

Computer Technology & Visual Arts in Adams 12

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Creating Learning Communities

Spring 2001

Environmental & Cultural Scan

I teach art at Vantage Point Campus, an alternative high school option in the Adams County 12 Five Star School District continuum of educational services. In other words, I work with an at-risk population of students aged 15-20. The Vantage Point morning program serves about 175 students. Though small, we have two computer labs. Funding for our first lab came through support for the afternoon computer assisted instruction program (CAI) that serves expelled students and “recycled” Vantage Point kids. Our second lab was funded with carry over money two years ago, a decision made by the entire staff, and its addition has been a boon to my digital arts class offerings. The VPC community is supportive of technology.

District 12, as a whole is supportive of technology integration and training for students and teachers alike. It is my understanding that every school in the district has a computer lab, or at least a set of computers available for student and teacher use. Our new Superintendent is committed to improving the technological resources for teachers and students, and the school board has allocated additional funding for technology. An updated technology-spending plan is due from each school in late April 2001, setting the stage for the 2001-2002 school year and beyond.

Adams County School District 12 serves families from the five communities of Broomfield, Federal Heights, Northglenn, Thornton, Westminster and unincorporated Adams County. District 12 families are diverse, representing a wide variety of ethnic and socioeconomic backgrounds. In Adams

12 there are over 29,000 students who attend 44 schools located within 62 square miles. The schools include: 26 elementary schools; 7 middle schools, grades 6-8; an alternative middle school program; 4 comprehensive high schools; an alternative high school (Vantage Point); a vocational/technical center; an adult high school diploma program; 3 charter schools, and a variety of special programs.

Of the 26 elementary schools, all but two have art teachers. Our Superintendent has voiced strong support for art and music instruction, and next year all schools will have a licensed art teacher on staff. All of the middle and high schools have art teachers. Every art teacher is a licensed educator, some of whom also serve other functions at their school. For example, one elementary school has a staff member who is half art and half computer technology; at another, there is a teacher who is half art and half Literacy Resource Teacher. We have a lively and active Art Standing Committee, two proactive committee co-chairs, and district support. We have secured the Front Range Community College, Westminster as our annual district art show exhibition venue, and they keep asking us to return. Each year we have been there the show has grown, and thousands of district students and their families attend the show. The arts are alive in Adams 12.

Inquiry Statement

As an art teacher who has developed and implemented a variety of digital curricula for learners of all ages, I am highly interested in computer based activities for all art students. I have been teaching various computer art classes for high school and elementary age students since 1996. Since 1998, I have worked with adult learners. Specifically, I periodically teach other educators how to create and manipulate digital images for use in their teaching. I am an experienced user of the computer as an artistic tool and an avid proponent for K-12 digital arts education.

I am employed by Adams County School District Twelve and hope to be a positive force in my district for the development of digital visual arts curricula. In order to be an effective agent of change, I must be informed about the *actual* state of computer technology in the visual arts programs in Adams 12. I want to know what my colleagues do with computers. Therefore I am curious to know to what extent computer technology is being integrated. I am curious about their attitudes and aptitudes with regard to computer based imaging tools. What factors influence the integration of art and computer technology? Do computers and peripherals have a place in their art programs? What hardware and software are art teachers and their students using? Ultimately, I must determine what kinds of changes are required to support what I believe is important: digital art throughout the K-12 experience.

The Adams Twelve Visual Art Standards do not make specific mention of computer use; however, the Colorado State Model Content Standards for Visual

Arts include suggested grade level expectations that state: “Students will use computer and peripherals to manipulate and create artwork.” (2000, pp. 14, 17, 20, and 24). These expectations begin at fifth grade and continue through twelfth grade. The International Society for Technology in Education (ISTE) lists a variety of performance indicators for technology-literate students, one of which is that prior to completion of Grade 12, “Students will use technology to compile, synthesize, produce and disseminate information, models, and other creative works.” This certainly communicates subtle, yet discernable support for the digital arts in K-12 education. Additionally, on the Colorado Department of Education’s Website (<http://www.cde.state.co.us/>) the educational technology page links to a rubric for student technology standards developed by the Poudre School District. This document contains specific guidelines to support student’s technological literacy. Listed below are three of the five Poudre School Districts’ Curriculum Area Considerations for Art:

“Yearbook design and layout. Using desktop publishing techniques, students will produce, illustrate, layout and manage the production of school yearbooks.

Graphics & Visualization. Using a computer, students will be able to produce graphics and animations and then produce them on videotape, in a photographic slide format, or in printed form. Many of these production facilities may be accessed via a wide area network linking them to a university or commercial production facility.

Production of student projects. Students will use computers, video, sound, and other multi-media sources to write, create and present projects utilizing what they have learned.”

To successfully meet goals such as these, buy-in from all stakeholders (i.e. teachers, administrators, parents, students, and the community) is vital. This type of educational thrust requires commitment to the acquisition of tools and support for ongoing training and maintenance. In order for Adams County School District Twelve Five Star Schools to develop its own technology in the arts guidelines and standards, our stakeholders must value the investment.

What role will I play in this? I will advocate for change backed by personal passion and more importantly, solid research. Before I begin a campaign, I must gather relevant data. Therefore, as a starting point I have conducted an action research project on Computer Technology and the Visual Arts in Adams 12. This revealed the nature of my closest allies, art teachers, so I may serve and influence them more effectively.

Methodology

To determine answers to my research questions I surveyed all art teachers that consented to participate in this study. I crafted an extensive, yet efficient survey to establish understanding with regard to my colleagues' computer aptitudes, use, training experiences, and unmet needs. (See appendix for instrument) The survey contained a variety of questions designed to garner both objective data and subjective commentary. Forty-two requests for participation were sent to each art teacher in Adams 12 on February 26, 2000. Twenty-seven of the 42 art teachers (64%) agreed to participate and submitted completed surveys.

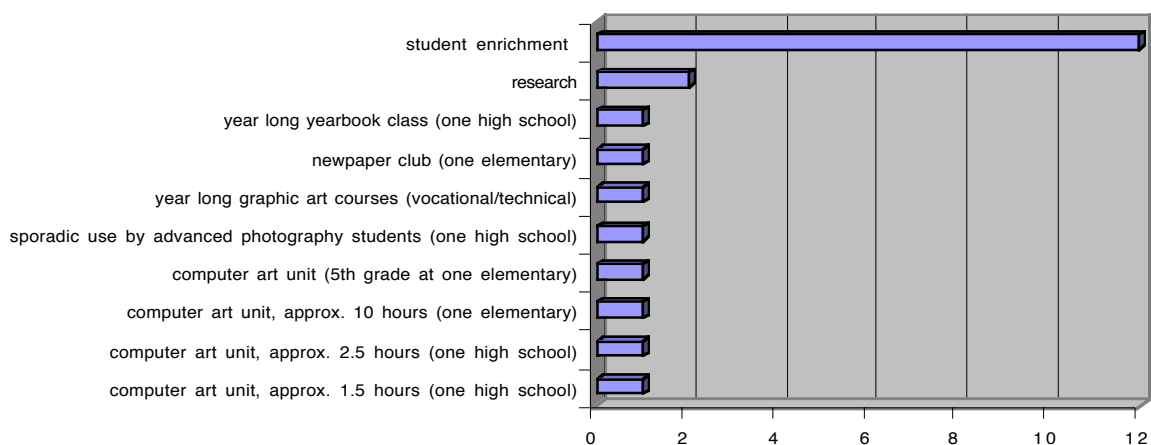
Given the thorough nature of the survey and limited time constraints, I decided not to conduct interviews of my colleagues. The survey results have provided me with an accurate snapshot of the computer arts climate in Adams 12. The outcome of this research has had an impact on my plans for the future. I have discovered that there is need and interest in future training to bring my colleagues up to speed in the realm of digital imaging and computer graphics. I intend to advocate for district support of equitable distribution of technology tools, hands-on training, and ongoing funding for software upgrades and technology support. I may also seek to conduct training sessions for district art teachers as I have expertise to share and I enjoy teaching teachers.

Findings

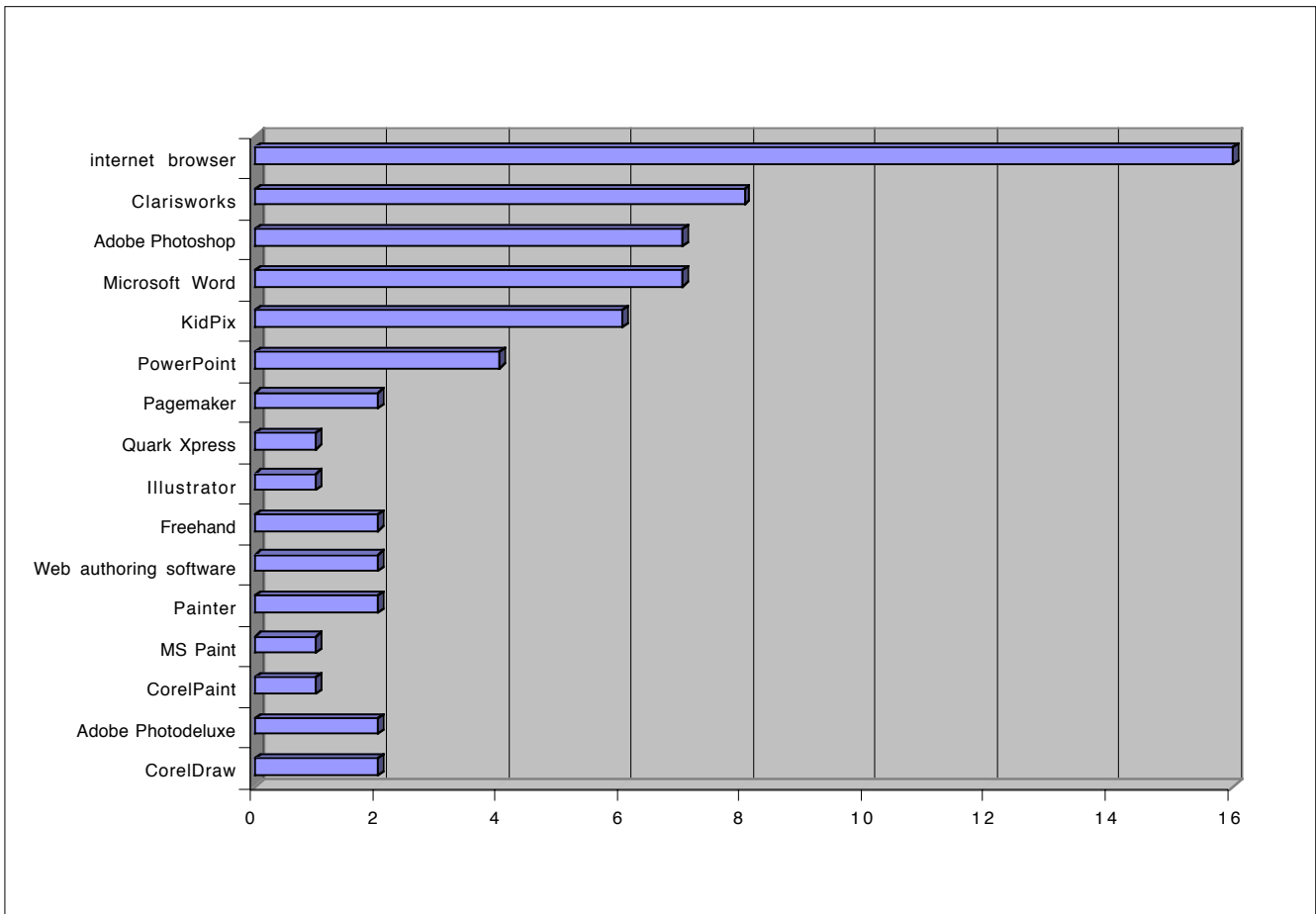
I set out to determine what factors influence the integration of computer technology in the art programs of my district. I wanted to know if computers and peripherals have a place in my colleagues' art classes; and if they do, what do students do with the tools? What software are art teachers and their students using, and why?

I have discovered that 71% of the participants use computers in their teaching, but that only eight of them (29%) teach structured digital imaging and graphic design units and lessons. The majority of computer use, 39%, is for enrichment: students that have finished with regular classroom activities may use the teacher's computer as a bonus. Internet use for research is the second most frequent use of computer technology in the art class.

Nineteen out of 27 (70.5%) participants use computer technology in their classes. The types of activities and their frequency are listed below:



The results regarding student software use also show that most students are not using computers for making art:

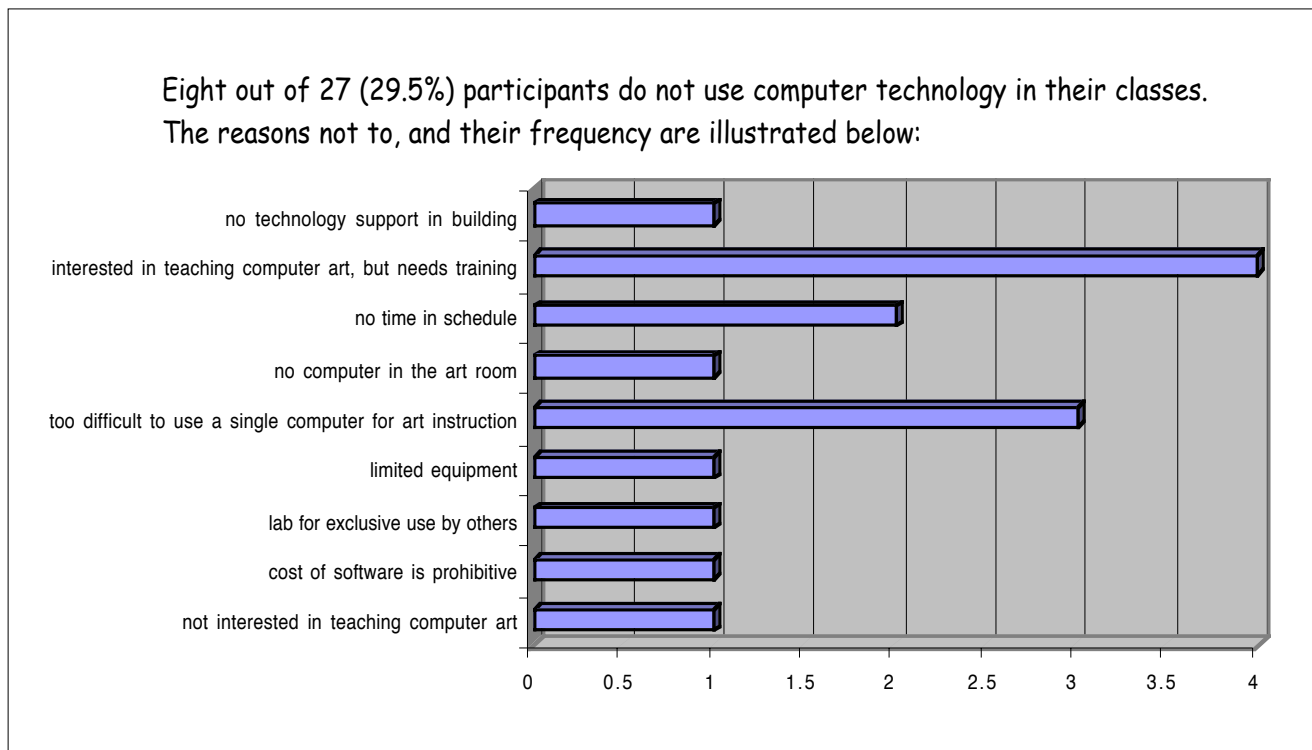


Fifty-two percent of the art teachers and their students have access to a digital camera and scanner, 22% have one or the other, and 26% have neither tool available. This data shows an unacceptable inequity if all students are to have access to what are increasingly considered to be essential tools in the professional as well as creative world. As Ohler (1996, para, 8) convincingly states, “The rapidly growing domain of employment, in which presentation, media, entertainment, and education converge, now embraces the Arts out of necessity.” If the Arts are to have such an influential place in the professional world, so too

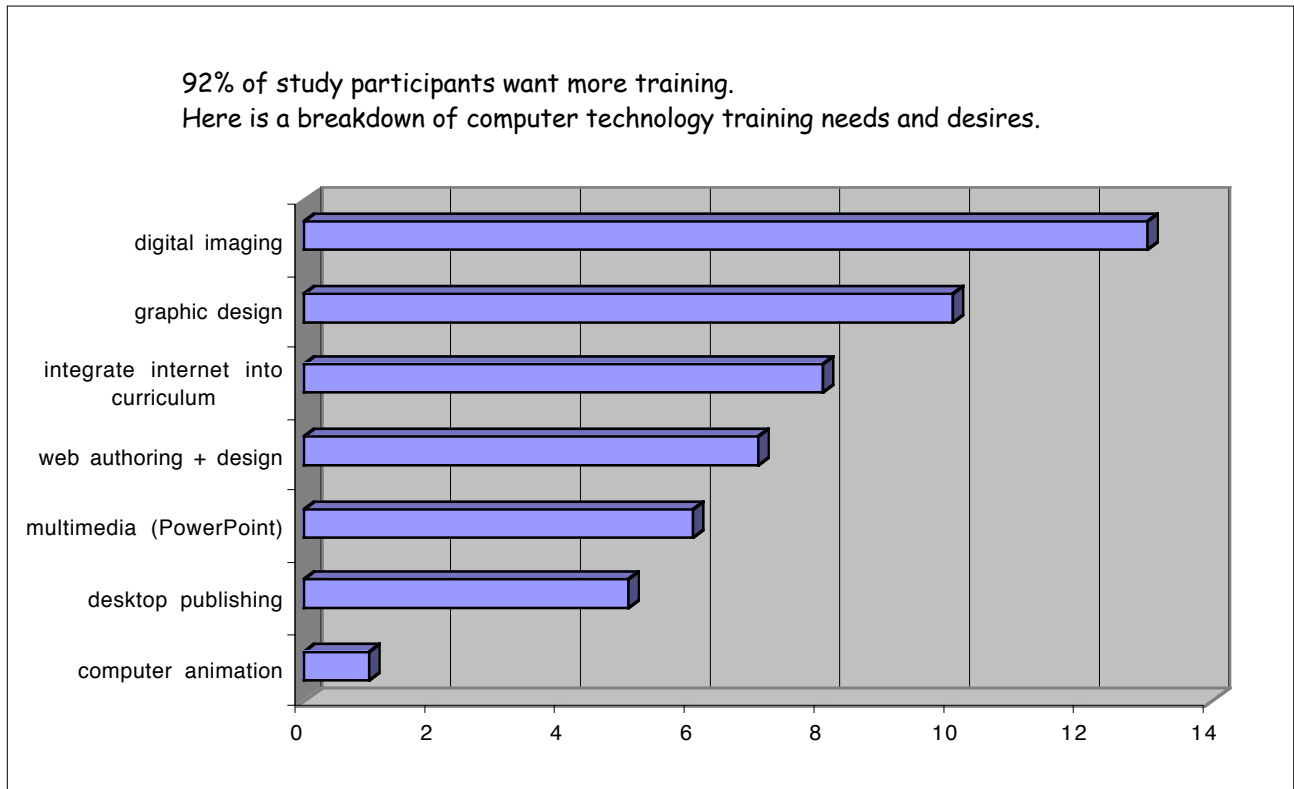
do the artists in training require knowledge and fluency in contemporary tools and technologies.

Most participants indicated comfort and proficiency with computer technology. All have access to computers at work and use them for a variety of purposes. Forty-four percent of the participants use their school's computer lab with students. Also, 44% of art teachers have had some kind of digital arts training. In concert, this data would cause one to assume that more than 29% of the art teachers would be teaching computer based art. We must attain a balance of training, tools, access, and support.

Of those who do not use computers in their work with students, the number one reason is that they have interest, but lack training. The second most frequent reason is that it is too difficult to use a single classroom computer in a meaningful way for all students.



An overwhelming majority of participants in the study, 92%, want more training. Digital imaging and graphic design are the two top areas of interest.



My colleagues are enthusiastic. They do not wish to shy away from new technologies. However, a comment made by one participant, “Time and energy are a problem for all.” is particularly poignant. As I take on the role of a technologically inclined arts leader in my district, I will be faced with challenging obstacles. I will have to expend significant energy and time convincing stakeholders of the benefits of investing in arts and technology integration. If my colleagues receive the training they are asking for, they must also get the access,

tools, and support, both financial and philosophical, to make that training come alive for the students they serve.

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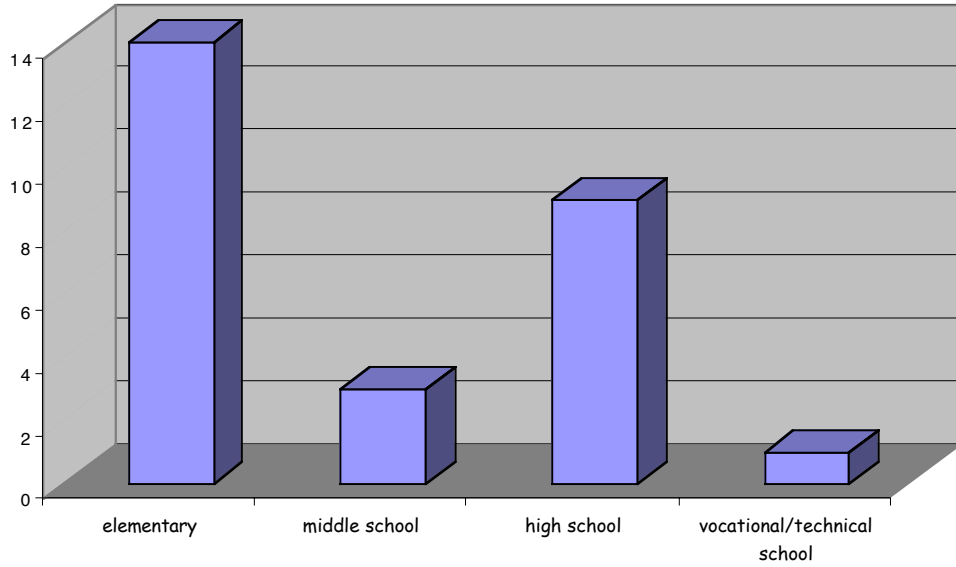
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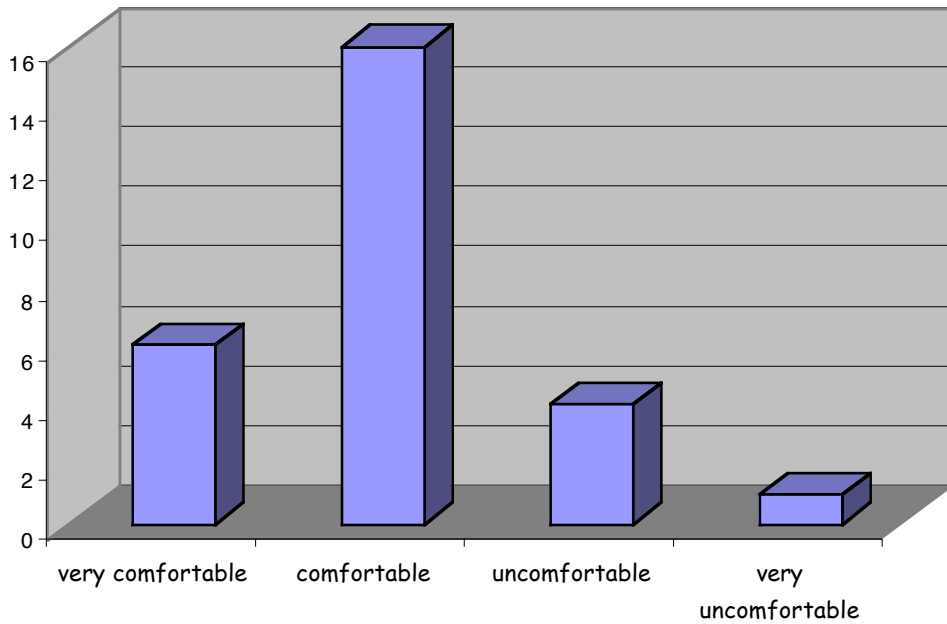
Appendix

64% of all district art teachers participated in the study.
Here is a breakdown of the participants:

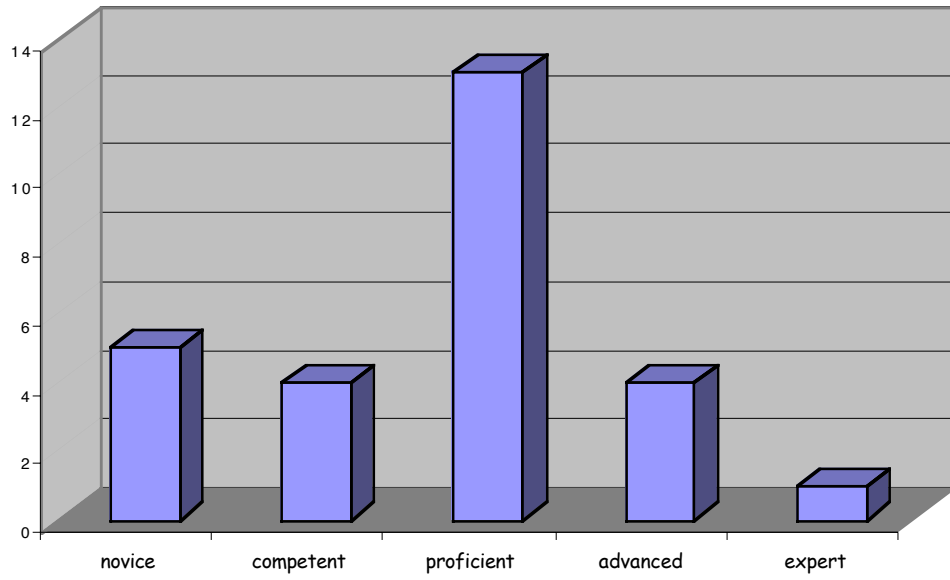


(Out of total district art teacher population, 66% of elementary, 42% of middle school, 81% of high school, and 100% of graphic design vocational art teachers consented to participate in this study. No art teachers from district charter schools participated.)

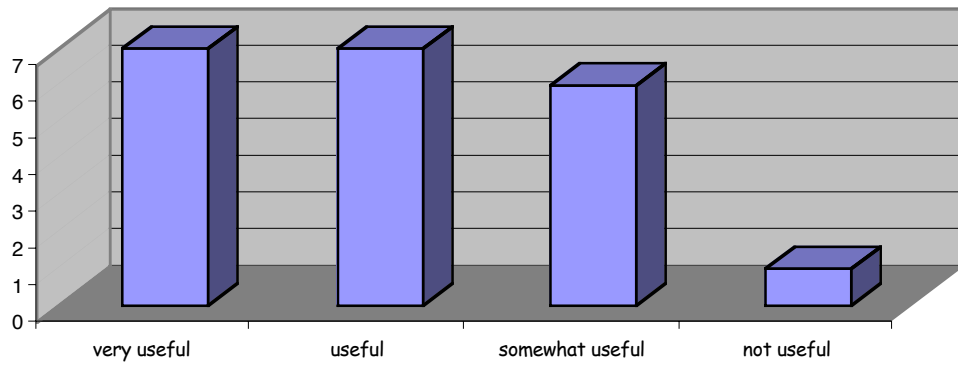
Participants' comfort levels with computer technology:



Participants' computer technology ability levels:



Usefulness of computer technology training:



77% of participants have received computer technology training.
Here is a breakdown as to where they got it:

