framework Ascertained from Literature

Gay and Airasian (1996) suggested that survey items should relate directly with the topic through the relevance of the literature. These data which constitute a conceptual framework ascertained for the purpose of this study have been derived and aligned through the research sources of this literature review.

The research sources aligned with the first research question "What are visual art instructors' attitudes toward online visual art courses?" include Brooks, 2003; Cornell and Martin, 1997; Gold, 2001; Hirumi, 2005; Rivera et al, 2002; Twigg, 2001; Valentine, 2002; Volery, 2002; Webster and Hackley, 1997; Whitesel, 1998; and Willis and Dickinson, 1997. The first research item categories include: distance education learning environment productivity, material learning, distance education interest, hands-on learning, and student/peer cooperation.

1. Survey item number one (IA1. The online environment supports a positive learning environment for online visual art courses.) derived from the research sources including: Brooks, 2003; Carr, 2000; Hirumi, 2005; Rivere et al., 2002; Russell, 1999; Schoech, 2000; Sonner, 1999; Spooner et al., 1999; Stella and Gnanam, 2004; Twigg, 2001; Volery and Lord, 2000; Webster and Hackley, 1997; Whitesel, 1998.
2. Survey item number two (IA2. Students are able to learn the same material in an online learning environment as in a classroom environment.) derived from the research sources including: Carr, 2000; Cooper, 2001; Hiltz, 1997; Hirschheim, 2005; Hirumi, 2005; O'Malley, 1999; Rivere et al., 2002; Schoech, 2000; Sonner, 1999; Spooner et al., 1999; Stella and Gnanam, 2004; Twigg, 2001; U.S. Department of Education, 2010.
3. Survey item number three (IA3. I would be interested in learning more regarding online visual art courses.) derived from the research sources including: Brooks, 2003; Gold, 2001; Haverila, 2012; Project Tomorrow, 2010; Twigg, 2001; Whitesel, 1998.
4. Survey item number four (IA4.The online environment supports hands-on learning that a visual art classroom does.) derived from the research sources including: Butterfly Edufields, 2010; Davis, 2008; Dorn, 1999; North Dakota Department of Public Instruction, 2000; Wright, 1997.
5. Survey item number five (IA5. The online classroom environment supports student/peer collaboration.) derived from the research sources including: Alavi, Wheeler, and Valacich, 1995; Anderson, 2012; Beaudin, 1990; Beldarrain, 2006; Burke & Chidambaram, 1996; Hackley, 1997; Haverila, 2012; Haynes and Pouraghabagher, 1997; Hiltz, 1990; Hiltz, 1997; Hiltz & Turoff, 1993; Jones et al.,

2007; McIsaak and Gunawrdena, 1996; Pascopella, 2008; Seward et al., 1998; Twigg, 2001; Volery and Lord, 2000; Webster and Hackley, 1997.

The second research question "What are visual art instructors' perspectives toward online education instructor incentives?" derived from the research sources including Betts, 1988; Humphries, 2008; Stewart et al., 1988; Twigg, 2001. The second research item categories include: administration support, professional development, release time, additional compensation, and consistency among instructors.

1. Survey item number six (IP1. Administration support is important for distance education faculty participation.) derived from the research sources including: Brooks, 2003 and Valentine, 2002.
2. Survey item number seven (IP2. Professional development is necessary for distance art educators.) derived from the research sources including: Brooks, 2003; Kim and Bonk, 2006; Humphries, 2008; Lee, 2002; Stammen and Schmidt, 2001; Twigg, 2001; Wang et all., 2003.
3. Survey item number eight (IP3. Distance art educators need release time for proper teaching preparation.) derived from the research sources including: Betts, 1998; Carter, 2001; Humphries, 2008; Lee, 2002; Webster and Hackley, 1997.
4. Survey item number nine (IP4. Distance art educators should receive additional compensation.) derived from the research sources including: O'Quinn and Michael, 2002; Stewart et al., 1998; Webster and Hackley, 1997.
5. Survey item number ten (IP5. Incentives need to be consistent among distance education faculty.) derived from the research sources including: Lee, 2002; Humphries, 2008; Stewart et al., 1988.

The third research question "Do visual art instructors have experience with five main technologies that support an online classroom?" categories include education social software, social networking software, communication software, video software, and electronic grading software?" derived from a combination of technology research sources as listed below:

1. Survey item number eleven (IT1. I have experience with Education Social Software programs such as Blackboard, or Moodle. If other please list:_____.) derived from the research sources including: Abromitis, 2002; Anderson, 2005, Cooper, 2002; Dede, 1996; Fernandes, 2009; Levin, 2004; McIssak and Gunawardena, 1996; Swan, 2002; Ubon and Kimble, 2004; Wikipedia, 2007.
2. Survey item number twelve (IT2. I have experience with social networking software such as Ning or Facebook in the classroom. If other please list:_____.) derived from the research sources including: Beldarrain, 2006; Boyd & Ellison, 2007; Dede, 1996; LeNoue, 2012; Levin, 2004; Swan, 2002; Ubon and Kimble, 2004; Ning, 2012; Wiki, 2012.
3. Survey item number thirteen (IT3. I have experience with online communication software such as web logs or wikis in the classroom. If other please list:_____.) derived from the resource sources including: Beaudin, 1990; Beldarrain, 2006; Jones et al., 2006; McIsaak and Gunawardena, 1996; Pascopella, 2008.
4. Survey item number fourteen (IT4. I have experience with video software such as Tegrity, Youtube, or vlogs in the classroom. If other please list:_____.) derived from the research sources including: Beadoin, 1990; Beldarrain, 2006; Borgmen, 2000; Boyd and Ellison, 2007; Dede, 1996; Fernandes, 2009; Foertsch et

al., 2002; Hiltz, 1997; Hiltz and Turoff, 1993; Jones et al., 2007;McKimmy and Leong,2004; Taylor, 1995; Tegrity Online, 2011.

5. Survey item number fifteen (IT5. I have experience with online grading systems such as WebCT, Blackboard, or Moodle. If other please list:_____.) derived from the research sources including: Carliner, 2005; DeMario and Heinze, 2001; Hiltz, 1990; Hiltz, 1997; Hiltz and Turoff, 1993; Jupiter, 2004-12; Pearson Education Incorporation, 2011-12; Stern, 2004; Wikipedia, 2011.

CHAPTER 3. METHODOLOGY

Chapter three outlines the method and design to accomplish the purpose of this study. This research study is a special-purpose survey, investigating university visual art instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' technology experience with five main educational technologies in accredited higher education institutions in the United States.

Research Design

This study is basically a quantitative survey research design grounded on principles of survey research methods and item design by Creswell (2004), Fowler (2002), and Patten (2001). Survey items collect specific data that is analyzed to fill information gaps, necessary in understanding a special purpose. Special-purpose surveys are useful in collecting data related to subjective feelings and behaviors in a specific situation based on conceptual frameworks ascertained from literature (Fowler, 2002; Patten, 2001).

The research design was constructed on four basic research steps in survey research methodology including (Creswell, 2004; Fowler, 2002; Patten, 2001; M. Schmidt, 2008).

1. Sampling
2. Designing items derived from the literature.
3. Data collection through survey methodology
4. Analysis of data collected

Despite discussion of Internet research disadvantages (Bordia, 1996; W. Schmidt, 1997; Stanton, 1998), literature suggested the comparability of Internet and traditional research reliability and validity of the study depends on research methodology (Buchanan & Smith, 1999; Hewson, Yule, Laurent, & Vogel, 2003; Stanton, 1998).

Internet research is similar to traditional research methodology in that the researcher needs to be aware of potential problems throughout the research process, mitigating possible problematic concerns for research methodology validity and reliability. Internet research may be a valid tool in providing quality information if utilized in a proper manner and meeting the focus of the research.

This research was cautious of the potential problems with Internet research methodology dealings with the online access and research methodology. Suggested awareness for researchers include population sampling, survey field timeline, awareness of Internet safety and security, and the proper equipment for Internet-based research (Fricker & Schonlaue, 2002; Fowler, 2002; Hewson et al., 2003; Pealer, Weiler, Pigg, Miller, &Dorman, 2001; W. Schmidt, 1997; Sheehan, 2002; Stanton, 1998)

In this quantitative research study, the population would be reached through the Internet. The Internet survey was appropriate in meeting the population needs through association email and mail list. Internet survey research was selected to reduce both the time and cost associated with traditional methods of hard copy survey with use "of materials, distribution and data collection, and converting data into a format for analysis" (Hewson et al., 2003, p. 43).

Research suggested that online survey implementation time should be similar to mail survey. Email and mail surveys provide essentially the same information in relation to email and mail response rate (Fricker & Schonlau, 2002; Fowler, 2002; Pealer et al., 2001; Tse, 1998; Tse, Tse, Yin, Ting, Yi, Yee, & Hong, 1995). However research studies showed significant differences in response rate return time (Granello & Wheaton, 2004; Knowledge Networks, 2012; Pealer et al., 2001; Sheehan, 2002).

Frananceschini (2000) and Sheehan (2002) reported that the turnaround time for web-based surveys is only 2 to 3 days and it is suggested to condense time allotted for follow-up compared to mail survey research (Frananceschini, 2000; Granello & Wheaton, 2004; Sheehan, 2002). Shaefer and Dillman (1998) found that 76% of all responses were received in 4 days or less. However, the overall response time was 9.16 days in comparison to paper surveys with 14.39 days. Some studies found more immediate responses in the majority of responses through online survey research returned in a 24 to 48 hour time period and as little as one day depending on the population and use of technology for communication (Sheehan, 2001; Sheehan, 2002; Tse et al., 1995)

To meet population needs it is suggested to leave the survey field open for 10 or more days to assure response rate reliability of 70% or more even though research suggests online survey research responses are returned quicker than other forms of survey methods. Research also suggests that online survey research needs to be similar to field timing as mail research with re-calculation to pre and post messaging, mailing, and lag time; progressing survey field to two weeks (14 days) (Fricker & Schonlau, 2002; Knowledge Networks, 2012; Pealer et al., 2001; Tse, 1998; Tse et al., 1995). Maintaining methods similar to mail survey research, this online study remained open in the field for 14 days following the initial introduction letter. The study encountered two complications throughout the process. Initial list-serve email complications led to an 8 day extension for a total of 22 days open in the field. Low response rate led to a request for the interactive online survey to remain open an additional 10 days following a protocol amendment Institutional Review Board Approval for a total of 32 active survey days.

The researcher was aware of Internet safety and security issues that may affect the validity and reliability of the research. Hewson et al., (2003) suggested providing confidentiality

information and explanation of the research study to participants along with the participants consent. Following the participant's review of the introduction, the participants were asked to select the survey link if they consented to participate. This provided the researcher with the required information necessary in moving forward with the study.

The third possible problem the researcher was aware of was the equipment for Internet-based research and program compatibility. The research chose an Internet program for participant accessibility. The survey was administered through the North Dakota State University Decision Center Interactive Website, providing Internet participant accessibility.

Internet research awareness equipped the researcher with the knowledge of minimizing possible problems that may affect research methodology validity and reliability similar to the methodology of traditional research. The researcher was aware of sound methodological approach to Internet research in this quantitative special-purpose attitude research guided by research expert suggestions. Research expert suggestions provided insight in in this quantitative special-purpose attitude research (Creswell, 2004; Gay & Airasian, 2000; Hewson et al., 2003; O'Dochartaigh, 2002).

Population and Sampling

The population for this survey included visual art instructors of institutions accredited by the National Association of Schools of Art and Design. A random cluster sample (Creswell, 2004; Gay, Mills, & Airasian, 2005) was utilized to obtain 85 schools, a subgroup in the population that represents the population as a whole from the 309 technical, 2-year, and 4-year schools accredited by the National Association of Schools of Art and Design. The National Association of Schools of Art and Design included 4 technical schools (1.29%), 13 2-year schools (4.19%), and 292 4-year schools (94.20%). The total of 4 technical schools was

included in the subgroup participants for a (100%) technical school subgroup inclusion. The schools chosen in representation for 2-year schools incorporated 9 out of 13 (69%) of the total 2-year subgroup schools. A total of 4 subgroups were chosen from a chart of random numbers created in Microsoft Excel. Random subgroups chosen were recorded on the United States map, representing the United States in 4 regions including West, Midwest, South, and Northeast. Schools in states that were not chosen in the first random selection were included in the second random selection to achieve balanced distribution across the United States. The United States distribution map has not been included to protect participant identification. The subgroup of 4-year schools percentage of representation was 25%. A chart of random numbers created in Microsoft Excel was utilized in choosing 29 4-year schools. Randomly chosen 4-year subgroups were recorded on the United States Map, representing the United States in 4 regions including West, Midwest, South, and Northeast. Schools in states that were not represented in the first random selection were included in a second chart for random selection in gaining balanced distribution across the United States with the addition of 43. The total number of 72 schools (25%) was chosen from a table of random numbers in representation of the whole population in cluster subgroups (Creswell, 2004, p. 147) (Gay et al., 2005, p. 135). The United States distribution map has not been included to protect participant identification. A total of 85 subgroups were included in the cluster sampling in representing technical, 2-year, and 4-year schools accredited by the National Association of Schools of Art and Design. Association member lists were obtained by compiling a listserve from individual institution websites accredited by the National Association of School of Art and Design with a total of 1,418 full-time visual art instructor possible participants. The population sample size of 1,418 full-time visual art instructors calculated for desired sample size at 20% suggests the desired sample size

of 284 participants (Gay et al., 2005, p. 135). Full-time visual art instructors at accredited universities in the United States had the opportunity to participate in this online survey regarding attitudes toward online visual art courses, instructors' perspectives toward distance education instructor incentives, and also instructors' technology experience. Full-time visual art instructor selection to participate in the e-mailed online survey indicated consent for participation.

Data Collection Instrument

The data collection instrument used in this study is a special-purpose survey research study to focus on the uniqueness of the topic of higher education visual art instructors' attitudes toward online visual art courses, instructors' perspectives toward distance education instructor incentives, and also to investigate technology use.

Full time visual art instructors had the opportunity to participate through the North Dakota State University Group Decision Center's interactive website. The initial introduction (Call for Respondents) letter with an email link to the study hosted through the North Dakota State University Group Decision Center was emailed on the first day of the study on January 23th, 2013. The interactive website began January 23th, 2013 and initially remained open in the field for 14 days. Following the disbursement of the introduction email, a problem with the North Dakota State University decision center email software was detected. The software sent out 10 introductory emails to each possible participant. A "Report of Unanticipated Event" was filed with the NDSU IRB January 31, 2013, requesting to include an apology in a "Reminder to Participate" email to all possible participants through individual email. The "Reminder to Participate" email was sent out February 4th, 2013. The North Dakota State University Decision Center interactive survey remained open throughout the initial 14 days and was extended 8 days to accommodate changes to the research process. The survey closed at 11:59 pm on February

13th, 2013. Due to a low participant response of 13.8%, it was decided that the low response rate could be related to the initial introductory email sending out 10 emails to each possible participant and may have caused the email to be filtered by participant SPAM email folders. Participants may have not received the introductory email. A "Protocol Amendment Request" was filed with the NDSU IRB, requesting to send a second reminder email in response to the unanticipated problem that occurred in the initial introductory email stage. After IRB approval, a second reminder email was sent to possible participants March 13, 2013 and remained open for 10 days. The interactive site closed March 22, 2013 at 11:59pm. The interactive survey remained open for a total of 32 days including the initial 14 days, an unanticipated event extension for 8 days, and the amendment to open the survey for a second email reminder for 10 days. The survey design included twenty items and consisted of four sections: 1-5 Attitude Toward Visual Art Online Offerings, 6-10 Instructor Perspectives Toward Incentives, 11-15 Technology Experience, and 16-20 Demographic Information (see Appendix C). The first 15 survey items consisted of the following 4-point Likert scale and coded as:

1. Strongly Disagree
2. Disagree
3. Agree
4. Strongly Agree

Section one was composed of five items measuring the construct of instructor attitude towards distance education visual art courses. Section one consisted of a 4-point Likert scale measuring attitude on an interval data scale. Section two was composed of five items measuring the construct of instructor perspective towards incentives. Section two consisted of a 4-point Likert scale measuring instructor perspective on an interval data scale. Section three was

composed of five items measuring the construct of instructor experience with five technological components that support an online classroom including education social software, social networking software, communication software, video software, and electronic grading software. Section three consisted of a 4-point Likert scale measuring instructor experience with the five technological components that support an online classroom on an interval scale. Section four was composed of five nominal data demographic items.

The quantitative interval scale on the survey consisted of items 1 – 15 focused on the following conceptual framework ascertained from literature:

1. Instructor Attitude Affects the Quality of Distance Education
   (Survey Item 1-5)
   A. Positive Learning Environment (Survey Item 1)
   B. Material Learning (Survey Item 2)
   C. Interest in Learning More Information (Survey Item 3)
   D. Hands-on Learning (Survey Item 4)
   E. Student/Peer Cooperation (Survey Item 5)
2. Instructor Incentives affect Instructor Attitude (Survey Items 6-10)
   A. Administration Support (Survey Item 6)
   B. Professional Development (Survey Item 7)
   C. Release Time (Survey Item 8)
   D. Additional Compensation (Survey Item 9)
   E. Consistent Incentives (Survey Item 10)
3. Instructor Experience with Five Main Technologies that Support the Online Classroom (Survey Items 11-15)

A. Education Social Software (Survey Item 11)

B. Social Networking Software (Survey Item 12)

C. Communication Software (Survey Item 13)

D. Video Software (Survey Item 14)

E. Online Grading System (Survey Item 15)

Nominal items on the survey included Item #s 16, 17, 18, 19, and 20. This has been included in order to provide respondents' demographic information (Creswell, 2004; Fowler, 2002; Gay & Airasian, 2000; Patten, 2001).

Validation

This survey retrieved descriptive data through a 4-point Likert scale, dismissing common statistical techniques. Research validation for this survey focused on face validity, designedly ensuring that the survey items "measures the characteristic or trait of interest" (Miller, n.d., p. 3) or the "way it appears to measure what it claims to measure" (Gay & Airasian, 2000, p. 164.

Survey design face validity was established through survey design methodology proposed by multiple research experts including: Creswell, (2004), Fowler, (2002), Gay and Airasian, (2000), and Patten (2001). Steps in designing the survey design included:

1. Review of Research Literature for Survey Design

2. Research Methodology Training

3. Expert Guidance

4. Pilot Study

Gay and Airasian (2000) explained that "of course if there is a valid and reliable instrument available, it can be used, but using an instrument just because it is there is not a good idea. If you want appropriate answers you have to ask appropriate items" (p. 277). In the

specifics of this research, it was in best interest to design survey items derived from the literature. Gay and Airasian (2000) suggested that survey items relate directly with the topic through the relevance of the literature. The review of literature led to the construction of the survey items. The survey items were derived and aligned through the research sources of the literature review.

The second step taken for further validation was research methodology training through the North Dakota State University Ph.D. in Education Program Summer 2007 through Summer 2013. Research methodology training incorporated quantitative and qualitative methods of research, focusing on the alignment of the right research methodology that best serves the research problem (Stammen, 2007; M. Schmidt, 2008).

Expert guidance was another step involved in further validating this research study. Expert guidance was utilized throughout the methodology research design, construction, and administration. Survey items were re-vamped each time they were reviewed and as needed in providing clear and non-ambiguous items (Creswell, 2004; Gay & Airasian, 2000; Fowler, 2002; Patten, 2001). Survey validity was supported by making the item as reliable as possible. "Good items maximize the relationship between the answers recorded and what the researcher is trying to measure" Fowler, 2002, p. 76).

Patten's (2001) survey writing steps were followed to provide clear and non-ambiguous items. Steps taken in providing a clear and non-ambiguous survey items incorporated clear items that only ask one item and not have multiple items within one item. Consideration was given in writing the simplest form of items with retrieving one answer per item. In this research study, all of these steps were taken to further the validity of the survey with also the inclusion of a 4-point Likert scale by providing: strongly agree, agree, disagree, and strongly disagree.

Construct validity was established through the research source literature review that generated three constructs that affect the quality of learning in the visual art distance education environment. Gay and Airasian (2000) explained that "research studies that involve a construct are valid only to the extent that the test representing the construct is valid" (p. 168).

Three constructs generated from the literature review (Instructors' Attitudes Toward Visual Art Distance Education, Instructors' Perspectives Toward Visual Art Distance Education Instructor Incentives, and Instructors' Experience with Five Education Technologies) led to the construction of the three research items:

1. What are the visual art instructors' attitudes toward online visual art courses?
2. What are the visual art instructors' perspectives toward online education instructor incentives?
3. Do visual art instructors have experience with five main technologies that support an online classroom? Categories include: education social software, social networking software, communication software, video software, and electronic grading software?

These items were derived and aligned with the literature review, establishing construct validity through a conceptual framework ascertained from literature. The graph provided in Appendix I originated from the conceptual framework resource listed on P.37 and shows the conceptual framework ascertained from the literature.

Construct validity was also established through review of relevance and use of survey items (Creswell, 2004). Creswell (2002) advises that it is typical for researchers to use a panel of judges or experts and have them identify whether the items are valid. Research expert review

for relevance and use of item measurements has been conducted. Iteration of expert review was followed by survey item changes which supported relevant and useful survey items.

Gay and Airasian (2000) explained that construct validity may be established by having scholars in the research field examine test items to judge whether they represent typical topics in the field. A pilot study was conducted to review and analyze survey for clarity of items and item alignment following NDSU IRB exemption approval (Appendix A). A pilot study is used to refine the survey items prior to using a survey in more definitive studies for face validity (Patton, 2001) and also to review items for relevance and use of item measurements for construct validity (Gay & Airasian, 1996). The pilot study included participants of the research committee. Survey revisions were made following the pilot study.

Following survey construction and design, evaluation of content validity occurred through the examination of the research plan and procedures used in the research design.

The survey design, directly related with the topic literature review and following the inclusion of expert guidance may be reviewed in Appendix H.

Reliability

Reliability factors that can result in unreliable data were considered in supporting survey design reliability. This was done by utilizing Creswell's (2005) concerns that influence research reliability which are as follows:

1. Ambiguous and unclear questions on the instrument.
2. Procedures of test administration vary and are not standard.
3. Participant fatigue, are nervous, misinterpret questions, or guess on tests.

Multiple concerns were considered throughout the research design and procedure, as well as steps taken to minimize reliability issues that may be affected. To address the first concern of

ambiguous and unclear questions on the instrument, research methodology training and expert guidance were included as an appropriate tactic in preparing a sound research design (Creswell, 2005; Fowler, 2002; Gay & Airasian, 2000; Patten, 2001). To further address reliability, items on the instrument were reviewed for clear and non-ambiguous items through a pilot study, minimizing participant misunderstanding of items on the instrument (Patten, 2001).

The second concern, procedures of test administration vary and are not standard, was addressed by having the online survey research design as similar to traditional research methodology and having awareness of potential problems throughout the research process. A standard online research survey was administered through the North Dakota State University Group Decision Center's interactive website.

The third concern includes participant fatigue, are nervous, misinterpret questions, or guess on tests. This concern was addressed by having a survey research design include a short survey incorporating fifteen items in minimizing participant fatigue and stress related with survey research. The survey was not timed, allowing participants to not feel nervous. To further address reliability concerns, items on the instrument were reviewed for clear and non-ambiguous items, minimizing participant misunderstanding of items on the instrument.

Research reliability was also reviewed through factor analysis utilizing an extraction method of Principal Component Analysis. The intent of administering factor analysis for each representing construct was to review the weighted sums, or components, and their interdependencies between observed variables and their representation of the underlying variable or in this case, constructs. Results indicated the correlation among variables and their representation of the underlying construct they measure and also if any items are deemed outliers

or unusable by having low correlation (Creswell, 2005; Gay & Airasian, 2000; Olive-Taylor, 2008; Sagepub, 2013; Statsoft, 2013; Wikipedia, 2013).

Reliability was further established through Cronbach's alpha statistical analysis following the administration of the survey. Cronbach's alpha was administered utilizing SPSS to review the reliability of the survey, measuring the "internal consistency reliability by determining how all items on the test relate to all other test items and to the total test" (Gay & Airasian, 2000, p. 174) or to the "extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test" (Tavakol & Dennick, 2011, p. 53). Cronbach's Alpha was administered to assess if the instrument represents the constructs it is supposed to measure.

This study was only generalized for the select community of visual art instructors who teach full-time at accredited higher education facilities.

Data Analysis

Survey data was collected through North Dakota State University Group Decision Center's interactive survey web site. Collected data was entered in SPSS Software where statistical information was calculated. Demographic information was collected through this survey and analyzed through descriptive statistics of mean and standard deviation. A demographic chart has been included to display collected demographic information. Data sets were limited if respondents did not answer all items, fluctuating the participant size for item analysis.

Instructor survey of attitudes was analyzed using descriptive statistics including frequency distribution and standard deviation. Instructor survey of incentive perceptions was analyzed using descriptive statistics including frequency distribution and standard deviation.

Survey of experience with technology was analyzed by descriptive statistics through frequency distribution and standard deviation.

Factor analysis utilizing an extraction method of Principal Component Analysis and an eigenvalue of 1 was administered for each construct including instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main technologies. Each construct included five survey items, each representing 1 eigenvalue. Variable weight with eigenvalues of .6 or higher are deemed acceptable in practical significance for construct representation. Eigenvalues lower than this represent minimal support for construct representation. A survey item with an eigenvalue lower than the acceptable value may represent another variable and may need to be eliminated from the survey. In this case, all eigenvalues were set at 1 to review the correlation coefficient of each variable. Correlation coefficient numbers fall between -1.00 - +1.00. High correlation is near -1.00 or +1.00. Correlation coefficient .50 or less is unusable unless in combination with another variable. Social sciences accept a .4> correlation coefficient. Results indicated the correlation among variables and their representation of the underlying construct they measure and also if any items were deemed outliers or unusable by having low correlation (Creswell, 2005; Gay & Airasian, 2000; Olive-Taylor, 2008; Sagepub, 2013; Statsoft, 2013; Wikipedia, 2013).

Cronbach's alpha was administered to measure the internal consistency of the instrument used in this particular study. An alpha score of 0.6 and higher is acceptable for the internal consistency of the survey. Cronbach's alpha reliability research suggests more items yields higher alpha. Alpha scores higher than .90 suggest redundancy in items; those in the range of .70 to .80 suggest that these items have an appropriate amount of construct representation. A chart

displaying instrument Cronbach's alpha coefficient has been included. (Gay & Airasian, 2000; Tavakol & Dennick, 2011; University of California, Los Angeles, 2013; Wikipedia, 2013; Zaiontz, 2013)

SPSS was utilized to transform, or combine, variables for each construct including instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main technologies.

An independent sample t-test was administered through SPSS to compare means between the composite mean of the independent variable for instructors' type of institution and each of the composite mean dependent variables for instructors' attitudes, incentives, and experience. (Creswell, 2005; Gay & Airasian, 2000; SPSS, 2003)

Pearson correlation was administered to analyze whether variables are related, and to what degree, through the statistical analysis program SPSS to review the composite mean of independent variables including instructors' experience, attitude, incentives, and education level. A significant correlation is represented between a range of values from +1 to -1. A value of 0 represents that there is no relationship between variables. Level of significance correlation coefficient is p=.05. SPSS represents a significant correlation p=.05 with *. A Pearson correlation chart is included to display relation of variables and to what degree (Creswell, 2005; Gay & Airasian, 2000; Lund Research, 2013; SPSS, 2003; Statistics How To, 2013; Wikipedia, 2013).

Linear regression was administered through SPSS to analyze the composite mean of the dependent variable including instructors' attitudes toward online visual art courses and two independent variable predictors including instructors' incentives and experience. A significant prediction is represented by a p = .05 significance or less, representing a 95% or higher

confidence level that is not probability by chance. A linear regression chart is included to display relation of variables and to what degree (Creswell, 2005; Gay & Airasian, 2000; SPSS, 2003).

CHAPTER 4. RESEARCH FINDINGS

The purpose of this quantitative study is to review accredited university visual art instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main educational technologies in accredited higher education institutions in the United States.

Research Questions

1. What are the visual art instructors' attitudes toward online visual art courses?
2. What are the visual art instructors' perspectives toward online education instructor incentives?
3. Do visual art instructors have experience with five main technologies that support an online classroom? Categories include:
    A. Education Social Software
    B. Social Networking Software
    C. Communication Software,
    D. Video Software
    E. Electronic Grading Software

This study also compared means between the instructors' types of institution employed independent variable and the three dependent variables which include instructors' attitudes toward online visual art courses (attitude), instructors' perspectives toward online education instructor incentives (incentives), and instructors' experience with five main technologies (experience). It was hypothesized that instructors' types of institution employed will not have a significant difference with each of the three dependent variables which include instructors' attitude, incentives, and technology experience.

Null Hypothesis 1: There is not a significant difference between the composite mean of the independent variable including instructors' types of institution employed and each of the composite mean of the dependent variables including instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main technologies.

This study also examined correlation between the visual art instructors' attitudes, technology experience, incentives, and visual art instructors' level of education.

Null Hypothesis 2: There is no correlation between the composite mean of each variable including visual art instructors' attitudes toward online visual art courses, visual art instructors' technology experience with five main technologies, visual art instructors' perspectives toward online education instructor incentives, and visual art instructors' level of education.

This study also analyzed the composite mean of each of two independent predictor variables including instructors' incentives and instructors' technology experience and the composite mean of the dependent variable including instructors' attitudes.

Null Hypothesis 3: The composite mean of two independent variables including visual art instructors' perspectives toward online education instructor incentives and visual art instructors' experience with five main technologies does not predict the composite mean of the dependent variable including visual art instructors' attitudes toward online visual art courses.

Discussion

The special purpose quantitative survey was administered to visual art instructors working fulltime at accredited higher education institutions in the United States Spring 2013, beginning in January and completing in March. A total of 137 respondents accessed the survey online through the North Dakota State University Decision Center. Participants that did not consistently participate throughout the survey were eliminated to defray survey skew of scores. If a respondent failed to answer all the items for one of the constructs, the respondent was eliminated from the study. However, if a respondent failed to answer one of the items within the five items that make up the construct, the participant mean was filled in to replace the missing data. A total of 129 surveys were incorporated for analysis. The data was collected through the NDSU Decision Center and entered into SPSS Data Collection Software for further analysis.

Demographic Information

A total of 129 subjects completed the survey. Findings may not be infinitive as they show a high percentage of a population representative, nonetheless, a small number of participants. Subjects ranged in age from 30 to 71. Table 4 displays participant demographic characteristics. Table 5 displays participant characteristic mean and standard deviation.

Table 4

Demographic Characteristics of Participants (N = 129)

Characteristic	*n*	%
Age at time of survey (years) (N = 124)		
30-34	6	5
35-39	16	13
40-44	18	14
45-49	21	16
50-54	18	14
55-59	10	9
60-64	24	20
65-69	9	7
70-74	2	2
Type of Institution (N = 128)		
Technical Institution Instructors	0	0
2-year Institution Instructors	13	10.2
4-year Institution Instructors	115	89.8
Years Employed at an Institution Accredited by NASAD (N = 128)		
1-5	26	20
6-10	22	17
11-15	27	21
16-20	20	16
21-25	15	12
26-30	9	7
31-35	3	2
36-40	4	3
41-45	2	2
Education Level (N = 127)		
Bachelor's	6	4.7
Master's	14	11
Master of Fine Arts	80	63.0
Doctorate	27	21.3

Note. Totals of percentages are not 100 for every characteristic because of rounding.

Table 5

Participant Characteristics (N = 129)

Characteristic	M	SD
Age at time of survey (years)	50.48	10.405
Type of Institution (2 or 4 year)	3.80	.607
Years Employed by NASAD Accred. Inst.	15.26	10.118
Education Level	3.01	.718

Attitude Toward Online Visual Art Courses

Research Item was stated as follows: What are the visual art instructors' attitudes toward online visual art courses? Items 1-5 on the survey asked subjects to indicate their attitude toward online visual art courses. Instructor attitude items included:

A1. The online environment supports a positive learning environment for online visual art courses.

A2. Students are able to learn the same material in an online learning environment as in a classroom environment.

A3. I would be interested in learning more regarding online visual art courses.

A4. The online environment supports hands-on learning that a visual art classroom does.

A5. The online classroom environment supports student/peer collaboration.

Reliability

Factor analysis was conducted using SPSS to measure the factor loadings. In this particular study, the acceptable eigenvalue of >= 1.0 was selected for the survey construct "Instructor Attitude Toward Online Visual Art Courses".

The results show that this factor has an eigenvalue of 2.812. Since it is greater than 1.0, all the items load correctly.

Cronbach's alpha was administered utilizing SPSS to review the reliability of the survey. An alpha score of 0.6 or higher is acceptable for the internal consistency of the survey. The Cronbach's alpha administered on this particular instrument indicated high alpha scores. The construct for "Instructors' Attitude" included five items and had an alpha score of .788. Table 6 displays the Principal-Components Factor Analysis matrix and the Cronbach's alpha score for the construct "Instructors' Attitude Toward Online Visual Art Courses".

Table 6

Principal-Component Analysis and Cronbach's Coefficient Alpha for "Instructors' Attitude Toward Online Education Instructor Incentives"

Item	Factor Loadings
Factor 1: Instructors' Attitudes (α = 788)	
A1 – The Online Environment Supports a Positive Learning	.829
A2 – Students are able to Learn the Same Material	.764
A3 – Interested in Learning More	.642
A4 – The Online Environment Supports Hands-on Learning	.822
A5 – The Online Classroom Environment Supports Student/Peer Collaboration	.673
Eigenvalue	2.81

Note. Item descriptions can be found in Appendix G

Independent Sample T-test

The possible totals for each participant's responses on these five items range from 5 – 20, resulting in a test mean of 12.5. An independent-sample t-test was conducted, comparing the results of instructors at 2-year institutions with those at 4-year institutions to compare the scores of the participants with a test mean of 12.5. Instructors working full-time at a technical institution chose not to participate in this study; therefore they are not included in the t-test results. Instructors working full-time at 2-year institutions have a mean of 9.5800 and instructors working full-time at a 4-year institution had a mean of 9.9912, falling under the test value of 12.5. The results are shown in Table 7.

Table 7

Attitude Differences Between Groups Who Worked Full-time at a 2-Year Institution and Who Worked Full-time at a 4-Year Institution

	Attitude					
Institution Type	M	SD	df	T	p	Cohen's d
2-Year Institution	9.5800	2.84427	12	-.488	.627	0.281746
4-Year Institution	9.9912	2.88600	114	-.493	.629	0.092347

Perspective Toward Online Education Instructor Incentives

Research Item was stated as follows: What are visual art instructors' perspective toward online education instructor incentives? Items 6-10 on the survey asked subjects to indicate their perspectives toward online education instructor incentives. Instructor perspective items included:

P1. Administration support is important for online education faculty participation.

P2. Professional development is necessary for online art educators.

P3. Online art educators need release time for proper teaching preparation.

P4. Online art educators should receive additional compensation.

P5. Incentives need to be consistent among online education faculty.

Reliability

Factor analysis was conducted using SPSS to measure factor loadings. In this particular study, the acceptable eigenvalue of >= 1.0 was selected for the survey construct "Instructor Perspectives Toward Online Education Instructor Incentives".

The results show that this factor has an eigenvalue of 2.660. Since it is greater than 1.0, all the items load correctly.

A reliability test called Cronbach's alpha was administered utilizing SPSS to review the reliability of the survey. An alpha score of 0.6 or higher is acceptable for the internal consistency of the survey. The Cronbach's alpha administered on this particular instrument indicated high alpha scores. The construct of "Instructors' Incentives" included five items and had an alpha score of .771. Table 8 displays the Principal-Components Factor Analysis matrix and Cronbach's alpha for the construct "Instructors' Perspectives Toward Online Education Instructor Incentives".

Table 8

Principal-Component Analysis and Cronbach's Coefficient Alpha for "Instructors' Perspective Toward Online Education Instructor Incentives"

Item	Factor Loadings
Factor 2: Instructors' Perspective (α = 771)	
P1 – Administration Support is Important	.727
P2 – Professional Development is Necessary	.740
P3 – Online Art Educators Need release Time for Proper Teaching Preparation.	.752
P4 – Online Art Educators Should Receive Additional Compensation	.705
P5 – Incentives Need to be Consistent Among Online Education Faculty	.723
Eigenvalue	2.66

Note. Item descriptions can be found in Appendix G

Independent Sample T-test

The possible totals for each participant's responses on these five items range from 5 – 20, resulting in a test mean of 12.5. An independent-sample *t*-test was conducted, comparing the results of instructors at 2-year institutions with those at 4-year institutions to compare the scores of the participants with a test mean of 12.5. Instructors working full-time at a technical institution chose not to participate in this study; therefor they are not included in the t-test results. Instructors working full-time at 2-year institutions have a mean of 16.0000 and instructors working full-time at a 4-year institution had a mean of 16.1440. Instructors working full-time at both 2-year and 4-year institutions show high correlation with instructors' incentives, displaying a mean above the range mean of 12.5. The results are shown in Table 9.

Table 9

Incentive Perspective Differences Between Groups Who Worked Full-time at a 2-Year Institution and Who Worked Full-time at a 4-Year Institution

	Incentive Perspective					
Institution Type	M	SD	df	T	p	Cohen's d
2-Year Institution	16.0000	3.87298	12	-.176	.860	-0.101613
4-Year Institution	16.1440	2.65016	114	-.131	.898	-0.024538

Experience with Five Main Educational Technologies

Research Item was stated as follows: Do visual art instructors have experience with five main technologies that support an online classroom? Categories include: education social software, social networking software, communication software, video software, and electronic grading software. Items 11-15 on the survey asked subjects to indicate their experience with five

main technologies that support an online classroom. Instructor technology experience items include:

T1. I have experience with Education Social Software programs such as Blackboard or Moodle. If other please list:

T2. I have experience with social networking software such as Ning or Facebook in the classroom. If other please list:

T3. I have experience with online communication software such as web logs or wikis in the classroom. If other please list:

T4. I have experience with video software such as Tegrity, Youtube, or vlogs in the classroom. If other please list:

T5. I have experience with online grading systems such as WebCT, Blackboard, or Moodle. If other please list:

Reliability

Factor analysis was conducted using SPSS to measure factor loadings. In this particular study, the acceptable eigenvalue of >= 1.0 was selected for the survey construct "Instructor Experience with Five Main Technologies".

The results show that this factor has an eigenvalue of 3.098. Since it is greater than 1.0, all the items loaded correctly.

A reliability test called Cronbach's alpha was administered utilizing SPSS to review the reliability of the survey. An alpha score of 0.6 or higher is acceptable for the internal consistency of the survey. The Cronbach's alpha administered on this particular instrument indicated high alpha scores. The construct "Technology Experience" included five items and had an alpha score

of .845. Table 10 displays the Principal-Components Factor Analysis matrix and Cronbach's alpha for the construct "Instructors' Experience with Five Main Educational Technologies".

Table 10

Principal-Component Analysis and Cronbach's Coefficient Alpha for "Instructors' Experience with Five Main Educational Technologies".

Item	Factor Loadings
Factor 3: Instructors' Technology Experience (α = 845)	
T1 – Instructor's Experience with Education social Software	.844
T2 – Instructor's Experience with Social Networking Software	.727
T3 – Instructor's Experience with Online Communication Software	.740
T4 – Instructor's Experience with Video Software	.808
T5 – Instructor's Experience with Online Grading Systems	.809
Eigenvalue	3.098

Note. Item descriptions can be found in Appendix G

Independent Sample T-test

The possible totals for each participant's responses on these five items range from 5 – 20, resulting in a test mean of 12.5. An independent sample t-test was conducted, comparing the results of instructors at 2-year institutions with those at 4-year institutions to compare the scores of the participants with a test mean of 12.5. Instructors working full-time at a technical institution chose not to participate in this study; therefore they are not included in the t-test results. Instructors working full-time at 2-year institutions have a mean of 10.9931 and

instructors working full-time at a 4-year institution had a mean of 14.2970. Results show high correlation with instructors working full-time at a 4-year institution and instructors' experience, displaying a mean above the range mean of 12.5. The results are shown in Table 11.

Table 11

Technology Experience Differences Between Groups Who Worked Full-time at a 2-Year Institution and Who Worked Full-time at a 4-Year Institution

	Technology Experience					
Institution Type	M	SD	df	T	p	Cohen's d
2-Year Institution	10.9931	2.61992	12	-3.164	.002	-1.826736
4-Year Institution	14.2970	3.65427	114	-4.117	.001	-0.771184

Pearson Correlation

Pearson correlation was administered through SPSS to analyze the correlation between the variables: Visual art instructors' attitudes, technology experience, incentives, and visual art instructor level of education. Table 12 displays the results of the Pearson correlation for the above variables.

Table 12

Correlation between Visual Art Instructors' Attitudes, Technology Experience, Incentives, and Visual Art Instructor Level of Education

	Attitude	Experience	Incentives	Educ. Level
Attitude	1			
Experience	.208*	1		
Incentives	.135	.164	1	
Educ. Level	-.014	.155	-.040	1

*Correlation is significant at the 0.05 level (2-tailed).

A small correlation coefficient is near .10 and a medium correlation coefficient is near .30. The findings indicate that visual art instructors' experience and attitudes have a significant correlation of .208*, above a small correlation and under a medium correlation. All other correlations are not significant. Given this finding, linear regression was performed between the dependent variable attitude and the independent variable experience.

Linear Regression

Linear regression was administered through SPSS to analyze the composite mean of the dependent variable including visual art instructors' attitudes toward online visual art courses and two independent variable predictors including visual art instructors' incentives and experience.

The results of the regression indicated that one predictor explained 4.3% of the variance ($R^2 = .043$, $F(1,127) = 2.391$, $p < .05$). It was found that instructors' technology experience significantly predicted instructors' attitudes toward online visual art courses ($\beta = .208$, $p = .018$). This suggests that as experience increases, attitude also increases as shown in Table 13.

Table 13

Regression Analysis Summary for Instructors' Technology Experience Predicting Instructors' Attitudes Toward Online Visual Art Courses

Variable	B	SE B	β	T	P
Constant	7.692	.973		7.903	.000
Technology Experience	.161	.067	.208	2.391	.018

Note. R2= .043 (N = 129, $p<.05$).

The general findings indicate that 1) respondents show a high percentage of visual art instructors have negative attitudes toward visual art online courses; 2) visual art instructors find instructor incentives to be an important aspect for visual art online courses; 3) visual art instructors have a high percentage of technology experience; 4) visual art instructors working full-time at a 4-year institution have more experience with five main technologies than instructors working full-time at a 2-year institution ; 5) visual art instructor technology experience and visual art instructor attitude towards online visual art courses have a significant correlation, suggesting that instructors with technology experience are more likely to have positive attitudes toward distance education than instructors with less technology experience; 6) instructors are interested in learning more regarding visual art online courses; and 7) visual art instructors support non-materialistic professional development in preparation for visual art online course instruction.

CHAPTER 5. DISCUSSION

The purpose of this quantitative study is to review accredited university visual art instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main educational technologies in accredited higher education institutions in the United States.

Research Questions

1. What are the visual art instructors' attitudes toward online visual art courses?
2. What are the visual art instructors' perspectives toward online education instructor incentives?
3. Do visual art instructors have experience with five main technologies that support an online classroom? Categories include:
    A. Education Social Software
    B. Social Networking Software
    C. Communication Software,
    D. Video Software
    E. Electronic Grading Software

This study also compared means between the instructors' types of institution employed independent variable and the three dependent variables which include instructors' attitudes toward online visual art courses (attitude), instructors' perspectives toward online education instructor incentives (incentives), and instructors' experience with five main technologies (experience). It was hypothesized that instructors' type of institution employed will not show a significant difference with each of the three dependent variables which include instructors' attitudes, incentives, and technology experience.

Null Hypothesis 1: There is not a significant difference between the composite mean of the independent variable including instructors' types of institution employed and each of the composite mean of the dependent variables including instructors' attitudes toward online visual art courses, instructors' perspectives toward online education instructor incentives, and instructors' experience with five main technologies.

This study also examined correlation between the visual art instructors' attitudes, experience, incentives, and visual art instructors' level of education.

Null Hypothesis 2: There is no correlation between the composite mean of each variable including visual art instructors' attitudes toward online visual art courses, visual art instructors' technology experience with five main technologies, visual art instructors' perspectives toward online education instructor incentives, and visual art instructors' level of education.

This study will also analyze the composite mean of each of two independent predictor variables including instructors' incentives and instructors' technology experience and the composite mean of the dependent variable including instructors' attitudes.

Null Hypothesis 3: The composite mean of two independent variables including visual art instructors' perspectives toward online education instructor incentive and visual art instructors' experience with five main technologies does not predict the composite mean of the dependent variable including visual art instructors' attitudes toward online visual art courses.

Discussion

Reliability analysis displayed literature review support and survey item extraction, presenting sound research methodology. Factor analysis results show that all survey items loaded correctly and all survey constructs have a Cronbach's alpha score of 0.6 or higher, supporting internal consistency of the survey.

The first research item reviewed instructors' attitudes toward online visual art courses. The general findings indicated that 58.9% disagreed that "the online environment supports a positive learning environment for visual art courses" including the combined results of strongly disagree and disagree and 93% of participants disagree that "students are able to learn the same material in an online learning environment as in a classroom environment" including the combined results of strongly disagree and disagree. A high percentage of participants also disagree with the statement that "the online environment supports hands-on learning that a visual art classroom does" with a combined strongly disagree and disagree total of 90%. A lower amount of 58.1% disagreed that "the online classroom environment supports student/peer collaboration" with a combined results of strongly disagree and disagree. In regards to the research item reviewing instructors' attitudes toward online visual art courses, instructors' attitude suggest that participants were generally in disagreement with online visual art courses providing learning experiences that a classroom environment offers. However, findings suggest that over half of participating instructors, 59.7%, are willing to learn more regarding online visual art courses with a combined result of strongly agree and agree.

The second research item reviewed visual art instructors' perspectives toward online education instructor incentives. The findings indicate that 94.6% of participants agree that "administration support is important for online education faculty participation" with a combined

result of strongly agree and agree and a slightly higher amount of 96.1% agree that professional development is necessary for online art educators with a combined result of strongly agree and agree. Participants also agree that online art educators need release time for proper teaching preparation with 82.9% in agreement with a combined result of strongly agree and agree; however, about half, or 52.7% of the participants agreed that online art educators should receive additional compensation with a combined result of strongly agree and agree. A total of 83.7% also agree that incentives need to be consistent among online education faculty with a combined result of strongly agree and agree. In regards to the research item reviewing instructors' perspectives toward online education Instructor Incentives, it appears that the visual art instructors generally agree with online education Instructor Incentives in terms of support in teaching online with exception to additional compensation that was split with only half of the participating instructors agreeing with this incentive.

The third research item reviewed visual art instructor experience with five main educational technologies that support an online classroom. Over half of the participants have experience with education social software programs with 69% of participants in agreement with ESS experience with a combined result of strongly agree and agree, and listed multiple ESS programs that were also utilized. A total of 57.4% of participants have experience with social networking software in the classroom such as Ning or Facebook with a combined result of strongly agree and agree, and listed multiple social networking software programs that were also utilized. A total of 56.6% of participants have experience with communication software programs in the classroom such as web logs and wikis with a combined result of strongly agree and agree, and listed a few more communication software programs that were utilized. However, combined results of strongly agree and agree represented by74.4% have experience with video

software programs in the classroom such as Tegrity, Youtube, or vlogs in the classroom. Vimeo video software was listed as another utilized program in the classroom. A slightly lower percentage of 70.6% of participants have experience with online grading systems with a combined result of strongly agree and agree.

This study compared the means between the instructors' types of institution employed predictor variable and the three dependent variables which include instructors' attitude, incentives, and experience. It was hypothesized that instructors' types of institution employed will not have a significant difference with each of the three dependent variables which include instructors' attitudes, incentives, and experience.

Instructors' types of institution employed does not have a significant difference with instructors' attitudes, displaying 2-year (M = 9.5800) and 4-year (M = 9.9912) institutions having both similar mean and below the average mean of 12.5. Instructors' types of institution employed also does not have a significant difference with Instructors' Incentives at both the 2-year (M = 16.0000), and 4-year (M = 16.1440) institutions with both means above the mean average of 12.5. Instructors' types of institution employed does have a significant difference between instructors' experience with 2-year (M = 10.9931) and 4-year (M = 14.2970) institutions displaying 2-year institutions falling below the mean and 4-year institutions above the mean of 12.5; therefore, rejecting Null Hypothesis 1: There is not a significant difference between the composite mean of the independent variable including instructors' types of institution employed and each of the composite mean of the dependent variables including instructors' attitudes, incentives, and experience.

Findings indicate that instructors working full-time at a 4-year institution have more experience with five main technologies than instructors working full-time at a 2-year institution.

This may be due to the vast opportunity in course options through a 4-year institution that drives 4-year institutions toward technology integration. Most colleges and universities offer "online courses that are marginal to their core operations" (Moe, Cuban, & Chubb, 2009, p. 48)

This study also examined correlation between the composite mean of each variable including instructors' attitudes, experience, incentives, and visual art instructor level of education. It was hypothesized that there is no correlation between the composite mean of each variable including instructors' attitudes, experience, incentives, and instructors' level of education.

Instructors' attitudes and experience have a significant correlation ($p = .018$); therefore, rejecting Null Hypothesis 2 : There is no correlation between the composite mean of each variable including instructors' attitudes toward online visual art courses, instructors' experience with five main technologies, instructors' perspectives toward online education instructor incentives, and instructors' level of education.

The relationship between instructors' attitudes and experience is positive. This suggests that instructors with technology experience are more likely to have positive attitudes toward distance education than instructors with less technology experience.

This study also analyzed the composite mean of two independent predictor variables including instructors' incentives and experience and the composite mean of the dependent variable including instructors' attitudes. It was hypothesized that the composite mean of two independent variables including instructors' incentives and experience does not predict the composite mean of the dependent variable including instructors' attitudes.

Findings indicated that instructors' experience with five main technologies was a significant predicting variable for instructors' attitudes ($p = .018$); therefore, rejecting Null

Hypothesis 3:The composite mean of two independent variables including instructors' incentives and experience does not predict the composite mean of the dependent variable including visual art instructors' attitudes. Findings suggest that as visual art instructors' technology experience positively increases, visual art instructors' attitudes also positively increases.

Instructors' experience and attitudes relationship was further explored to show supporting evidence for previous findings. Pearson correlation was administered through SPSS to analyze the linear relationship correlation between variables including instructors' attitudes, incentives, and experience. Table 14 displays Pearson correlation results.

Table 14

Correlation between Visual Art Instructors' Attitudes, Incentives, and Experience

	Attitude	Incentives	Experience
Attitude	1		
Incentives	.135	1	
Experience	.208*	.164	1

*Correlation is significant at the 0.05 level (2-tailed).

The findings further support regression, indicating that instructors' attitude and experience have a significant correlation ($p = .018$). There was no correlation among variable scores for instructors' attitudes and instructors' incentives.

Post-hoc Analysis

Post hoc analyses were conducted given the statistically significant correlation between instructor's attitudes and experience.

An independent sample t-test was administered to compare the sample mean of individual items with the actual population mean and the test mean of 12.5. The possible totals for each participant's responses on these five items range from 5 – 20, resulting in a test mean of 12.5.

Instructors' attitude results show the population mean (M = 9.94), displaying a mean below the range mean of 12.5. Item correlation coefficient is high among all items excluding the item "I am interested in learning more regarding online visual art courses". All items relate within .53 degrees of the population mean (M=1.99). Table 15 displays the sample mean of each item representing the instructors' attitudes construct and also the actual population mean.

Table 15

Attitude Differences between Individual Item Mean and the Population Mean for Visual Art Instructors' Attitudes Toward Visual Art Online Courses

	Attitude					
Sample	M	SD	df	T	p	Cohen's d
Positive Learning Environment	2.27	.755	128	-3.53	.001	-0.62
Learns Same Material	1.52	.674	128	-16.52	.000	-2.92
Interested in Learning More	2.52	.862	128	.263	.793	0.05
Hands-on Learning	1.54	.647	128	-16.93	.000	-2.99
Student/Peer Collaboration	2.10	.917	128	-4.94	.000	-0.87
Population	9.94	2.86	128	-10.15	.000	-1.79

Instructors' incentives results show the population mean (M = 16.15), displaying a mean above the range mean of 12.5. Item correlation coefficient is high among all items. All items relate within .50 degrees of the population mean (M = 3.23). Table 16 displays the sample mean of each item representing the instructors' incentives construct and also the actual population mean.

Table 16

Perspective Differences between Individual Item Mean and the Population Mean for Visual Art Instructors' Perspectives Toward Online Education Instructor Incentives

	Perspectives					
Sample	M	SD	df	T	p	Cohen's d
Administration Support	3.40	.644	128	24.76	.000	4.37
Professional Development	3.55	.610	128	28.95	.000	5.12
Release Time	3.32	.829	128	18.06	.000	3.19
Additional Compensation	2.73	.939	128	8.88	.000	1.57
Consistent Incentives	3.14	.778	128	16.67	.000	2.95
Population	16.15	2.78	128	14.920	.000	2.64

Instructor experience results show the population mean (M = 13.95), displaying a mean above the range mean of 12.5. Item correlation coefficient is high among all items. All items relate within .14 degrees of the population mean (M=2.79). Table 17 displays the sample mean of each item representing the instructors' experience construct and also the actual population mean.

Table 17

Technology Experience Differences between Individual Item Mean and the Population Mean for Visual Art Instructors' Technology Experience with Five Main Technologies That Support an Online Classroom

Sample	Experience		df	T	p	Cohen's d
	M	SD				
ESS Experience	2.86	1.044	128	3.92	.000	0.69
SNS Experience	2.59	.915	128	1.11	.271	0.20
Communication Software	2.67	.930	128	2.04	.044	0.36
Video Software	2.93	.859	128	5.70	.000	1.01
Online Grading System	2.91	.931	128	4.97	.000	0.88
Population	13.95	3.68	128	4.48	.000	0.79

Construct mean results show high population mean, above the item range mean of 12.5, for both instructors' incentives and experience. However, all items representing the construct instructors' incentives are significant ($p = .000$) and show visual art instructors' incentive perspectives in rank order of importance:

1. Professional Development is Necessary for Distance Art Educators
2. Administration Support is Important for Distance Education Faculty Participation.
3. Distance Art Educators Need Release Time for Proper Teaching Preparation.
4. Incentives Need to Be Consistent Among Distance Education Faculty.
5. Distance Art Educators Should Receive Additional Compensation.

Review of analysis conveys that instructors' attitude and experience have a positive significant correlation ($p = .018$), suggesting that instructors with technology experience are

more likely to have positive attitudes toward distance education than instructors with less technology experience and that instructors' experience significantly predicted instructors' attitude ($p = .018$). Post-hoc analysis reveals Instructor Incentives rank order of importance with instructors ranking professional development first in importance.

The combination of analysis provides insight in planning professional development and suggests what direction may be beneficial for visual art online course instructors. Whether a respondent self-reported low or high in number of response for technology experience, attitude increases with technology experience gained through professional development.

Research revealed that results may be useful to gauge visual art instructor technology experience utilizing regression results. A visual art department may set technology level of experience goals by using a formula to predict outcome variables based on instructor self-reported technology experience scores. Visual art departments may plan scaffolding level professional development focused on individual technology experience needed in progressing visual art instructors in reaching a department outcome goal. The formula utilizes the regression results in Table 15 (p. 76) to calculate an individual outcome variable by using the formula based on the regression constant average score (intercept), predicting variable score, and individual self-reported technology experience score as shown in Table 20. The formula shows that by adding the regression Constant B score and Technology Experience B score and multiplying that score by the Self-reported Technology Experience Score ranging from 5 – 20 with a range mean of 12.5, an individual predicted outcome may be calculated. An individual predicted outcome gauges instructor technology experience level. An art department may project a technology experience predicted outcome score goal. This may be useful in planning individual technology

experience professional development, progressing individual instructor technology experience throughout the art department. An example of the highest to lowest range is shown in Table 18.

Table 18

Technology Experience Formula

(Constant B)	+	(Tech. Exp. B)	X	(Self-reported Tech. Exp.)	=	Predicted Outcome Score
7.692	+	.161	X	20.0	=	157.06
7.692	+	.161	X	12.5	=	98.16
7.692	+	.161	X	5.0	=	39.26

Predicted outcomes will provide beneficial information for visual art department projected goals and visual art instructor individual growth in gaining technology experience. Technology experience progression supports increase in visual art instructor attitude, the key success toward productive learning environments (Brooks, 2003; Twigg, 2001; Volery & Lord, 2000; Whitesel, 1998).

Conclusion

Education has not achieved technology integration. Technology is changing how we teach disciplines, including visual art (Buffington, 2013). Despite research suggestion of "no significant difference" between traditional learning and distance educational learning, visual art online educational opportunities in the United States are minimal (Allen & Seaman, 2010). Reviewing visual art instructors' attitudes toward visual art online courses, instructors' perspectives toward online education instructor incentives, and visual art instructors' experience

with five main technologies that support an online classroom is the key towards productive visual art courses.

Supporting evidence and the paired-sample t-test in this study suggest that visual art instructor incentives are necessary in supporting visual art instructors including administration support, professional development, release time for proper teaching preparation, additional compensation, and consistent incentives among online education faculty (Betts, 1988; Humphries, 2008; Stewart, Keegan, & Holmberg, 1988; Twigg, 2001). However, linear regression results also suggest supporting evidence that visual art instructors' technology experience with five main technologies is a predicting variable for visual art instructors' attitudes toward online visual art courses, excluding visual art instructors' perspectives toward incentives. The item then is "Should the focus be toward providing instructors with instructor incentives when instructor technology experience yields positive attitudes toward teaching online?"

Rath and Harter (2010) suggested that some incentives such as wealth accumulate the wrong target. Wealth does not establish wellbeing. Instead, finances spent on experiences rather than on material items yielded positive wellbeing. "Experiences last while material purchases fade" (p.55).

Higher income and happiness association was reviewed through the Gallup World Poll, 2010. The study found that economic and social psychological prosperities predicted different types of wellbeing. Economic prosperity was a strong predictor for life evaluation. However, positive and negative wellbeing feelings were mostly associated with psychological needs which included learning, use of one's skills, and respect (Diener, 2010).

Yang and Cornelious (2005) suggested the importance of instructor technology mastery level for teaching online courses. Instructors need to understand the change of the role and aligned attitude to this role. Instructors' attitudes can hinder effective education. It is necessary to fully prepare instructors with optimal technology skills in various devices, supporting a positive attitude toward technology. (Valentine, 2002)

Further research suggests that technology experience and non-materialistic incentives may both sustain importance for positive instructor attitudes toward visual art online courses.

Interestingly, post hoc construct one-sample t-test for instructors' perspectives toward online education instructor incentives results show professional development first in rank order of importance and additional compensation ranked fifth. This suggests that instructors understand the importance of professional development in an online teaching and learning environment.

The results of this study show that as visual art instructors' experience with five main technologies that support an online environment increases visual art instructors' attitude toward online visual art courses. Research findings suggest that visual art instructors' attitudes may improve if instructors were offered professional development focusing on five main technologies that support an online classroom.

Implications for Practice

Research review brings attention to professional development improvements for visual art instructor increase in attitude and enthusiasm in teaching visual art courses online throughout higher education visual art departments.

It is important for visual art instructors to shift visual art education towards a technology-based platform, providing visual art course opportunities not confined to a geographic area.

Technology advancements itself has shifted education in providing courses to a larger student body through distance and online learning. Visual art is an area of frequent cuts when educational funding is minimized (Davis, 2005; Holcomb, 2007; University of California Institute for Research in the Arts, 2010). Validation of program aesthetic value may be supported in mainstreaming visual art offerings through online education.

Combination of research correlation results, linear regressions results, and instructor incentives rank order of importance provides insight in planning better professional development for instructors at higher education institutions. Many times professional development is generalized for an educational group. It is essential that visual art departments gauge visual art instructor experience through technology experience survey and plan specific professional development opportunities in meeting instructor individual needs. This supports instructor ownership by addressing practical problems instructors may have and gaining experience in specific technology that supports solving these problems. Research results show us that gaining experience with five main online educational technologies, attitudes toward teaching online will increase, providing an educational environment that supports effective teaching and learning.

This also projects light onto visual art andragogy goals for increasing instructor attitude by incorporating online educational technologies in higher education program requirements and establishing community of practice throughout visual art departments at higher education institutions in the United States. Community of practice is defined as "a group of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly" (Wenger-Trayner, 2011). Visual art instructor collaborative learning through community of practice provides instructor insight and support in learning new technologies. Educational technology community of practice may be established within a university visual art

department or may be established throughout visual art departments at multiple higher education institutions that have similar program goals. Social networking software and communication software may be utilized in providing a foundation for community of practice throughout visual art departments at multiple higher education institutions, providing instructor learning with the technologies needed for online instruction. It is suggested that research implications of practice incorporates visual art instructor professional development focused on educational technologies and also provide instructor community of practice to further support visual art instructors' learning. This will increase visual art instructors' attitudes toward online visual art courses, supporting the shift of visual art courses online.

Given that, there is need for more research regarding visual art instructors' attitudes toward online visual art courses, visual art instructors' perspectives toward online education instructor incentives, and visual art instructors' technology experience.

Recommendations

Findings suggest instructors' need for professional development with five main technologies that support an online environment. Without proper training, instructors may struggle in organizing an enriched experience for students participating in an online environment (Brooks, 2003; Kim & Bonk, 2006; Stammen & Schmidt, 2001, Twigg, 2001). Supporting instructor knowledge and experience of the online educational environment will have a positive effect on visual art instructors' attitudes toward online visual art courses. Technology experience gained through professional development increases instructors' self-worth with knowledge gain and also provides instructors professional mobility, increasing instructors' well-being and instructors' attitudes toward visual art online courses (Gallup World Poll, 2010; Rath & Harter, 2010; Yung & Cornelious, 2005; Valentine, 2002).

Following research review, it is suggested that visual art departments focus on professional development with five main technologies, progressing visual art instructors' attitudes toward visual art online courses to move forward in creating productive online courses. Professional development may be provided on location or may include external conferences and workshops that focus specifically on experience with the five main technologies that support an online classroom. Visual art instructor technology professional development should be offered in a non-generic manner, meeting specific needs of the instructor through tailored professional development plans and addressing specific problems through practical experience. It is also suggested that visual art departments gauge visual art instructor experience through technology experience survey and plan specific professional development opportunities in meeting instructor individual needs. Providing instructors with specific technology experience will not only support visual art instructors' professional well-being, but also increase instructors' attitudes toward visual art courses.

It is also suggested that higher education institutions provide instructors with continual community of practice in supporting visual art instructor continual learning and growth with the five main technologies that support on online environment. Visual art instructor community of practice supports instructor implications for practice, scoping visual art online course advancements.

Recommendations for further research regarding visual art instructors' attitude toward online visual art courses, visual art instructors' perspectives toward online education instructor incentives, and visual art instructors' technology experience:

1. Since the current study focused on visual art instructors' perspectives toward online education instructor incentives, a further study should be planned regarding higher education current incentives provided for visual art instructors teaching online. What incentives are visual art instructors receiving for teaching online?
2. Combination of research correlation results, linear regressions results, and instructor incentives rank order of importance provides insight in planning better professional development for instructors at higher education institutions. The results of this study show that as visual art instructors' experience with five main technologies that support an online environment increases visual art instructors' attitude toward online visual art courses. Research findings suggest that visual art instructors' attitudes may improve if instructors were offered professional development focusing on five main technologies that support an online classroom. A further study should be planned to determine current professional development opportunities for higher education visual art instructors teaching online. What professional development opportunities are provided for visual art instructors teaching online?

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APPENDIX A. INSTITUTIONAL REVIEW BOARD EXEMPTION

NDSU NORTH DAKOTA STATE UNIVERSITY

Institutional Review Board
Office of the Vice President for Research, Creative Activities and Technology Transfer
NDSU Dept. 4000
1735 NDSU Research Park Drive
Research 1, P.O. Box 6050
Fargo, ND 58108-6050

701.231.8995
Fax 701.231.8098

Federalwide Assurance #FWA00002439

Tuesday, January 22, 2013

Claudette Peterson
School of Education

Re: IRB Certification of Exempt Human Subjects Research:
Protocol **#HE13107 , "Visual Art Instructors Attitude, Perspective, and Experience with Online Education"**

Co-investigator(s) and research team: **Misti D. Vogle**

Certification Date: 1/22/2013 Expiration Date: 1/21/2016
Study site(s): **varied**
Funding: **n/a**

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, *Protection of Human Subjects*). This determination is based on protocol and consent emails (received 1/22/2013).

Please also note the following:

- If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
- Conduct the study as described in the approved protocol. If you wish to make changes, obtain approval from the IRB prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
- Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- Report any significant new findings that may affect the risks and benefits to the participants and the IRB.
- Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.

Sincerely,
Kristy Shirley
Kristy Shirley, CIP, Research Compliance Administrator

NDSU is an EO/AA university.

APPENDIX B. CALL FOR RESPONDENTS LETTER

NDSU – North Dakota State University
Department of Education
SGC Suite C Rm#117
NDSU Dept. #2625
PO Box 6050
Fargo, ND 58108-6050

NDSU RESEARCH STUDY

Accredited University Visual Art Instructor Attitudes Toward Online Visual Art Courses, Instructor Perspectives Toward Online Education Instructor Incentives, and Instructor Experiences With Five Main Educational Technologies In Accredited Higher Education Institutions in the United States.

Dear Visual Art Instructor:

Would you be willing to express your viewpoint on distance education related to your field? Whether you work for a technical, 2-year, or 4-year school, your opinions are important to us!

We hope you will invest a little time by letting your voice be heard. This study is intended to provide insight into the visual art education impacts for distance education technologies.

This research survey should take about ten minutes to complete online and may be accessed by clicking on the link provided. Data collection is anonymous, not even the researcher will know who participated in the study. We may publish the results of the study; however we

will keep your name and other identifying information private. By clicking the link provided you are indicating consent for use of your responses in this study.

If you have any items about this project, please contact me at 701.290.9853, misti.vogle@sendit.nodak.edu *o*r contact my advisor, Claudette Peterson at 701.231.7085, claudette.peterson@ndsu.edu. If you have items about the rights of human participants in research, or to report a problem, contact the NDSU Institutional Review Board (IRB) Office, at (701) 231.8908, or ndsu.irb@ndsu.edu.

Thank you for your participation in this study. If you wish to receive a copy of the research results, please email me at misti.vogle@sendit.nodak.edu, or call me at (701) 290-9853.

Thank you for your participation in this study.

Sincerely, Misti Vogle, NDSU Graduate Students

APPENDIX C. CALL FOR RESPONDENTS REMINDER LETTER

NDSU – North Dakota State University
Department of Education
SGC Suite C Rm#117
NDSU Dept. #2625
PO Box 6050
Fargo, ND 58108-6050

NDSU RESEARCH STUDY

Dear Visual Art Instructor:

If you have already filled out the survey regarding the perspectives of visual art instructors, please accept our thanks. If you have not yet completed the anonymous survey, please take a few minutes and do so now. You can click on the following link to participate in this voluntary study.

This research survey should take about ten minutes to complete online and may be accessed by clicking on the link provided. Data collection is anonymous, not even the researcher will know who participated in the study. We may publish the results of the study; however, we will keep your name and other identifying information private. By clicking the link provided you are indicating consent for use of your responses in this study.

Please click the following link to participate in this voluntary study. You may choose not to participate or quit participating at any time.

https://tt1.opinio.net:443/s?s=16405

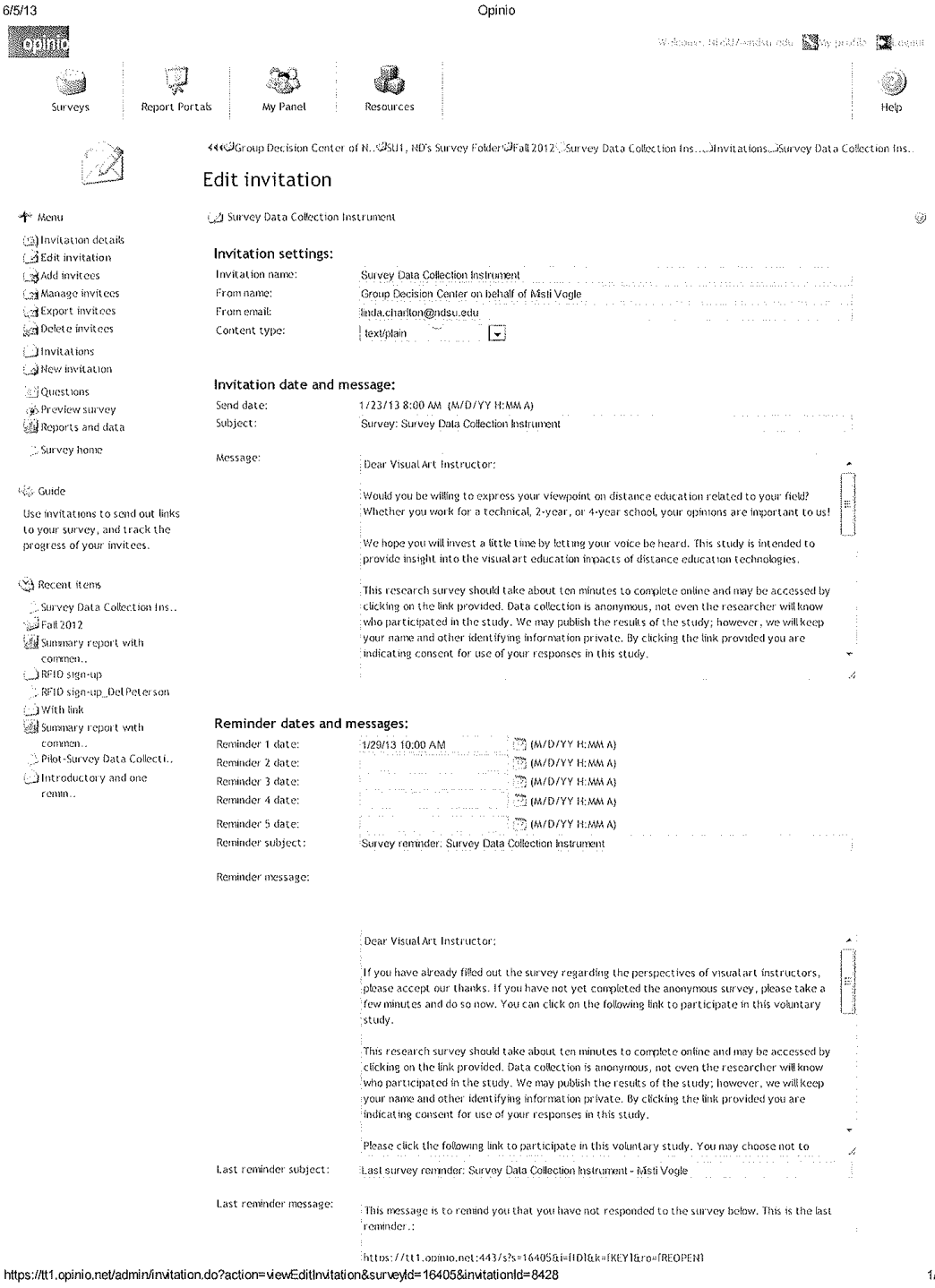
If you have any items about this project, please contact me at 701.290.9853, misti.vogle@sendit.nodak.edu *o*r contact my advisor, Claudette Peterson at 701.231.7085, claudette.peterson@ndsu.edu. If you have items about the rights of human participants in research, or to file a complaint, contact the NDSU Institutional Review Board (IRB) Office, at (701) 231.8908, or ndsu.irb@ndsu.edu.

Thank you in advance for your participation in this voluntary study.

Misti D. Vogle
Graduate Student,
Education Doctoral Programs
North Dakota State University

Claudette M. Peterson, Ed.D.
Assistant Professor,
Education Doctoral Programs
North Dakota State University

APPENDIX D. NDSU GROUP DECISION CENTER INTRODUCTION AND REMINDER LETTER



6/5/13 Opinio

opinio

Surveys | Report Portals | My Panel | Resources | Help

Group Decision Center of N... SU1, ND's Survey Folder Fall 2012 Survey Data Collection Ins... Invitations... Survey Data Collection Ins...

Edit invitation

Menu
- Invitation details
- Edit invitation
- Add invitees
- Manage invitees
- Export invitees
- Delete invitees
- Invitations
- New invitation
- Questions
- Preview survey
- Reports and data
- Survey home

Guide

Use invitations to send out links to your survey, and track the progress of your invitees.

Recent items
- Survey Data Collection Ins...
- Fall 2012
- Summary report with commen...
- RFID sign-up
- RFID sign-up_DelPeterson
- With link
- Summary report with commen...
- Pilot-Survey Data Collecti...
- Introductory and one remin...

Survey Data Collection Instrument

Invitation settings:

Invitation name:	Survey Data Collection Instrument
From name:	Group Decision Center on behalf of Misti Vogle
From email:	linda.charlton@ndsu.edu
Content type:	text/plain

Invitation date and message:

Send date:	1/23/13 8:00 AM (M/D/YY H:MM A)
Subject:	Survey: Survey Data Collection Instrument

Message:

Dear Visual Art Instructor:

Would you be willing to express your viewpoint on distance education related to your field? Whether you work for a technical, 2-year, or 4-year school, your opinions are important to us!

We hope you will invest a little time by letting your voice be heard. This study is intended to provide insight into the visual art education impacts of distance education technologies.

This research survey should take about ten minutes to complete online and may be accessed by clicking on the link provided. Data collection is anonymous, not even the researcher will know who participated in the study. We may publish the results of the study; however, we will keep your name and other identifying information private. By clicking the link provided you are indicating consent for use of your responses in this study.

Reminder dates and messages:

Reminder 1 date:	1/29/13 10:00 AM (M/D/YY H:MM A)
Reminder 2 date:	(M/D/YY H:MM A)
Reminder 3 date:	(M/D/YY H:MM A)
Reminder 4 date:	(M/D/YY H:MM A)
Reminder 5 date:	(M/D/YY H:MM A)
Reminder subject:	Survey reminder: Survey Data Collection Instrument

Reminder message:

Dear Visual Art Instructor:

If you have already filled out the survey regarding the perspectives of visual art instructors, please accept our thanks. If you have not yet completed the anonymous survey, please take a few minutes and do so now. You can click on the following link to participate in this voluntary study.

This research survey should take about ten minutes to complete online and may be accessed by clicking on the link provided. Data collection is anonymous, not even the researcher will know who participated in the study. We may publish the results of the study; however, we will keep your name and other identifying information private. By clicking the link provided you are indicating consent for use of your responses in this study.

Please click the following link to participate in this voluntary study. You may choose not to

Last reminder subject:	Last survey reminder: Survey Data Collection Instrument - Misti Vogle

Last reminder message:

This message is to remind you that you have not responded to the survey below. This is the last reminder.:

https://tt1.opinio.net:443/s?s=16405&i=[ID]&k=[KEY]&ro=[REOPEN]

https://tt1.opinio.net/admin/invitation.do?action=viewEditInvitation&surveyId=16405&invitationId=8428 1/2

Remind incomplete respondents:

Save Cancel

Copyright 1998-2013 ObjectPlanet

APPENDIX E. REPORT OF UNANTICIPATED EVENT APPROVAL

Institutional Review Board ...for the protection of human participants in research

North Dakota State University
Sponsored Programs Administration
1735 NDSU Research Park Drive
NDSU Dept #4000
PO Box 6050
Fargo, ND 58108-6050 231-8908(ph) 231-8098(fax)

Date of Receipt RECEIVED JAN 31 2013 INSTITUTIONAL REVIEW BOARD

Report of Unanticipated Problem or Serious Adverse Event

Investigators must report possible unanticipated problems and serious adverse events to the IRB within 72 hours of knowledge of the incident, experience or outcome. Reference: SOP 7.7.

Unanticipated problem involving risks to subjects or others: any incident, experience, or outcome that is unexpected (in terms of nature, severity, or frequency), and possibly related to research participation. Not all unanticipated problems may result in actual harm, but may only represent risk of harm (*physical, psychological, economic, legal, social, etc)* to participants.

Adverse event: any untoward or unfavorable medical occurrence (physical or psychological) in a human subject, including any abnormal sign, symptom, or disease, temporally associated with the subject's participation in the research, whether or not considered related to their research participation

Serious adverse event: any adverse event that meets any of the following criteria: results in death, is life-threatening, requires hospitalization, results in persistent or significant disability, results in congenital anomaly, may jeopardize subject's health or may require medical intervention to prevent any of the other outcomes listed here.

Protocol #: **#HE13137** Title of Project: **Visual Art Instructors Attitude, Perspective, and Experience with Online Education**

Principal Investigator: **Dr. Claudette Peterson**

Report submitted by: Misti D. Vogle Role in research project: Graduate Student

Signature: Claudette Peterson Date: 1/31/2013

1. **Type of problem:**

- ☐ breach of confidentiality (ie, lost or stolen data, or unauthorized access)
- ☐ unexpected participant harm possibly related to the research
- ☐ identification of previously unforeseen risks to participants
- ☐ protocol change/deviation implemented without prior IRB approval to prevent immediate harm
- ☒ complaint from participants or others that cannot be resolved by investigator
- ☐ other unanticipated problem involving risks that were not identified in protocol or consent form

2. **Describe the problem or event, including whether or not any subject experienced harm:**

The NDSU Decision Center software had a fault in messaging possible population for the the survey study. The survey study was set up to send out one email introduction message to each possible participant. The NDSU

Decision Center software sent out ten messages to each email.

3. Describe any immediate or proposed actions in response to the problem:

Linda Charlton-Gunderson, the Technology Coordinator at the Decision Center was asked by a participant why the survey was sent out so many times. We have conferred with Linda and still is a problem going back to multiple messages being sent out for SROIs in Fall 2012. She says the problem will not be resolved anytime soon. We propose send the reminder email (that was already approved by the IRB) to the population using the researcher's NDSU email address. We have confirmed with the GDC that the system will accept the data from participants if we are the ones emailing the link.

4. Does the problem/event alter the level of risk to past, present or future participants?

☐ yes
☒ no
☐ Unknown

Explain:

5. Based on your judgment, should currently enrolled subjects, or those completing the study be notified?

☒ yes
~~☒ no~~

Explain:

Getting extra copies of an email does not harm the participants, so we prefer not to add addditional email traffic to them.

6. Based on your judgment, should this problem/event be added to the protocol and consent form as a potential risk or discomfort?

☐ yes - provide revised consent form
☒ no - explain why this should not be necessary:

We will avoid using the GDC software for this research, so participants will not receive multiple emails for the followup reminder. for reminder emails. Data will still be collected through GDC per M. Vogle.

- - - - - - - - - - -FOR IRB OFFICE USE ONLY - - - - - - - -

Reviewed by: ☒ Expedited method or ☐ Full Board on _____	
Corrective actions: ☐ Not required ☒ Required; see comments Comments: Please add language to the reminder email explaining the issue with the initial email and apologizing for inconvenience. Provide a copy of revised reminder to IRB prior to sending for final OK. External report to OHRP, funding sponsor, other entities: ☒ Not required ☐ Required	
IRB Signature: Kristy Shirley	Date: 1/31/2013

APPENDIX F. UNANTICPATED EVENT SURVEY REMINDER LETTER

Dear Visual Art Instructor:

If you have already filled out the survey regarding the perspectives of visual art instructors, please accept our thanks. We apologize for any inconvenience resulting from the receipt of extra recruitment emails. The software utilized for recruitment sent multiple emails and may have gone to a spam folder. To resolve this issue the North Dakota State University email system is now being utilized to send out this recruitment email. If you have not yet completed the anonymous survey, please take a few minutes and do so now. You can click on the following link to participate in this voluntary study.

This research survey should take about ten minutes to complete online and may be accessed by clicking on the link provided. Data collection is anonymous, not even the researcher will know who participated in the study. We may publish the results of the study; however, we will keep your name and other identifying information private. By clicking the link provided you are indicating consent for use of your responses in this study.

Please click the following link to participate in this voluntary study. You may choose not to participate or quit participating at any time.

https://tt1.opinio.net:443/s?s=16405

If you have any items about this project, please contact me at 701.290.9853, misti.vogle@sendit.nodak.edu *o*r contact my advisor, Claudette Peterson at 701.231.7085, claudette.peterson@ndsu.edu. If you have items about the rights of human participants in research, or to file a complaint, contact the NDSU Institutional Review Board (IRB) Office, at (701) 231.8908, or ndsu.irb@ndsu.edu.

Thank you in advance for your participation in this voluntary study.

Misti D. Vogle
Graduate Student,
Education Doctoral Programs
North Dakota State University

Claudette M. Peterson, Ed.D.
Assistant Professor,
Education Doctoral Programs
North Dakota State University

NORTH DAKOTA STATE UNIVERSTIY
School of Education
210 Family Life Center
Fargo, ND 58108-6050
Phone: 701.231.7085
Fax: 701.231.7416

APPENDIX G. IRB AMENDMENT APPROVAL

Institutional Review Board ...for the protection of human participants in research

North Dakota State University
Sponsored Programs Administration
1735 NDSU Research Park Drive
NDSU Dept #4000
PO Box 6050
Fargo, ND 58108-6050 231-8995(ph) 231-8098(fax)

Date of Receipt
RECEIVED
MAR 1 2 2013
INSTITUTIONAL REVIEW BOARD

Protocol Amendment Request Form

Changes to approved research may not be initiated without prior IRB review and approval, except where necessary to eliminate apparent immediate hazards to participants. Reference: SOP 7.5 Protocol Amendments.

Examples of changes requiring IRB review include, but are not limited to changes in: investigators or research team members, purpose/scope of research, recruitment procedures, compensation scheme, participant population, research setting, interventions involving participants, data collection procedures, or surveys, measures or other data forms.

Protocol Information:

Protocol #: ~~HE13107~~ HE13107 (R) Title: **Visual Art Instructors Attitude, Perspectives, and Experience with Online Education**

Review category: ☒ Exempt ☐ Expedited ☐ Full board

Principal investigator: **Dr. Claudette Peterson** Email address: **Claudette.Peterson@ndsu.edu**
Dept: **Education**

Co-investigator: **Misti Vogle** Email address: **Misti.Vogle@sendit.nodak.edu**
Dept: **Education Graduate Student**

Principal investigator signature, Date: Claudette Peterson 3/5/2013

In lieu of a written signature, submission via the Principal Investigator's NDSU email constitutes an acceptable electronic signature.

Description of proposed changes:

1. Date of proposed implementation of change(s)*: ~~**March 5, 2013**~~ 3/13/13
   ** Cannot be implemented prior to IRB approval unless the IRB Chair has determined that the change is necessary to eliminate apparent immediate hazards to participants.*

2. Describe proposed change(s), including justification:
   It is proposed that a second reminder letter for survey participation will be sent out in response to the unanticipated problem that occurred in sending out the first introductory letter to possible participants. The NDSU Decision Center software faulted in sending each participant one introductory letter. Instead, the software sent out ten introductory letters to each possible participant. It is possible that this software issue caused the introductory letter to be filtered by spam email and participants may not have received the introductory email. The software issue

was filed with IRB under an unanticipated problem report. IRB granted approval to send out an apology with a reminder letter for possible participants to participate in the survey. Survey participation is lower than the desired amount of possible participants. To achieve a higher response rate it is proposed that a second reminder letter be sent out.

3. Will the change involve a change in principal or co- investigator?
   ☒ No - skip to Question 4
   ☐ Yes:
   - *Include an Investigator's Assurance (last page of protocol form), signed by the new PI or co-investigator*
   - *Conflict of Interest disclosure.* Does any investigator responsible for the design, conduct or reporting of the project (including their immediate family members) have a financial, personal or political interest that may conflict with their responsibility for protecting human participants in NDSU research? (*SOP 6.2 Conflict of Interest in Human Research, Investigator and Research Team)*

     ☐ No – As PI, I attest that I have conferred with my co-investigators and key personnel and confirmed that no financial, personal or political interests currently exist related to this research.
     ☐ Yes – Describe the related financial, personal or political interests, and **attach documentation of COI disclosure and review** *(as applicable).*

     Financial, personal or political interests related to the research (the sponsor, product or service being tested, or a competing product or service) may include:
     - compensation (e.g., salary, payment for services, consulting fees)
     - intellectual property rights or equity interests
     - board memberships or executive positions
     - enrollment or recruitment bonus payments

     (Refer to *NDSU Policy 151.1, External Activities and Conflicts of Interest, and NDSU Policy 823, Financial Disclosure – Sponsored Projects* for specific disclosure requirements.)

Note: If the change is limited to addition/change in research team members, skip the rest of this form.

4. Will the change(s) increase any risks, or present new risks *(physical, economic, psychological, or sociological)* to participants?
   ☒ No
   ☐ Yes: *In the appropriate section of the protocol form, describe new or altered risks and how they will be minimized.*

5. Does the proposed change involve the addition of a vulnerable group of participants?
   Children: ☒ no ☐ yes – include the *Children in Research* attachment form
   Prisoners: ☒ no ☐ yes – include the *Prisoners in Research* attachment form
   Cognitively impaired individuals: ☒ no ☐ yes*
   Economically or educationally disadvantaged individuals: ☒ no ☐ yes*

   **Provide additional information where applicable in the revised protocol form.*

6. Does the proposed change involve a request to waive some or all the elements of informed consent or documentation of consent?
   ☒ no

☐ yes – include the *Informed Consent Waiver or Alteration Request* attachment form

7. Does the proposed change involve a new research site?
   ☒ no
   ☐ yes – include a letter of permission/cooperation, IRB approval, or grant application or contract

If information in your previously approved protocol has changed, or additional information is being added, incorporate the changes into relevant section(s) of the protocol. Highlight (e.g. print and highlight the hard copy, or indicate changes using all caps, asterisks, etc) the changed section(s) and attach a copy of the revised protocol to this form. *(If the changes are limited to addition/change in research team members, a revised protocol form is not needed.)*

Impact for Participants (future, current, or prior):

1. Will the change(s) alter information on previously approved versions of the recruitment materials, informed consent, or other documents, or require new documents?
   ☒ No
   ☐ Yes - attach revised/new document(s)

2. Could the change(s) affect the willingness of *currently* enrolled participants to continue in the research?
   ☒ No
   ☐ Yes - describe procedures that will be used to inform current participants, and re-consent, if necessary:

3. Will the change(s) have any impact to *previously* enrolled participants?
   ☒ No
   ☐ Yes - describe impact, and any procedures that will be taken to protect the rights and welfare of participants:

---------- FOR IRB OFFICE USE ONLY ----------

Request is: ☒ **Approved** ☐ **Not Approved**

Review: ☒ **Exempt, category#:** 2 ☐ **Expedited method, category #** ____ ☐ **Convened meeting, date:** ____

IRB Signature: Kristy Shirley **Date:** 3/13/13

Comments:

Protocols previously declared exempt: (Allow 5 working days) If the proposed change does not alter the exemption

status, the change may be administratively reviewed by qualified IRB staff, chair, or designee. If the change(s) would alter this status, Expedited or Full Board review will be required.

Protocols previously reviewed by the expedited method: (Allow 10 working days) Most changes may also be reviewed by the expedited method, unless the change would increase risks to more than minimal, and/or alter the eligibility of the project for expedited review.

Protocols previously reviewed by the full board: Minor changes (not involving more than minimal risks, or not significantly altering the research goals or design) may be reviewed by the expedited method (allow 10 working days). Those changes determined by the IRB to be more than minor will require review by the full board (due 10 working days prior to next scheduled meeting).

APPENDIX H. AMENDMENT SURVEY ACCESS REMINDER

Dear Visual Art Instructor:

If you have already filled out the survey regarding the perspectives of visual art instructors, please accept our thanks. We apologize for any inconvenience resulting from the receipt of extra recruitment emails. The software utilized for recruitment sent multiple emails and may have gone to a spam folder. To resolve this issue the North Dakota State University email system is now being utilized to send out this recruitment email. If you have not yet completed the anonymous survey, please take a few minutes and do so now. You can click on the following link to participate in this voluntary study.

This research survey should take about ten minutes to complete online and may be accessed by clicking on the link provided. Data collection is anonymous, not even the researcher will know who participated in the study. We may publish the results of the study; however, we will keep your name and other identifying information private. By clicking the link provided you are indicating consent for use of your responses in this study.

Please click the following link to participate in this voluntary study. You may choose not to participate or quit participating at any time.

https://tt1.opinio.net:443/s?s=16405

If you have any items about this project, please contact me at 701.290.9853, misti.vogle@sendit.nodak.edu *o*r contact my advisor, Claudette Peterson at 701.231.7085, claudette.peterson@ndsu.edu. If you have items about the rights of human participants in research, or to file a complaint, contact the NDSU Institutional Review Board (IRB) Office, at (701) 231.8908, or ndsu.irb@ndsu.edu.

Thank you in advance for your participation in this voluntary study.

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APPENDIX I. SURVEY DATA COLLECTION INSTRUMENT

https://tt1.opinio.net/s?s=16392

Instructions:
Please select the answer that most accurately describes your attitude towards online visual art courses ranging from Strongly Disagree to Strongly Agree.

1. The online environment supports a positive learning environment for online visual art courses.	Strongly Disagree	Disagree	Agree	Strongly Agree
2. Students are able to learn the same material in an online learning environment as in a classroom environment.	Strongly Disagree	Disagree	Agree	Strongly Agree
3. I would be interested in learning more regarding online visual art courses.	Strongly Disagree	Disagree	Agree	Strongly Agree
4. The online environment supports hands-on learning that a visual art classroom does.	Strongly Disagree	Disagree	Agree	Strongly Agree
5. The online classroom environment supports student/peer collaboration.	Strongly Disagree	Disagree	Agree	Strongly Agree

Instructions:
Please select the answer that most accurately describes your perception towards distance education instructor incentives ranging from Strongly Disagree to Strongly Agree.

6. Administration support is important for distance education faculty participation.	Strongly Disagree	Disagree	Agree	Strongly Agree
7. Professional development is necessary for distance art educators.	Strongly Disagree	Disagree	Agree	Strongly Agree
8. Distance art educators need release time for proper teaching preparation.	Strongly Disagree	Disagree	Agree	Strongly Agree
9. Distance art educators should receive additional compensation.	Strongly Disagree	Disagree	Agree	Strongly Agree
10. Incentives need to be consistent among distance education faculty.	Strongly Disagree	Disagree	Agree	Strongly Agree

Instructions:
Please select the answer that most accurately describes your instructor experience with five main technologies that support an online classroom for teaching ranging from Strongly Disagree to Strongly Agree.

11. I have experience with Education Social Social Software programs such as Blackboard, or Moodle. If other please list:_____	Strongly Disagree	Disagree	Agree	Strongly Agree
12. I have experience with social networking software such as Ning or Facebook in the classroom. If other please list:_____	Strongly Disagree	Disagree	Agree	Strongly Agree
13. I have experience with online communication software such as web logs or wikis in the classroom. If other please list:_____	Strongly Disagree	Disagree	Agree	Strongly Agree
14. I have experience with video software such as Tegrity, Youtube, or vlogs in the classroom. If other please list:_____	Strongly Disagree	Disagree	Agree	Strongly Agree
15. I have experience with online grading systems such as WebCT, Blackboard, or Moodle. If other please list:_____	Strongly Disagree	Disagree	Agree	Strongly Agree

Directions: Please provide the following information about yourself by typing in the answer in the space provided.

16. Your age:_____

17. Classification of institution employed (select one): (2-year, Technical, or 4-year institution)_____

18. Years employed by a school accredited by the National Association of Schools of Art and Design: _____

19. Highest Level of Education (select one): Bachelors, Masters, Master of Fine Arts, or Doctorate

20. Additional Specialization Degree:_____

Subject to formatting changes by the Group Decision Center web design.

APPENDIX J. NDSU GROUP DECISION CENTER SURVEY

Close preview

Survey Data Collection Instrument

The purpose of this quantitative study is to review accredited university visual art instructor attitudes toward online visual art courses, instructor perspectives towards online education instructor incentives, and experiences with five main educational technologies in accredited higher education institutions in the United States.

1. Instructions:
Please select the answer that most accurately describes your attitude towards online visual art courses ranging from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Agree	Strongly Agree
The online environment supports a positive learning environment for online visual art courses.	○	○	○	○
Students are able to learn the same material in an online learning environment as in a classroom environment.	○	○	○	○
I would be interested in learning more regarding online visual art courses.	○	○	○	○
The online environment supports hands-on learning that a visual art classroom does.	○	○	○	○
The online classroom environment supports student/peer collaboration.	○	○	○	○

2. Instructions:
Please select the answer that most accurately describes your perception towards online education instructor incentives ranging from Strongly Disagree to Strongly Agree.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Administration support is important for online education faculty participation.	○	○	○	○
Professional development is necessary for online art educators.	○	○	○	○
Online art educators need release time for proper teaching preparation.	○	○	○	○
Online art educators should receive additional compensation.	○	○	○	○
Incentives need to be consistent among online education faculty.	○	○	○	○

Instructions:
Please select the answer that most accurately describes your instructor experience with five main technologies that support an online classroom for teaching ranging from Strongly Disagree to Strongly Agree.

3. I have experience with Education Social Social Software programs such as Blackboard, or Moodle. If other please list: ○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

4. I have experience with social networking software such as Ning or Facebook in the classroom. If other please list: ○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

5. I have experience with online communication software such as web logs or wikis in the classroom. If other please list: ○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

6. I have experience with video software such as Tegrity, Youtube, or vlogs in the classroom. If other please list: ○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

7. I have experience with online grading systems such as WebCT, Blackboard, or Moodle. If other please list: ○ Strongly Disagree ○ Disagree ○ Agree ○ Strongly Agree

Directions: Please provide the following information about yourself by typing in the answer in the space provided or select the most accurate answer.

8. Your age: in years

Your age. [ ] in years

9. Classification of institution employed (select one) ◯ 2-year ◯ Technical ◯ 4-year institution

10. Years employed by a school accredited by the National Association of Schools of Art and Design. [ ] Years

11. Highest level of education (select one) ◯ Bachelors ◯ Masters ◯ Master of Fine Arts ◯ Doctorate

12. Additional Specialization Degree:

[ ]

Finish

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APPENDIX K. SURVEY ITEM RESULTS

Table K1

Response to Survey Question "The online environment supports a positive learning environment for online visual art courses. (Choose One)"

Response	*n*	%
Strongly Disagree	21	16.3
Disagree	55	42.6
Agree	49	38.0
Strongly Agree	3	2.3
Non-response (M=2.27)	1	.8
Total	129	100.0

Mean	2.2657	Median	2.00	Mode	2	SD	.75503

Note. N = 129.

Table K2

Response to Survey Question "Students are able to learn the same material in an online learning environment as in a classroom environment. (Choose One)"

Response	*n*	%
Strongly Disagree	73	56.6
Disagree	47	36.4
Agree	7	5.4
Strongly Agree	2	1.6
Non-response	0	0
Total	129	100.0

Mean	1.5194	Median	1.00	Mode	1	SD	.67431

Note. N = 129.

Table K3

Response to Survey Question "I would be interested in learning more regarding online visual art courses (Choose One)"

Response	*n*	%
Strongly Disagree	22	17.1
Disagree	26	20.2
Agree	67	51.9
Strongly Agree	10	7.8
Non-response (M = 2.27)	4	3.1
Total	129	100.10

Mean	2.5200	Median	3.00	Mode	3	SD	.86241

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K4

Response to Survey Question "The online environment supports hands-on learning that a visual art classroom does."

Response	*n*	%
Strongly Disagree	70	54.3
Disagree	46	35.7
Agree	11	8.5
Strongly Agree	0	0
Non-response (M = 1.54)	2	1.6
Total	129	100.10

Mean	1.5355	Median	1.00	Mode	1	SD	.64705

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K5

Response to Survey Question "The online classroom environment supports student/peer collaboration."

Response	*n*	%
Strongly Disagree	44	34.1
Disagree	31	24.0
Agree	49	38.0
Strongly Agree	4	3.1
Non-response (M = 2.10)	1	.8
Total	129	100.0

Mean	2.1016	Median	2.00	Mode	3	SD	.91720

Note. N = 129.

Table K6

Response to Survey Question "Administration support is important for online education faculty participation."

Response	*n*	%
Strongly Disagree	2	1.6
Disagree	5	3.9
Agree	61	47.3
Strongly Agree	61	47.3
Non-response	0	0
Total	129	100.10

Mean	3.4031	Median	3.00	Mode	3	SD	.64371

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K7

Response to Survey Question "Professional development is necessary for online art educators."

Response	*n*	%
Strongly Disagree	2	1.6
Disagree	2	1.6
Agree	47	36.4
Strongly Agree	77	59.7
Non-response (M = 3.55)	1	.8
Total	129	100.10

Mean	3.5547	Median	4.00	Mode	4	SD	.60993

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K8

Response to Survey Question "Online art educators need release time for proper teaching preparation."

Response	*n*	%
Strongly Disagree	4	3.1
Disagree	18	14.0
Agree	40	31.0
Strongly Agree	67	51.9
Non-response	0	0
Total	129	100.0

Mean	3.3178	Median	4.00	Mode	4	SD	.82901

Note. N = 129.

Table K9

Response to Survey Question "Distance art educators should receive additional compensation."

Response	*n*	%
Strongly Disagree	9	7.0
Disagree	51	39.5
Agree	33	25.6
Strongly Agree	35	27.1
Non-response (M = 2.73)	1	.8
Total	129	100.0

Mean	2.7343	Median	3.00	Mode	2	SD	.93945

Note. N = 129.

Table K10

Response to Survey Question "Incentives need to be consistent among online education faculty."

Response	*n*	%
Strongly Disagree	6	4.7
Disagree	13	10.1
Agree	65	50.4
Strongly Agree	43	33.3
Non-response (M = 3.14)	2	1.6
Total	129	100.10

Mean	3.1417	Median	3.00	Mode	3	SD	.77786

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K11

Response to Survey Question "I have experience with Education Social Software programs such as Blackboard or Moodle; If other please list."

Response	*n*	%
Strongly Disagree	20	15.5
Disagree	20	15.5
Agree	47	36.4
Strongly Agree	42	32.6
Non-response	0	0
Total	129	100.0

Mean	2.8605	Median	3.00	Mode	3	SD	1.04391

Note. N = 129.

Table K12

Response to Survey Question "I have experience with social networking software programs such as Ning or Facebook in the classroom; If other please list."

Response	*n*	%
Strongly Disagree	18	14.0
Disagree	37	28.7
Agree	54	41.9
Strongly Agree	20	15.5
Non-response	0	0
Total	129	100.10

Mean	2.5891	Median	3.00	Mode	3	SD	.91526

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K13

Response to Survey Question "I have experience with communication software programs such as web logs or wikis in the classroom; If other please list."

Response	*n*	%
Strongly Disagree	15	11.6
Disagree	39	30.2
Agree	47	36.4
Strongly Agree	26	20.2
Non-response (M = 2.66)	2	1.6
Total	129	100.0

Mean	2.6614	Median	3.00	Mode	3	SD	.92888

Note. N = 129.

Table K14

Response to Survey Question "I have experience with video software programs such as Tegrity, Youtube, or vlogs in the classroom; If other please list."

Response	*n*	%
Strongly Disagree	10	7.8
Disagree	22	17.1
Agree	63	48.8
Strongly Agree	33	25.6
Non-response (M = 2.93)	1	.8
Total	129	100.10

Mean	2.9297	Median	3.00	Mode	3	SD	.85863

Note. N = 129. Total of percentage is not 100 because of rounding.

Table K15

Response to Survey Question "I have experience with online grading systems such as WebCT, Blackboard, or Moodle; If other please list."

Response	*n*	%
Strongly Disagree	13	10.1
Disagree	23	17.8
Agree	54	41.9
Strongly Agree	37	28.7
Non-response (M = 2.91)	2	1.6
Total	129	100.10

Mean	2.9056	Median	3.00	Mode	3	SD	.93067

Note. N = 129. Total of percentage is not 100 because of rounding.