Instructional Portfolio
Dr. James G Jones
Department of Technology and Cognition
University of North Texas

Updated: October 2005

Contents
Instructional Philosophy................................................................. 1
Instructional Goals.......................................................................... 3
Instructional Activities...................................................................... 3
Instructional Course Revisions......................................................... 5
Student Evaluations......................................................................... 6
Student Feedback and Comments...................................................... 9

Instructional Philosophy
“Teaching is a creative act, an organizational activity, and a social contract” (Coppola, 2000).

I believe that the goal of an instructor is to provide the necessary framework and foster communications such that students can attain their learning potential. When done correctly, students are motivated to engage new materials and discover new understandings.

I first began to develop my instructional philosophy while a doctoral student studying at the University of Texas, Austin. This revision reflects changes since becoming an assistant professor in the College of Education at the University of North Texas (UNT) in 2003.

The majority of courses I teach at UNT are computer science courses geared towards educators attaining a master’s or doctorate degree. The typical student taking these courses wants or needs to acquire knowledge that might help them as a technology coordinator, administrator, manager, professional developer, trainer, or other support role that requires them to have technical understanding of computers and technology in educational settings. Students begin my courses having a basic understanding of computers, but are expected to attain a much more in-depth understanding on the selected topic. All of my courses at UNT are considered to be hybrid courses, where interaction and learning takes place both in-person and using Internet-based tools throughout a semester.

To provide successful learning, I create an atmosphere of communications and feedback that stimulates learning and provides the maximum support for students to understand new and sometimes difficult concepts outside of their chosen field of study or profession. This requires providing a course organization that is appropriate to both the course content and the level of Internet communications called for by the course offering. My research focus on 3D online learning environments is tied directly with these issues. I have created 3D online learning environments that foster higher levels of discourse among students and improve student course satisfaction. My published research has
shown that 3D online learning environments perform closely to face-to-face classroom activities and work much better than text and web-based course delivery tools. When teaching, I use a combination of learning styles ranging from mastery learning techniques for technical areas, written exams (midterm or final) to demonstrate knowledge gained from the mastery activities, and weekly discussions on selected topics. This combination of approaches allows students to learn from their mistakes as they attempt to master new concepts, theory, applications, and techniques before they are required to demonstrate that knowledge on a test. The weekly discussion topics allow students to explore important issues in more detail over an extended period. When students share information and experiences on the discussion topics, it creates a richer understanding of the topic for all. This teaching approach also allows me to identify and anticipate student uncertainty or problems. I can then provide additional guidance and feedback to allow the student to get past any uncertainty on a topic. These strategies have resulted in a high completion rate for courses, even for the students that began them with high anxiety levels.

Professional development is a very important and critical part of my instructional philosophy. Keeping current with the research, technology, and practices is essential in providing students with up-to-date knowledge and learning in these technical courses. Textbook selection for courses is an annual event to ensure students are learning the correct information. These yearly changes to the materials as the technology and art change are a benefit to the courses, because they keep the courses fresh and allow me to maintain my enthusiasm for what I am teaching. Bernoff (1992) feels that these issues are important because students perceive effective teachers as ones who have knowledge of the subject matter, as well as the ability to communicate that knowledge clearly and enthusiastically.

As to my social contract for education, I agree with Dr. Coppola’s (2000) statement of “I have a set of moral obligations that drive my actions and behaviors as one human being who exists with the communities of higher education, including my students, my protégés, my colleagues, my institution, my professional organizations, and with society in general.”

I have been using computers since junior high school (1977) and using telecommunications since my senior year in high school (1981). During this time, I became friends with several technologists in Dallas who worked at MOSTEK. These engineers encouraged me to get involved with computers and helped me build my first computer. Over the years, I have realized that most of my learning experiences have occurred as a result of my having been mentored. This is true for most of the more positive educational and recreational experiences I have had in my life. I now find myself mentoring others in my area of expertise in the same way I was mentored when I was younger and am now mentored as a junior faculty member.


Instructional Goals

My instructional goals are:

Course Development Continue to improve courses to improve quality and increase student satisfaction.
Professional Development Continue to increase my knowledge in the subjects that I teach in order to maintain and improve the quality of education and training to my students.
Student Mentoring Provide mentoring to graduate students in the program.
Student Evaluations Maintain good to outstanding student evaluations for courses taught.

Instructional Activities

The following is an overview of the courses I have taught while at UNT. Appendix B contains syllabus from these courses. Each course number indicates the method of delivery by section number. I have taught face-to-face (.001), blended with a mixture of both face-to-face and Internet interaction (.010 and .030), and full Internet-based courses (.020, .800). Appendix A provides student evaluation..

CECS 3260.001
Web Authoring
This course focuses on the creation of static web-based (HTML and XHTML) materials incorporating text, graphics, and multimedia elements. Students learn to use standards-based technologies for creating content for web-based delivery starting with basic HTML and finishing with Cascading Style Sheets (CSS).

CECS 4550.001, .010
Network Systems Administration
This course focuses on educational computer networking and administration. Students configure a network server as part of a course that covers topics including server configuration, user management, resource allocation, security, backup and disaster recovery, wireless networking, and other topics related to computer networks that would be found in or deployed for educational use. This course normally meets with the graduate version of this course CECS 5460.

CECS 4560.001, .010
Internet Services Administration
This course focuses on the design and implementation of Internet information services including SSH, SFTP, World Wide Web (apache), and Internet services that can be deployed in an educational setting. Students install and maintain an Internet server. In small groups, students throughout the semester build and install various educational services.
This course normally meets with the graduate version of this course CECS 5450.

**CECS 5020.800**

**Computers in Education**

This course analyzes computer use in education and applications programming in education. Topics include software and hardware evaluation, planning computer education curricula and facilities.

**CECS 5100.001, .020, .030, .800**

**Educational Computer Languages**

This course provides a “hands-on” approach to learning computer programming and scripting. The course focuses on the concept of basic software development, variables, simple and complex data structures, debugging, all geared towards the development of educational software. The instructor chooses the programming language to be used for the course. The course has been taught using Logo, Basic, Pascal, C, C++, and Java. I have taught this class using PERL and HTML, and more recently using PHP for the purpose of creating programmed dynamic web-based interactions.

**CECS 5400.001, .800**

**Educational Telecommunications**

The course explores foundational issues and currently emerging trends in telecommunications that are becoming integrated into the field of education. The course provides hands-on experience with as many telecommunications systems as possible. Topics include History of Telecommunications and their Societal Impact, Digital Communications, Wireless Communications, Computer Networks, Distance Education, and Advanced Topics on latest technology.

**CECS 5420.001, .030**

**Web Authoring**

This course focuses on the creation of static web-based (HTML and XHTML) materials incorporating text, graphics, and multimedia elements. Students learn to use standards-based technologies for creating content for web-based delivery starting with basic HTML and finishing with Cascading Style Sheets (CSS).

**CECS 5450.001, .010**

**Building Internet Information Services**

This course focuses on the design and implementation of Internet information services including SSH, SFTP, World Wide Web (apache), and Internet services that can be deployed in an educational setting. Students install and maintain an Internet server. In small groups, students throughout the semester build and install various educational services.
CECS 5460.001, .010, .030
Computer Network for Educational Environments
The course focuses on computer networks used in support of education and training. Students configure a network server as part of a course that covers topics including server configuration, user management, resource allocation, security, backup and disaster recovery, wireless networking, and other topics related to computer networks that would be found in or deployed for educational uses. Special emphasis is placed on the application of network technologies for K-12 and higher education.

CECS 5610.020
Analysis of Research in Educational Technology
Students during the course learn to examine and then critique educational research concerning educational technology. The course allows for the interpretation, analysis and synthesis of current research in educational technology for the purpose of teaching students how to integrate research methodology and application to educational environments.

CECS 6210.001
Theory and Practice of Interactive Multimedia
This doctoral seminar course reviews and discusses the theories of interaction, feedback, flow, learning theory, and other elements that impact the design and development of interactive multimedia. Students develop their own theory that is then used in an interactive educational multimedia project.

CECS 6900.709
Independent Study

Instructional Course Revisions
The following courses have had major revisions made since I began teaching the course.

CECS 5450 – Internet Services
Moved from Microsoft technology to Linux and updated the course to reflect current development in Open Source educational applications for server deployment.

CECS 5460 – Computer Networking
Moved from NOVEL technology to Linux as the example network server example. Also added materials to increase the discussion and demonstration of wireless technology.

CECS 5100 – Educational Programming
Changed the course from Java to PHP for use with dynamic web pages as the method of problem solving, system design, programming, and implementation. This
allows students to develop programming skills, while getting experience with database and dynamic web content.

CECS 6210 – Interactive Multimedia

Changed the course to increase the discussion and research on theories related to topic and decreased the hands on technical session that had been emphasized when the course was taught at the masters level.

Student Evaluations

Dr. Jones has outstanding student reviews for the courses he teaches. The universities student evaluations consistently report Dr. Jones’ student mean above 4.0 (out of 5.0). Dr. Jones midterm evaluations that are used to determine if his courses are on track consistently track positively with students. The following shows student evaluations collected by the University using its five-question survey and the results from an evaluation that Dr. Jones administers to students after midterms to determine if courses are on a correct track.

UNT

The university student evaluation consists of a 5-item likert scale survey. The questions are as follows:

<table>
<thead>
<tr>
<th>Semester/Year</th>
<th>Course</th>
<th>Students</th>
<th>Mean</th>
<th>STDEV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall 2005</strong></td>
<td>CECS 6210.001 Interactive Video</td>
<td>8</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5420.010 Web Authoring</td>
<td>13</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5100.030 Survey of Educational Computer Language</td>
<td>11</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Summer 2005</strong></td>
<td>CECS 5400.870 Educational Telecommunications</td>
<td>14</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5400.885 Educational Telecommunications</td>
<td>14</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5420.010 Web Authoring</td>
<td>12</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5460.010 Computer Networks for Education</td>
<td>6</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Spring 2005</strong></td>
<td>CECS 5420.001 Web Authoring</td>
<td>10</td>
<td>4.71</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>CECS 5450.010 Internet Services</td>
<td>7</td>
<td>4.70</td>
<td>0.43</td>
</tr>
<tr>
<td><strong>Fall 2004</strong></td>
<td>CECS 5420.030 Web Authoring</td>
<td>10</td>
<td>4.19</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>CECS 5460.010 Computer Networks for Education</td>
<td>13</td>
<td>4.42</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>CECS 5100.030 Survey of Educational Computer Language</td>
<td>12</td>
<td>4.88</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Summer 2004</strong></td>
<td>CECS 5400.883 Educational Telecommunications</td>
<td>12</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5400.884 Educational Telecommunications</td>
<td>6</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>CECS 5460.030 Computer Networks for Educational Environments</td>
<td>10</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Course Number</td>
<td>Course Title</td>
<td>Semester/Year</td>
<td>Students</td>
<td>Mean</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------</td>
<td>---------------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>CECS 5420</td>
<td>Web Authoring</td>
<td>Spring 2004</td>
<td>13</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 5420.001</td>
<td>Web Authoring</td>
<td>Fall 2003</td>
<td>10</td>
<td>4.08</td>
</tr>
<tr>
<td>CECS 5450.001</td>
<td>Internet Services</td>
<td>Fall 2003</td>
<td>9</td>
<td>4.50</td>
</tr>
<tr>
<td>CECS 3260.001</td>
<td>Web Authoring</td>
<td>Fall 2003</td>
<td>20</td>
<td>4.44</td>
</tr>
<tr>
<td>CECS 5100.020</td>
<td>Survey of Educational Computer Language</td>
<td>Summer II 2003</td>
<td>18</td>
<td>3.70</td>
</tr>
<tr>
<td>CECS 6210.001</td>
<td>Interactive Video</td>
<td>Summer II 2003</td>
<td>8</td>
<td>4.78</td>
</tr>
<tr>
<td>CECS 5460.001</td>
<td>Computer Networks for Education</td>
<td>Summer II 2003</td>
<td>15</td>
<td>4.32</td>
</tr>
<tr>
<td>CECS 6900.709</td>
<td>SP Pro Educational Computer</td>
<td>Summer II 2003</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 5420.001</td>
<td>Web Authoring</td>
<td>Spring 2003</td>
<td>22</td>
<td>4.12</td>
</tr>
<tr>
<td>CECS 5450.001</td>
<td>Internet Services</td>
<td>Spring 2003</td>
<td>8</td>
<td>3.96</td>
</tr>
<tr>
<td>CECS 5400</td>
<td>Educational Telecommunications</td>
<td>Fall 2002</td>
<td>30</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 5100</td>
<td>Survey of Educational Computer Language</td>
<td>Fall 2002</td>
<td>22</td>
<td>4.12</td>
</tr>
<tr>
<td>CECS 6210</td>
<td>Interactive Video</td>
<td>Fall 2002</td>
<td>6</td>
<td>4.56</td>
</tr>
<tr>
<td>CECS 5800</td>
<td>Analysis of Research in Educational Technology (5610)</td>
<td>Fall 2002</td>
<td>8</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### Undergraduate Semester/Year

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Semester/Year</th>
<th>Students</th>
<th>Mean</th>
<th>STDEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>CECS 5400</td>
<td>Educational Telecommunications</td>
<td>Summer 2005</td>
<td>30</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 5100</td>
<td>Survey of Educational Computer Language</td>
<td>Summer 2005</td>
<td>22</td>
<td>4.12</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 6210</td>
<td>Interactive Video</td>
<td>Summer 2005</td>
<td>6</td>
<td>4.56</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 5800</td>
<td>Analysis of Research in Educational Technology (5610)</td>
<td>Summer 2005</td>
<td>8</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Semester/Year</th>
<th>Students</th>
<th>Mean</th>
<th>STDEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>CECS 4550.010</td>
<td>Computer Networks for Education</td>
<td>Spring 2005</td>
<td>4</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>CECS 4560.010</td>
<td>Internet Services</td>
<td>Spring 2005</td>
<td>5</td>
<td>3.33</td>
<td>0.79</td>
</tr>
<tr>
<td>CECS 4550.010</td>
<td>Computer Networks for Education</td>
<td>Fall 2004</td>
<td>6</td>
<td>4.29</td>
<td>0.19</td>
</tr>
<tr>
<td>CECS 3260.001</td>
<td>Web Authoring</td>
<td>Spring 2004</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CECS 4550.010</td>
<td>Computer Networks for Education</td>
<td>Fall 2003</td>
<td>12</td>
<td>4.20</td>
<td>0.21</td>
</tr>
</tbody>
</table>
Dr. Jones Midterm Survey
Dr. Jones administers a 12-item survey that asks the questions that he can use to see if a course is on the correct track.

1. The instructor maintains a teaching style that meets the learning needs of the classroom majority. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
2. The professor maintains an atmosphere that encourages the students to ask questions. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
3. When sought the instructor is available to answer questions. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
4. The material in this course is explained clearly and concisely. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
5. This course was well-organized. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
6. The professor shows interest in the progress and learning of the students. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
7. This class is of value to me. (Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5])
8. How would you rate this professor overall? (1-5, 5 being best)
9. How would you rate this class overall? (1-5, 5 being best)
10. I consider the amount of work required to be... (Insufficient [1], Light [2], Average [3], High [4], Excessive [5])
11. On average how many hours a week do you spend studying outside of the classroom? (0-2 [1], 2-4 [2], 4-6 [3], 6-8 [4], 8+ [5])
12. Would you recommend this course to a fellow student? (Yes and No)

Fall 2004
Analysis

Spring 2005
Analysis

Fall 2005
Analysis
Student Feedback and Comments
The following are selected comments sent from students.

Date: Sat, 11 Dec 2004 11:24:44 -0600
From: "Jennifer Lee" <JenLee@coe.unt.edu>
Subject: CECS 5420

Dr. Jones:

Thanks for sharing the CRG software with us. I also used it for CECS 5210 (Dr.Young) for our mid-term post-exam review. I think it made a tremendous difference in my learning process this semester. I love the idea of virtual classroom interactions as opposed to the traditional WebCT course where communication is done solely through emails and postings on the bulletin board.

Jennifer

From: habimb@unt.edu
Date: Tue, 11 Jan 2005 10:07:36 -0600
Subject: hello dr. jones

Dr. Jones

I am mujtaba, i was in your web development class spr 2004. Well due to you and your class i ended up in a web development job( i was really insipired by the web development class). Currently i am working as a web developer for COBA, working with CSS, XHTML, PHP and JavaScript. I wanted to thank you for the class and the start of my web career. I didnt have any web development class in my computer science major and the class i took outside of my major to learn something got a job for me.

Sincerely

Mujtaba Habib

Date: Wed, 01 Jun 2005 22:20:46 -0500
From: "Jean Keller" <jkeller@unt.edu>
To: "Blair Copeland" <Copeland@cc.admin.unt.edu>
Cc: "Jon Young" <jyoung@unt.edu>
Subject: Re: A note from a student.

Dear Blair,

Thank you so very much for taking the time to share with me your experiences in the CECS program. Warmest congratulations on your excellent performance and I will indeed look forward to awarding you your MS degree in December!

Please know you made my day and I am sure you made Dr. Jones' as well. As faculty, we aspire to do just the things you outlined in this email
that Dr. Jones has done. Sharing ideas and resources and creating opportunities for learning and growth are why we do what we do. Thank you for sharing your very positive experiences with me. I know Dr. Jones is honored and I sincerely appreciate his fine work.

Best wishes and I look forward to meeting you.

Jean

>>> Blair Copeland 6/1/2005 6:07 PM >>>
Blair Copeland
9700 Lacey Lane
Keller, TX 76248
April 20, 2005

Dr. Jean Keller, Dean
College of Education
University of North Texas
214 Matthews Hall
Denton, TX 76203-1337

I wanted to take a moment and let you know of my recent experiences. Although my comments may reach back a little bit in time I hope you will find this appropriate. I have been employed at UNT full-time since February, 1992. During my time here I have had the pleasure of working with many talented individuals. In 2003 I rededicated myself to finishing the undergraduate degree I started in January of 1986 and quickly moved on to graduate school in August of 2004. I have four classes left for my degree and I am currently maintaining a 4.0 GPA. I expect to complete my Instructional Technology and Cognition master's degree this December.

I am very proud of my current effort, but I have not made this journey alone. During my graduate studies I have sought additional assistance and counsel from many of my instructors. In my journey I found a wealth of knowledge, understanding and insight from Dr. Greg Jones. Although I spent the majority of my career at UNT in a support position, I was not aware of the resources available to me so I was not fully prepared for my graduate studies. Dr. Jones discussed master's and doctorate programs with me in-depth including opportunities and responsibilities. Under his counsel I discovered the importance of utilizing conferences, writing articles and maintaining a current footing in research. Dr. Jones further discussed research and conference opportunities, lecture expertise and offered me speaking opportunities. Dr. Jones introduced me to many new concepts and theories in Technology and Cognition and challenged me to excel beyond standard expectations.

In addition to what Dr. Jones offered, he also referred me to other opportunities and individuals that could help me understand what UNT had to offer me as well as what I had to offer UNT. Dr. Jones introduced me to knowledge and opportunities I would not have been aware of as a student or as an employee.

I want to make sure you knew how truly beneficial I found my interactions with Dr. Jones, and I hope someday to be as helpful to other students as I found Dr. Jones.
Alright...I just uploaded my site....I have really enjoyed this class this semester....I have absolutely worked my brains out, but I have learned so much...Thanks!!! BillyF

General Comments from Student Evaluations:
Appendix A – Student Evaluation

Appendix B – Course Syllabus