A Proposal for a Minor in Digital Literacy and Multimedia Design

The greatest challenge is moving beyond the glitz and pizzazz of the flashy technology to teach true literacy in this new milieu.
--Jones-Kavalier and Flannigan(2006)--

This proposal includes the following sections:

I. Digital Literacy and Multimedia Design Minor Overview

A. Definition: Digital Literacy and Multimedia Design

Today, the term "digital" refers to computer-based technology and the information transmitted through it. Digital technology is ubiquitous; it has rendered our society multidimensional, media-saturated, and fast-paced; it affects how we study, work, communicate and collaborate. We need strategies and knowledge of how to use the new digital technology tools needed for success. Digital Literacy is the new literacy of the 21st Century.

The term, digital literacy, as it appears in the title of this minor program, represents a person's ability to perform tasks effectively in a digital environment. It includes the abilities to read and interpret media, to reproduce data and images through digital manipulation, and to locate information, evaluate critically and apply new knowledge from digital environments. (Jones-Kavalier & Flannigan, 2006). **Digital literacy and Information and Communication Technologies (ICT) competencies** (http://unesdoc.unesco.org/images/0012/001295/129538e.pdf) **can be used interchangeably**.

The phrase, multimedia design, is added to the title of the minor to emphasize this subset of digital literacy. Multimedia design is concerned with integrating multiple forms of media, such as sound, image, and video. Especially, it focuses on web-based information delivery format, which is becoming more prevalent.

B. Rationale

In order to thrive in the 21st century, students need to be prepared with digital age proficiencies. These include critical thinking skills, teamwork, and proficiency in using technology, as well as academic knowledge (*National Alliance of Business, 2000).* More specifically, based on an Association of American Colleges and Universities report (2010), a higher percentage of employers want colleges to "Place More Emphasis" on science and technology than on any other learning outcome, in the category of Knowledge of Human Cultures and the Physical and Natural World. In the same report, information literacy was also ranked as one of most important learning outcomes in the category of Intellectual and Practical Skills.

In order to respond to this need, the faculty of the MAIT program, in collaboration with faculty members in other programs, proposes a new, interdisciplinary minor in Digital Literacy and Multimedia Design.

Although the interdisciplinary, Master of Arts in Instructional Technology (MAIT) program at Stockton was instituted in 1997, undergraduate coursework in Instructional Technology is conspicuously absent from Stockton's curriculum. While theoretical foundations for digital literacy and multimedia design are within the domain of Instructional Technology, there is significant overlap with other programs, such as communication, visual arts, and computer science. The proposed, interdisciplinary minor will reach and serve undergraduate students throughout the college.

This program will provide courses in which students design, develop and evaluate digital content using multimedia technology and relevant learning theories. Given the prevalence of digital media, students in any major will be better prepared for their career goals with practical knowledge and skills learned from this interdisciplinary program.

Finally, the structure of the minor has the inherent potential to add valuable courses to the curriculum in the future (in program and general studies), and could enhance students' exposure to a comprehensive liberal-arts education by exposing students to broadly applicable courses that they would not previously have considered.

II. Needs Assessment

A. Stockton Study Plan

In the Undergraduate Bulletin, two elements of the Stockton study plan are stated (2008-2010 Bulletin, p. 92): study in depth (major) and study in breadth (general education). One of the components of the general education element is, "mastery of transferable intellectual skills critical to any line of work to citizenship in a democracy and to a life of continuous learning" (p. 92). As stated earlier, digital literacy is one of these critical skills. This minor meets the needs of Stockton's general education mission.

B. National Trends

According to the Partnership for 21st Century Skills (www.21stcenturyskills.org):

"…. People in the 21st century live in a technology and media-suffused environment, marked by various characteristics, including: 1) access to an abundance of information, 2) rapid changes in technology tools, and 3) the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology."

Also, in 2009, when the New Jersey Core Curriculum Content Standards was revised, the key goal of the revision was to align state content standards with the knowledge and skills needed for post-secondary education and the 21st century workplace. (http://www.njcccs.org/help/NJCCCSHelp.pdf)

Few would argue that this is not an accurate reading of the world into which our graduates will enter upon leaving Stockton. The rate of technological change and its far-reaching impact on many areas of modern life is seen in all fields. However, as was shown by Stockton's participation in the Information Literacy Skills test in 2006 (see Appendix 1), our students are not nearly as prepared as they need to be for critically assessing information from digital sources. In addition, evidence exists that while students are users of technology tools, their mere use does not translate into effective application of those same tools in their academic and work lives. Lastly, there are very real concerns that as a society we are becoming less civil due to the less direct nature of online discourse, even as technologies to promote collaboration are touted as making the world smaller.

What these issues and questions point to is a need for college graduates to, as part of their education, learn the knowledge and skills to become citizens of the 21st century. Alan Greenspan, in remarks made in 2002 regarding the value of a liberal arts education in the modern world, noted that:

"The advent of the twenty-first century will certainly bring new challenges for our society and for our education system. We cannot know the precise directions in which advances in technology, conceptual thinking, and the transmission of knowledge will take us. However, we can be certain that our institutions

of higher education will remain at the center of the endeavor to comprehend those profound changes and to seize the opportunities to direct them toward ever-rising standards of living and quality of life." (Greenspan, 2002)

If that is true, then it is incumbent upon the college to provide a program of study for any student, from any major, to help them wrestle with the issues facing them as citizens of a 21st century world. Such a program would also need to provide them with grounding in the basic skills for using digital tools to make their own way in that world.

C. Pre-service Teachers

In October 2004, New Jersey Department of Education added two new curriculum standards for K-12 to meet the needs of the 21century. Standard 8.1 concerns digital literacy in school settings:

> 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. (http://www.state.nj.us/education/techno/techlit/)

In order to prepare for the daunting task of assisting K-12 students in meeting Standard 8.1, teachers will need to build their skills and understandings in this area. Stockton's large number of pre-service teachers will benefit from this minor, and be more competitive when they apply for jobs.

D. Stockton Student Interest

In the Fall semester, 2009, 231 Stockton students from a variety of majors participated in an on-line survey (http://tinyurl.com/digitalliteracyinterestsurvey) regarding their interest in a digital literacy and multimedia design minor (see Appendix 2). The sample was comprised of students of the following classes: 14% freshmen, 16% sophomores, 36% juniors, 30% seniors, and 3% postbaccalaureates. Of the participants, 51% were transfer students. It should be noted that, based on reported major, the survey results came from all undergraduate majors in Stockton. Overall, from a five-point Likert scale question plus a "cannot decide now" option, **19% of those surveyed** reported that they were very interested or interested in taking this minor. This finding indicates significant interest among Stockton students. Table 1 contains a detailed breakdown of the results.

Table 1. Majors for Very Interested or Interested in the minor group

CSIS	1	2%
Biochemistry	1	2%
Business	5	12%
Communications	6	14%
Computer Science	2	5%
Criminal Justice	1	2%
Hospitality	2	5%
Literature	3	7%
Math	1	2%
Psychology	4	10%
Visual Arts	7	17%
Art Ed.	1	2%
CIS	1	2%

CSIC	1	2%
Management	1	2%
Marine Science	1	2%
Marketing	1	2%
Photography	1	2%
N/A	2	5%

Students in two majors appear to be especially interested in this new minor. Among the visual arts and communication majors, half of the participating students reported that they were very interested or interested in taking this minor (Visual Arts 7/13 Communication 6/13).

Another large student group who are interested in this minor is those who are in the teacher certification program or planning to enter the teacher certification program. Among those 54 students, 14 students said they would be very interested or interested in taking this minor, which is 29% of the respondents.

However, the majors of those who expressed their interest in the minor are widely spread out, raging from business, to literature, to psychology.

III. Curriculum

A. Goal

The overall goal of this proposed minor is to provide students with a balanced combination of practical knowledge and advanced technology skills as well as theoretical foundations in order for them to thrive in the digital world.

B. Curriculum Structure and Requirements

1. Overall Curriculum Structure

The minor would require a total of 20 undergraduate credits at Richard Stockton College (see Appendix 3 Curriculum Sheet). There is one required capstone course (INTC 4XXX Digital Design Studio), and there are elective courses divided into two categories: technical and theoretical/applied. The followings are descriptions of each category and capstone course.

Technical courses:

> These courses focus on helping students develop skills and understanding related to the use of digital technology. Through hands-on activity, students develop digital products, thus demonstrating their capacity to use digital technology for practical purposes.

Theoretical/Applied courses:

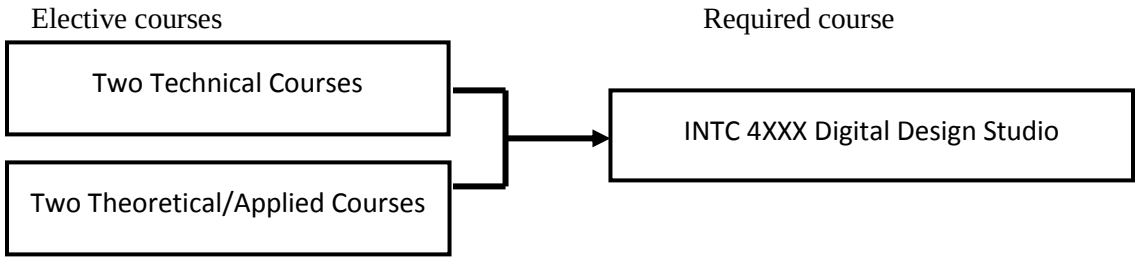
> These courses focus on theories related to digital technology and its impact on society, so students can identify new ways to adapt, adjust, and utilize technology. These courses prepare them to respond to the constant changes and challenges in the evolving digital world.

Capstone course:

This course is designed to be the culminating experience for those students seeking the minor in Digital Literacy and Multimedia Design. Utilizing what a student has learned throughout the minor regarding both the craft of various technologies as well as impact of those technologies on communication and other fields, he/she will design and develop a project that communicates in way relevant to his/her major field of interest.

Students must complete two courses from each category (see Figure 1). As long as students have pre-requisites for each course, they may take technical and theoretical/applied courses **in any sequence; however, at least one elective course must be at the 3000 level or higher.** Students are expected to complete all four elective courses before taking INTC 4XXX Digital Design Studio. However, in exceptional circumstances, due to schedule constraints, a student may take INTC 4XXX concurrently with the last elective course, with permission of the coordinator.

Figure 1. Curriculum structure



2. Elective Courses

The following list includes courses that appear applicable based on their catalog descriptions, and agreement by the faculty members teaching the courses. This preliminary list is by no means exhaustive and will be expanded to include other courses as they are identified or become available. As new paradigms and applications emerge, or as individual faculty members show interest, new courses can be added seamlessly to the curriculum after review by a committee consisting of at least three associated faculty members. To demonstrate the immediate feasibility of the minor, the tentative curriculum includes only courses currently offered or planned as part of the coursework at Stockton.

Technical Courses (Complete two courses)

GEN	2108	Teaching with Web 2.0 (Amy Ackerman)
GEN	2620	Multimedia and Virtual World (Aakash Taneja)
GAH	XXXX	Two Dimensional Design on the Computer (Michael McGarvey)
GEN	2XXX	Technologies as a Professional Development Tool (New, MAIT faculty)
ARTV	2125	Web Design (Dan Gambert) **OR** (other equivalent Web design courses)
ARTV	2270	Graphic Design I (Michael McGarvey)

ARTV	3625	Photoshop (Wendel White)
ARTV	3674	3D Computer Graphics (Hannah Ueno-Olsen)

Theoretical/Applied Courses (Complete two courses)

GAH	2342	Living in the Digital World (Douglas Harvey)
GAH	2403	Minds and Computers (Daniel Robins)
GXX	XXXX	Digital Humanites: Theory and Practice (Lisa Rosner)
GIS	4623	Digital Culture (Jung Lee)
ARTV	3220	Interactive Media Design (Dan Gambert)
COMM	3333	Mediated Communication: Computers (James Shen)
CSIS	3472	Human-Computer Interface (Jill Gerhardt)
INTC	3610	Tech for Educators (MAIT faculty and adjuncts)
INTC	4610	(Advanced Technology for Educators)
INTC	4XXX	Visual Literacy (Jung Lee)
GSS	3645	Tech & An Aging Society (David Burdick)

Possible future courses for this minor

Web design for non-art majors
3D Animation for non-art majors
E-portfolio (Business oriented)
Digital video production

C. Associated Faculty

In addition all MAIT faculty members, Amy Ackerman, Douglas Harvey, & Jung Lee who will serve as program faculty, faculty members from other programs throughout the college have agreed to serve and participate in the minor program.

Donna Marie Albano (Hospitality)
Evonne Kruger (Business)
Michael McGarvey (Visual Arts)
Michael Olan (Computer Science)
Daniel Robins (Philosophy)
James Shen (Communication)
Ken Tompkins (Literature)

The above-listed faculty's works are related to the field of Digital Literacy and Multimedia Design, and are currently teaching courses on the topic and/or developing new courses in this area. This group of faculty members makes up a diverse, interdisciplinary body that is capable of providing rich and extensive courses for our students. The existing coursework offered by this group is sufficient to launch the Digital Literacy and Multimedia Design minor without additional funds.

Roles and responsibilities of associated faculty are:

- To teach and/or develop courses
- To review prospective and existing courses
- To advise students who are in the program or interested in the program
- To participate in program assessment

D. Program Course Criteria

To be included in the digital literacy and multimedia design program, a course must do at least one of the following:

- Introduce students to digital technologies and their practical uses
- Create an awareness among students of the importance of digital literacy
- Improve digital literacy among students
- Introduce theories, challenges and/or issues associated with digital technology
- Have students use digital technologies to create and develop products

Once the instructor submits the course syllabus to the program, the program committee (consisting of at least three associated faculty members) will review the course, and vote on its inclusion.

E. Eligibility for the Minor Program

Any student at Richard Stockton College will be eligible for this minor program. Students who are interested in pursing a minor in Digital Literacy and Multimedia Design are asked to contact the MAIT program director for further information, and to inform their preceptors. Students who file "an Intent to Apply for a Minor in Digital Literacy and Multimedia Design" will automatically become part of a Digital Literacy and Multimedia Design mailing list.

IV. Resources

A. Facilities and Software

Many of the new courses we are developing will be held in computer labs. Although we cannot guarantee computer lab access in all class modules, there are many computer labs available for classes (CC103, D004, D018, D027, E012, F114, F210, F222 and N117), according to Joann Kocher (see Appendix 4 for the full list of the computer labs). Besides, on occasion, we will be able to use facilities at the SRI&ETTC and at Carnegie. Also H101 is a lab currently reserved for graduate students in the instructional technology program. Once this minor is launched, we can open the lab to these minor students, so that they can work on their projects.

In terms of software, SOE just purchased and installed new programs including 100 copies of Camtasia Studio and Quicktime Pro in D019, D018, F210 and H101 during June, 2010 (see Appendix 5 for the full list of software installed in computer labs). Also many new, free, on-line programs will be utilized to meet the goal of the program. In addition, the Dean of School of Education, Dr. Joseph Marchetti, agreed to support purchasing any additional programs that would be needed for the first year. In the meanwhile, we will seek a long-term solution with the College.

In addition, we are assuming that students who are interested in this minor are more likely to own their own computers and have Internet access. We expect to offer some online courses and online activities in which these students will be able to use their own personal computers.

As a result, we believe that existing facilities and software are sufficient to launch the minor program. Furthermore, the anticipated needs to sustain the program are modest and can be met within Stockton's general plan for upgrading technology.

B. Coordinator

The minor program will need a coordinator. The responsibilities and compensation of the coordinator are to be determined through negotiations between the administration and the union. We anticipate the agreement for this minor will be similar to those for other interdisciplinary minors.

V. Housing and Timeline

The definition of Instructional Technology refers to "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (Seels and Richey 1994). In this definition, resources mean available technologies for people. Michael Molenda explained that , "in popular usage, instructional technology refers to the use of communications media–hardware and software--to help people learn" (2003). In other words, **Instructional Technology deals with digital literacy.** Therefore, we propose that the minor should be housed in the School of Education where the Instructional Technology program resides. Based on discussions with faculty in ARHU and BUSN, we are optimistic about collaboration among schools. Jung Lee will start to serve as the first minor coordinator.

As shown in Table 2, we hope to launch the minor in the spring of 2011. We will obtain Faculty Senate approval during the fall of 2010. We see this timeline as feasible for a number of reasons. First, many courses listed in the minor's curriculum are already part of the regular course offerings at Stockton. Second, this minor will not require hiring new faculty and, therefore, is ready to be launched at any time.

Table 2. Time Table

Time	**Task**
September – October	Faculty Senate Approval
October	Presentation to the Dean's Council
Throughout the 2010 Fall semester	Coordinator responsibilities and compensation negotiations between Administration and Union
Throughout the 2010 Fall semester	Marketing the minor program (Print and electronic advertising,

	information sessions)
Throughout the 2010 Fall semester	Recruiting students (One-on-one meetings with program faculty)
November, 2010	Adding the minor description to college publications
November, 2010	Establishing interdisciplinary minor coordinator status
2011 Spring semester	Launch program

VI. Possible Concerns and Solutions

- **Do we have enough faculty to sustain the minor?**

Yes. Many of the required courses for this minor are already in existence. More over, we will be able to reply on a strong adjunct pool if necessary. MAIT has more than 200 alumni, and many of them are teachers or trainers with more than 10 years of teaching experience and advanced technology skills.

- **Since most of the courses are already in existence, will the demand for seats in those classes increase beyond what can be reasonably expected?**

We do not expect that implementation of this minor will dramatically increase these demands. Instead, it is predicted that some students who would have taken the listed courses anyway would be interested in taking this Digital Literacy and Multimedia Design minor. We are taking into account the possibility that there may be some additional students. If necessary, as stated above, by taking advantage of the strong adjunct pool, we can offer additional sections or new courses.

- **What are the differences between the MAIT and this minor program? Is the minor simply a watered down MAIT program**?

This minor is related to many disciplines, including visual arts, communications, computer sciences, business, as well as instructional technology. Although IT will serve as a major theoretical background to the minor, the minor is truly interdisciplinary. That is, not everything contained in the minor is part of the MAIT. Conversely, some areas of the MAIT (e.g., grant writing) are not part of the minor. Moreover, the minor will place a greater emphasis on practical skills and understandings than does the MAIT. Finally, courses in the minor will be geared toward the backgrounds and experiences of undergraduate students.

- **If a student pursues this minor, can the student take courses in the minor without taking course prerequisites?**

Some courses in the minor have prerequisites. All students pursuing the minor will be expected to fulfill all course prerequisites. This implies that, for example, a non-visual arts major who wishes to take Graphic Design I must first complete ARTV1161 and ARTV1162). For many visual arts majors this will not present a problem. For others, many alternatives courses exist in both the foundational and applied course categories.

VII. References

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