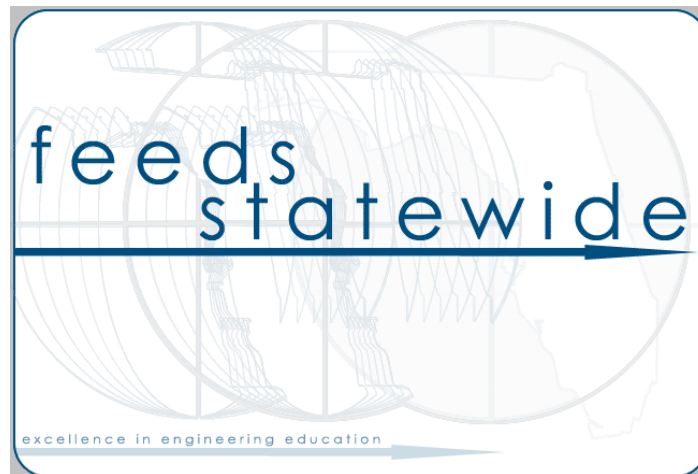## Seven Principles of Good Practice: A FEEDS Evaluation
Based on *Seven Principles of Good Practice in Undergraduate Education*,
by Arthur W. Chickering and Zelda F. Gamson (1987).

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UF Gainesville, Florida; **UNF** Jacksonville, Florida; **USF** Tampa, Florida; **UWF** Pensacola, Florida

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Foreword

Charge: A Study of Faculty-Student Interaction

At the annual meeting of the Florida Council of Engineering Deans (FCED) with the FEEDS State System Operations Committee (SSOC) in October 2001, the Deans asked the SSOC to address the question of increasing faculty-student interactions in engineering education. Subsequently, SSOC formed a sub-committee to investigate the current research and field practices.

According to the February, 2002 Statistical Analysis Report of the National Center for Education Statistics, "both proponents and critics of distance education stress that personal interaction is crucial to the learning process" (Bradburn & Zimbler, 2002). Research literature corroborates this view finding that "teaching and learning in higher education does affirm the importance of interactivity within the educational process " (Muirhead, 2001). Regarding distance education, specifically, faculty and administrators have long been concerned over the interactional relationships (or lack thereof) between instructors and students. …"the fact that in mediated education the teacher and learner might be physically separated is secondary to the consideration of factors affecting quality of their interaction" (Saba, 2000, *Research in Distance Education: A Status Report*).

This FEEDS report has been prepared based upon the <u>*Seven Principles of Good Practice in Undergraduate Education*</u>, by Arthur W. Chickering and Zelda F. Gamson (1987). It is divided into three comprehensive sections:

> 1) *The Seven Principles of Good Practice* including descriptions, examples, implementation, and references
>
> 2) Support and facilitation of *The Seven Principles of Good Practice* through the Florida Engineering Education Delivery System (FEEDS)
>
> 3) University Faculty & Student Development to support *The Seven Principles of Good Practice*

The report was developed to reflect "best practices" in education, concluding that there are no pedagogical differences between undergraduate and graduate, as it applies to the distance educational programs from the Colleges of Engineering throughout the State of Florida. It is the recommendation of this sub-committee that FCED share the contents of this report with their faculty to assess opportunities to improve upon faculty-student interactions.

I. Seven Principles of Good Practices

Good Practices # 1 – Encourages Student-Faculty Contact

Description

Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

Many examples of contact are suggested such as:

- Email is the primary form of private communication between instructor and students.
- Listservs and class bulletin boards are the main source of public communication between instructors and students.
- Creative activities and assignments foster a sense of community and encourage communication among the students and instructors.
- Building trust with the students enhances student-faculty communication.

Examples

1. *Teaching Online: Best Practices and Tips:*
http://jjconline.jjay.cuny.edu/faculty/teachonline.html

The website provides references and links to a variety of resources practiced at other institutions for implementing communication/contact methods between instructors and students. One of the references, *Handbook for Instructors on the Use of Electronic Class Discussion,* was prepared by Nancy Chism, Director, Office of Faculty & TA Development and is based on a study of several Ohio State classes that employed electronic class discussions, recommendations of student and faculty, and advice from experts in the fie

2. *Avoiding Online Discussion Pitfalls*. San Francisco State University.
http://online.sfsu.edu/faculty/pitfall.htm

The website charts problems and solutions for instructors and students involved in online discussion groups. It also provides faculty support as well as student support.

Implementation

1*. Seven Principles of Effective Teaching: A Practical Lens for Evaluating Online Courses* by Charles Graham, Kursat Cagitay, by Charles Graham, Kursat Cagiltay, Byung-Ro Lim, Joni Craner and Thomas M. Duffy: http://ts.mivu.org/default.asp?show=article&id=839

The "Seven Principles for Good Practice in Undergraduate Education," originally published in the AAHE Bulletin (Chickering & Gamson, 1987), are a popular framework for evaluating teaching in traditional, face-to-face courses. The principles are based on 50 years of higher education research. A faculty inventory (Johnson Foundation, "Faculty," 1989) and an institutional inventory (Johnson Foundation, "Institutional," 1989) based on these principles have helped faculty members and higher-education institutions examine and improve their teaching practices.

2. *Implementing The Seven Principles: Technology as a Lever.* Arthur W. Chickering and Stephen C. Ehrmann: http://tltgroup.org/programs/seven.html

Since the Seven Principles of Good Practice were created in 1987, new communication and information technologies have become major resources for teaching and learning in higher education. If the power of the new technologies is to be fully realized, they should be employed in ways consistent with the Seven Principles.

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6. Kent, E. & Carlson A.J. (1998) Distance Learning Versus Technology Enhanced Learning: How to Keep the Personal Touch While Teaching With the Internet,   retrieved from the Internet August 2002, http://www.ahea.org/how_to_keep.htm

Practices #2 – Encourages Cooperation Among Students

Description

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding.

Cooperation among students (classroom community) can be constitutively defined in terms of four dimensions:

- Spirit
  Recognition of membership in a community and the feelings of cohesion and bonding

- Trust
  Confident that fellow students can be trusted and represents a willingness to rely on other each

- Interaction
  Essential element of, but not the full solution to, the development of a sense of community cooperation

- Commonality of expectation and goals, in this case, learning that includes:
  Encouraging course cooperation through the use of well designed discussion assignments.

  Developing group project and assignments that require meaningful peer interaction

  Courses beginning with a structured activity in which students are asked to share and find out about each other's interests

  Asking students to evaluate each other's work

  Developing mechanisms for evaluating individual participation and contribution to group projects.

Examples

1. *Building Sense of Community at a Distance,* Alfred P. Rovai:
www.irrodl.org/content/v3.1/rovai.html

Drawing on research literature, the concept of a learning community is applied to the virtual classroom by taking on the issue of how best to design and conduct a course that fosters community/cooperation among learners who are physically separated from each other. Course design principles are described that facilitate dialogue and decrease psychological distance, thereby increasing a sense of community among learners.

2. *Community Development Among Distance Learners: Temporal and Technological Dimensions,* Caroline Haythornthwaite, Michelle M. Kazmer, Jennifer Robins http://www.ascusc.org/jcmc/vol6/issue1/haythornthwaite.html

The research focuses on what characterizes this community, and how students define and maintain cooperation while largely restricted to communication through electronic media. Interviews conducted over a year with 17 students reveal the importance of community and cooperation among students.

Implementation

1. *Building Community in an Online Learning Environment: Communication, Cooperation and Collaboration* Melanie Misanchuk and Tiffany Anderson: http://www.mtsu.edu/~itconf/proceed01/19.html

This paper presents strategies and rationales for implementing instructional techniques to move a class from cohort to community. The task of the authors of this paper was to structure the course design so learners have mechanisms to connect with each other and form community.

2. *A Methodological Approach to Networked Collaborative Learning: Design and Pedagogy Issues*, T. Daradoumis & J.M. Marquès http://collaborate.shef.ac.uk/nlpapers/daradoumis-p.htm

The objective of this work is twofold: first, to improve distance teaching and learning, and second, to facilitate social interaction among students. Goals, needs, expectations and preferences of students were analyzed, based on a previous pilot experience on distance collaborative learning.

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4. Teaching? Learning Activities: What do you want to use technology for? *University of Maryland University College Virtual Resources Site for Teaching With Technology*, retrieved from the Internet August 2002, http://www.umuc.edu/distance/odell/vteach/module1/strategies.html

5. Willis, B. *Distance Education at a Glance - Guide #2: Meeting Students Needs, retrieved from the Internet August 2002,* www.uidaho.edu/evo/dist2.html#studentneeds

Description

Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.

This can be accomplished by:

- Encouraging students to have dialogues with other students, faculty, and researchers by having them join bulletin boards on topics related to the class.
- Specify a minimum number of e-mail communications per week or term.
- Assigning team projects which are peer reviewed.

Examples

1. *Engineering Outreach: Distance Education at a Glance Guide #2.*
http://www.uidaho.edu/evo/dist2.html

This website is the work of Barry Willis, the Associate Dean for Outreach and the Engineering Outreach at the University of Idaho. It was developed to help teachers, administrators, facilitators, and students understand distance education. This particular section discusses the differences about teaching at a distance; reasons for teaching at a distance; ways to improve planning & organization; ways to meet student needs; guidelines on teaching skills; methods for improving interaction & feedback.

2. *Eight Ways to Get Students More Engaged in On-Line Conferences*.
http://www.cvm.tamu.edu/wklemm/Eight%20Ways/8waystoengage.htm

An all-too-common problem with on-line conferencing as a learning environment is that too many students "lurk," that is watch what is going on without becoming actively involved. Teachers should not allow students to lurk in on-line conferences. Nor is it necessary. Presented here are eight tactics that teachers can employ to make students more active learners in on-line conferences.

3. *Using bulletin boards for learning: What do staff and students need to know in order to use boards effectively?*
http://cea.curtin.edu/tlf/tlf2001/bunker.html

This course was designed as a staff development exercise for Edith Cowan University and was conducted over six weeks and there was no face-to face contact until a final debriefing session. The course was designed to give staff first hand experience with an on-line learning environment where bulletin boards were the main communication medium. The scenario used was equivalent to that used for most on-line units currently available to students at ECU. Staff took part in an authentic discussion forum where the topic related to 'Learning On-line'.

Implementation

1. EME 6053C: Current Trends in Instructional Technology
http://reach.ucf.edu/~eme6053c/

This is a course developed by Dr. Richard Cornell at the University of Central Florida. The course surveys current trends and issues of importance to the field of instructional technology. The focus of this semester's exploration will examine issues related to the understanding of diversity in global business and how they affect the global impact of technology in education and training.

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Good Practices # 4 – Gives Prompt Feedback

Description

Knowing what you know and don't know focuses your learning. In getting started, students need help in assessing their existing knowledge and competence. Then, in classes, students need frequent opportunities to perform and receive feedback on their performance. At various points during college, and at its end, students need chances to reflect on what they have learned, what they still need to know, and how they might assess themselves.

Information feedback is feedback that is informational or evaluative in nature. It is often manifested as the answer to a student question or an assignment grade and comments. Acknowledgement feedback is feedback that confirms or assures the student that some event has taken place. This can be done by

- Follow established office hours when students are able to contact you
- Automated responses can be provided for assignments delivered via email, informing the student of receipt of materials.
- Inform students that homework will be returned within a specified time frame and adhere to it.
- Provide detailed comments on an assignments, referring to additional sources for supplementary information.

Examples

1. *Engineering Outreach: Distance Education at a Glance Guide #2*
http://www.uidaho.edu/evo/dist4.html

This website is the work of Barry Willis, the Associate Dean for Outreach and the Engineering Outreach at the University of Idaho. It was developed to help teachers, administrators, facilitators, and students understand distance education. This particular section discusses The need to evaluate; types of evaluation; methods; what to evaluate; evaluation tips.

2. *Instructional Technology and Distance Education*
http://reach.ucf.edu/~eme6457/

This website is part of a course developed by Dr. Richard Cornell at the University of Central Florida. The site consists of various Microsoft PowerPoint presentations including one on "*Evaluation Approaches*."

3. *Quality Assurance in a Distance Education Context*
http://www.athabascau.ca/presoff/presentations/SREB.ppt

Athabasca University is Canada's leading distance-education and online university. The above link is a Microsoft PowerPoint presentation on guidelines that the university follows in the development of courses, including specific directions on faculty/student feedback.

Implementation

1.   Course Structure Evolutionary Genetics
http://www.qmw.ac.uk/~ugbt112/evolgenet/struct.htm

This is a worksheet developed for an Evolutionary Genetics course taught by Richard Nichols and Andrew Leitch of Queen Mary, University of London. The worksheet provides specific details as to what is expected of the students and how the instructor will provide feedback.

2. SPAN 696: Designing FL Instruction for Web Delivery
http://www-rohan.sdsu.edu/faculty/isabel/SPAN696/Work.html#anchor531531

This is a worksheet detailing the various media as well as information feedback for a course taught by Dr. Isabel Borras of San Diego State University.

References

1. Chickering, Arthur W., et al. (1991) Applying the Seven Principles for Good Practice in Undergraduate Education. *Jossey-Bass Inc*.

2. Graham, Charles et al. (2000) Teaching in a Web Based Distance Learning Environment: An Evaluation, Summary Based on Four Courses. *Indiana University*.

Description

Time plus energy equals learning. Learning to use one's time well is critical for students and professionals alike. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty.

New technologies can dramatically improve time on task for students and faculty members. Some years ago a faculty member told one of us that he used technology to "steal students' beer time," attracting them to work on course projects instead of goofing off. Technology also can increase time on task by making studying more efficient. Teaching strategies that help students learn at home or work can save hours otherwise spent commuting to and from campus, finding parking places, and so on. Time efficiency also increases when interactions between teacher and students, and among students, fit busy work and home schedules. And students and faculty alike make better use of time when they can get access to important resources for learning without trudging to the library, flipping through card files, scanning microfilm and microfiche, and scrounging the reference room.

For faculty members interested in classroom research, computers can record student participation and interaction and help document student time on task, especially as related to student performance.

Some examples which require that students spend adequate amounts of time on learning:

- Mastery learning
- Contract learning
- Computer-assisted instruction

Examples

1. Instructional Consulting - Indiana University Bloomington

Extended periods of preparation for college also give students more time on task. Matteo Ricci College guides high school students from the ninth grade to a B.A in six years through a curriculum taught jointly by faculty at Seattle Preparatory School and Seattle University.

Providing students with opportunities to integrate their studies into the rest of their lives helps them use time well. Workshops, intensive residential programs, combinations of televised instruction, correspondence study, and learning centers are all being used in a variety of institutions, especially those with many part-time students.

Weekend colleges and summer residential programs, courses offered at work sites and community centers, clusters of courses on related topics taught in the same time block, and double-credit courses make more time for learning.

At Empire State College, for example, students design degree Programs organized in manageable time blocks; students may take courses in nearby institutions, pursue independent studies, or work with faculty and other students at Empire State learning centers.

2. *Applying the Seven Principles for Good Practice in Undergraduate Education.* Arthur W. Chickering and Zelda F. Gamson.

   a. I expect my students to complete their assignments promptly.
   b. I clearly communicate to my students the minimum amount of time they should spend preparing for class and working on assignments.
   c. I help students set challenging goals for their own learning.
   d. I encourage students to prepare in advance for oral presentations.
   e. I explain to my students the consequences of non-attendance.
   f. I meet with students who fall behind to discuss their study habits, schedules, and other commitments.
   g. If students miss my class, I require them to make up lost work.

3. Gonzaga University - Institute for Law School Teaching

Inventory Checklist form
http://law.gonzaga.edu/ilst/P5.htm
   Online inventory checklist form for student, instructor, and university based upon Principle 5 from the *Seven Principles for Good Practice in Undergraduate Education.* Arthur W. Chickering and Zelda F. Gamson.

Implementation

1. Winona State - 7 principles with examples of how they are implemented

The basis for high performance lies in how an institution defines time expectations for students, faculty, administrators and other professional staff. Allocating realistic amounts of time builds effective learning for students and effective teaching for faculty.

Learning to use time productively establishes time management skills - - a valuable tool for students and professionals alike.

Computer assisted instruction, mastery learning, and contract learning are methods for requiring additional time outside the classroom beyond note-taking and textbook reading.

Example: The Electronic Technology Center located in Stark Hall features a multi-media learning opportunity for students and faculty. Working with computers and other peripherals, students receive a "built-in" requirement to spend time learning the equipment as well as its applications in the sciences and other disciplines

2. BYU - Brigham Young University

   a. Expect your students to complete their assignments promptly

b. Clearly communicate to your students the minimum amount of time they should spend preparing for classes
c. Make clear to your students the amount of time that is required to understand complex material
d. Help students set challenging goals for their own learning
e. When oral reports or class presentations are called for, encourage students to rehearse in advance
f. Underscore the importance of regular work, steady application, sound self-pacing, and scheduling
g. Explain to your students the consequences of non-attendance
h. Make it clear that full time study is a full time job that requires forty or more hours a week
i. Meet with your students who fall behind to discuss their study habits, schedules, and other commitments
j. If students miss your classes, require them to make up the work

3. NEC - Northern Essex Community College

a. Use timed writing in class
b. Have in class timed discussions
c. Start and end class on time
d. Try to keep class and clinical as productive as possible
e. Take home exams and assignments have a set due date
f. Work with students on time management
g. Have students discuss their limitations on time in small groups and with the whole class
h. Stress homework

4. UCF – University of Central Florida. Dennis Congos, Supplemental Instruction Coordinator (SI)

a. SI provides an excellent vehicle for helping students realize the significant commitment in time that they must invest to be successful in college.
b. SI leaders are successful students who must meet GPA criteria of 3.0 and have earned a grade of A or B in the class for which they are leading SI sessions.
c. Therefore, SI leaders are a resource for how much time they spend on learning tasks and are trained how model personal learning skills and success techniques when asked or when it seems appropriate and helpful to students.
d. SI leaders may distribute a handout on time management detailing the time commitment needed to do the job as a college student. This often prompts mutual self-help exchanges of time organization techniques among SI attendees
e. SI leaders may also have access to a learning skills library for more information on time management and college level study skills.
f. Many campus have a learning skills professional available from whom SI leaders could get more learning skills information or to use as a referral resource for students to acquire assistance on effective time organization in college.

5. *TECHNOLOGY* - Article by Chickering and Ehrmann on technology as a lever for implementing the 7 Principles

a. Technology also can increase time on task by making studying more efficient.

b.   Teaching strategies that help students learn at home or work can save hours otherwise spent commuting to and from campus, finding parking places, and so on.
c.   Time efficiency also increases when interactions between teacher and students, and among students, fit busy work and home schedules.
d.   Students and faculty alike make better use of time when they can get access to important resources for learning without trudging to the library, flipping through card files, scanning microfilm and microfiche, and scrounging the reference room.
e.   For faculty members interested in classroom research, computers can record student participation and interaction and help document student time on task, especially as related to student performance.

6.   *Classroom teaching strategies and techniques - Principles of Good Practice in Undergraduate Education* by Arthur Chickering and Zelda Gamson
http://www.indiana.edu/~icy/omnteach.html

f.   Mastery learning, contract learning, and computer-assisted instruction require that students spend adequate amounts of time on learning.
g.   Extended periods of preparation for college also give students more time on task. Matteo Ricci College guides high school students from the ninth grade to a B.A in six years through a curriculum taught jointly by faculty at Seattle Preparatory School and Seattle University.
h.   Providing students with opportunities to integrate their studies into the rest of their lives helps them use time well.
i.   Workshops, intensive residential programs, combinations of televised instruction, correspondence study, and learning centers are all being used in a variety of institutions, especially those with many part-time students.
j.   Weekend colleges and summer residential programs, courses offered at work sites and community centers, clusters of courses on related topics taught in the same time block, and double-credit courses make more time for learning.
k.   At Empire State College, for example, students design degree Programs organized in manageable time blocks; students may take courses in nearby institutions, pursue independent studies, or work with faculty and other students at Empire State learning centers.

7.   *SURVEY - The Knowledge Survey: A Tool for All Reasons*
by Edward Nuhfer, University of Colorado at Denver and Delores Knipp, United States Air Force Academy

a.   Full disclosure at the start of a course allows timely planning and study.
b.   A review sheet given out before an exam will not reveal to students what they do not know in a timely manner, and it will promote mere cramming rather than planned learning.
c.   Faculties, who plan courses well and disclose them at the detail of a knowledge survey, quickly discover that the survey keeps them honest.
d.   When a class inadvertently strays off track, knowledge surveys reveal whether straying resulted in any important omissions.
e.   Surveys also require students to engage material repeatedly. Some of the earliest research on cognition deduced the benefits of time spent in repetition to learning. The use of knowledge surveys ensures at least two additional structured engagements with the entire course material.

  f. *Seven Principles of Good Teaching Practice.* Dr. James W. King
    University of Nebraska-Lincoln.
    http://www.agron.iastate.edu/nciss/kingsat2.html

 A. Regular Classroom:
  a. List the job expectations of the instructor so that person can view what is
    expected of them.
  b. Assign what you think are realistic time values for each item. -If the total time
    equals greater than the time you have, adjust accordingly
  c. Be careful that time or task is real learning, not busy work
  d. Do not use technology for technology's sake, it must be relevant to topic and
    useful
  e. Progressive deadlines for project/assignments
  f. Many instructions establish "rules" -1 hour of lecture equals 2 hours of
    outside homework
  g. As an aspect of instruction, teach time management -With good organization
    of subject materials, assignments to be completed more timely and more
    completely
  h. Realistic expectations means you don't expect 10 papers in 10 weeks

 B. Distance Education:

  a. Proper planning means pretty good performance! -Make sure you know what
    your goals are and that the learners understand them as well.
  b. Understand that there will be problems with the distance and technology
    along the way
  c. Each distance class should involve some sort of time-achievement
    expectation that is laid out at the beginning of the course -Assign some
    content for out of class
  d. Consider both in and out of class time
  e. Encourage learners to participate in the time issue... Ask: we have 10/20
    minutes left, what do you want to do with it?
  f. Use available helps...facilitator, technician, and decision. Consider team
    approach and give up illusion of "doing it all," as one might in regular
    classroom
  g. Identify key concepts and how those will be taught. Given set amount of time,
    what can realistically be covered?
  h. In creating inter-active learning environment it can be overwhelming to both
    the students and the teacher if the types of interaction required are too time
    consuming. Keep it realistic!
  i. Vary the types of interaction!

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Technology and Higher Learning? *Annenberg/CPB Learner.org*, retrieved from the
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5. Seven Principles For Good Practice In Legal Education. *Gonzaga University, Institute for Law School Teaching*, retrieved from the Internet July 2002: http://law.gonzaga.edu/ilst/7PsIntro.htm

Good Practices # 6 - Communicates High Expectations

Description

Expect more and you will get it. High expectations are important for everyone — for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy.

New technologies can communicate high expectations explicitly and efficiently. Significant real-life problems, conflicting perspectives, or paradoxical data sets can set powerful learning challenges that drive students to not only acquire information but also sharpen their cognitive skills of analysis, synthesis, application, and evaluation.

Much faculty report that students feel stimulated by knowing their finished work will be "published" on the World Wide Web. With technology, criteria for evaluating products and performances can be more clearly articulated by the teacher, or generated collaboratively with students. General criteria can be illustrated with samples of excellent, average, mediocre, and faulty performance. These samples can be shared and modified easily. They provide a basis for peer evaluation, so learning teams can help everyone succeed.

Applying *The Seven Principles For Good Practice In Undergraduate Education*
Arthur W. Chickering and Zelda F. Gamson

Communicates High Expectations:
- I encourage students to excel at the work they do.
- I give students positive reinforcement for doing exemplary work.
- I encourage students to work hard in class.
- I tell students that everyone works at different levels and they should strive to put forth their best effort, regardless of what level that is.
- I help students set challenging goals for their own learning.
- I publicly call attention to excellent performance by students.
- I revise my courses to challenge students and encourage high performance.
- I work individually with students who are poor performers to encourage higher levels of performance.
- I encourage students not to focus on grades, but rather on putting forth their best effort.

Examples

1. *General Principles of Motivation.* Source Unknown

   Basic principles of motivation exist that are applicable to learning in any situation:

   a. The environment can be used to focus the student's attention on what needs to be learned.
   b. Teachers who create warm and accepting yet business-like atmospheres will promote persistent effort and favorable attitudes toward learning. This strategy will be successful in children and in adults. Interesting visual aids, such as

booklets, posters, or practice equipment, motivate learners by capturing their attention and curiosity.

c. Incentives motivate learning.

d. Incentives include privileges and receiving praise from the instructor. The instructor determines an incentive that is likely to motivate an individual at a particular time. In a general learning situation, self-motivation without rewards will not succeed. Students must find satisfaction in learning based on the understanding that the goals are useful to them or, less commonly, based on the pure enjoyment of exploring new things.

e. Internal motivation is longer lasting and more self-directive than is external motivation, which must be repeatedly reinforced by praise or concrete rewards.

f. Some individuals -- particularly children of certain ages and some adults -- have little capacity for internal motivation and must be guided and reinforced constantly. The use of incentives is based on the principle that learning occurs more effectively when the student experiences feelings of satisfaction. Caution should be exercised in using external rewards when they are not absolutely necessary. Their use may be followed by a decline in internal motivation.

g. Learning is most effective when an individual is ready to learn, that is, when one wants to know something.

h. Sometimes the student's readiness to learn comes with time, and the instructor's role is to encourage its development. If a desired change in behavior is urgent, the instructor may need to supervise directly to ensure that the desired behavior occurs. If a student is not *ready to learn,* he or she may not be reliable in following instructions and therefore must be supervised and have the instructions repeated again and again.

i. Motivation is enhanced by the way in which the instructional material is organized.

j. In general, the best-organized material makes the information meaningful to the individual. One method of organization includes relating new tasks to those already known. Other ways to relay meaning are to determine whether the persons being taught understand the final outcome desired and instruct them to compare and contrast ideas.

k. None of the techniques will produce sustained motivation unless the goals are realistic for the learner. The basic learning principle involved is that *success is more predictably motivating than is failure.* Ordinarily, people will choose activities of intermediate uncertainty rather than those that are difficult (little likelihood of success) or easy (high probability of success). For goals of high value there are fewer tendencies to choose more difficult conditions. Having learners assist in defining goals increases the probability that they will understand them and want to reach them. However, students sometimes have unrealistic notions about what they can accomplish. Possibly they do not understand the precision with which a skill must be carried out or have the depth of knowledge to master some material. To identify realistic goals, instructors must be skilled in assessing a student's readiness or a student's progress toward goals.

l. Because learning requires changed in beliefs and behavior, it normally produces a mild level of anxiety.

m. This is useful in motivating the individual. However, severe anxiety is incapacitating. A high degree of stress is inherent in some educational situations. If anxiety is severe, the individual's perception of what is going on around he or she is limited. Instructors must be able to identify anxiety and understand its

effect on learning. They also have a responsibility to avoid causing severe anxiety in learners by setting ambiguous of unrealistically high goals for them.

n. It is important to help each student set goals and to provide informative feedback regarding progress toward the goals.

o. Setting a goal demonstrates an intention to achieve and activates learning from one day to the next. It also directs the student's activities toward the goal and offers an opportunity to experience success.

p. Both affiliation and approval are strong motivators.

q. People seek others with whom to compare their abilities, opinions, and emotions. Affiliation can also result in direct anxiety reduction by the social acceptance and the mere presence of others. However, these motivators can also lead to conformity, competition, and other behaviors that may seem as negative.

r. Many behaviors result from a combination of motives.

s. It is recognized that no grand theory of motivation exists. However, motivation is so necessary for learning that strategies should be planned to organize a continuous and interactive motivational dynamic for maximum effectiveness. The general principles of motivation are interrelated. A single teaching action can use many of them simultaneously.

t. Finally, it should be said that an enormous gap exists between knowing that learning must be motivated and identifying the specific motivational components of any particular act. Instructors must focus on learning patterns of motivation for an individual or group, with the realization that errors will be common.

2. Motivation Factors and Strategies, By Time Period Beginning, During, And Ending

A. TIME:
Beginning: When learner enters and starts learning
MOTIVATIONAL FACTORS:
Attitudes: Toward the environment, teacher, subject matter, and self
Needs: The basic need within the learner at the time of learning
MOTIVATIONAL STRATEGIES:
a. Make the conditions that surround the subject positive.
b. Positively confront the possibly erroneous beliefs, expectations, and assumptions that may underlie a negative learner attitude.
c. Reduce or remove components of the learning environment that lead to failure or fear.
d. Plan activities to allow learners to meet esteem needs.

B. TIME:
During: When learner is involved in the body or main content of the learning process.
MOTIVATIONAL FACTORS:
Stimulation: The stimulation processes affecting learner during the learning experience.
Affect: The emotional experience of the learner while learning.
MOTIVATIONAL STRATEGIES:
a. Change style and content of the learning activity.
b. Make learner reaction and involvement essential parts of the learning process that is, problem solving, role-playing, and stimulation.

  c. Use learner concerns to organize content and to develop themes and teaching procedures.

  d. Use a group cooperation goal to maximize learner involvement and sharing.

 C. TIME:

  Ending: When learner is completing the learning process.

  MOTIVATIONAL FACTORS:

  Competence: The competence value for the learner that is a result of the l earning behaviors.

  Reinforcement: The reinforcement value attached to the learning experience, for the learner.

  MOTIVATIONAL STRATEGIES:

  a. Provide consistent feedback regarding mastery of learning.

  b. Acknowledge and affirm the learners' responsibility in completing the learning task.

  c. When learning has natural consequences, allow them to be congruently evident.

  d. Provide artificial reinforcement when it contributes to successful learning, and provide closure with a positive ending.

Implementation

1. Brigham Young University
   a. Tell your students you expect them to work hard in your classes
   b. Emphasize the importance of holding high standards for academic achievement
   c. Make clear your expectations orally and in writing and the beginning of each course
   d. Help students set challenging goals for their own learning
   e. Explain to students what will happen if they do not complete their work on time
   f. Suggest extra reading or writing tasks
   g. Encourage students to write a lot
   h. Publicly call attention to excellent performance by your students
   i. Revise your courses
   j. Periodically discuss how well the class is doing during the course of the semester

2. NEC - Northern Essex Community College

   a. Expect students to be on time
   b. Demonstrate a can do attitude
   c. Require revision of writing
   d. Clarify the course objective on your syllabus
   e. Set personal expectations high and give your students examples
   f. Give many problems worth small amounts each
   g. Constantly encourage students to try to do better (without exceeding their abilities)
   h. Don't take no for an answer
   i. Set up study guidelines
   j. Use of a mastery approach with a high minimum

2. SI - Dennis Congos, Supplemental Instruction (SI) Coordinator, at the University of Central Florida

a. A major focus an SI program is, while enabling, facilitating collaboration, and modeling effective study behaviors, SI leaders expect students to refine their abilities to understand, learn, remember, and apply knowledge from courses.
b. A major goal of SI is to help students rise to meet and exceed the expectations of professors.
c. Expectations for student behavior in SI sessions are high, also. Students are expected to attend SI session prepared by having read textbook assignments, attempted homework, and formulated questions that address individual needs for study skills and course content information.
d. SI leaders expect students to want to do well in the SI course and their other courses.
e. Students are expected to do the thinking, reasoning, analyzing, organizing, and applying of course information within the bounds of lecture and textbook information.
f. Students in SI sessions see SI leaders as students like themselves who have met high academic expectations and succeeded. The next logical though for student may be, "So then can I."

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Good Practices # 7 - Respects Diverse Talents and Ways of Learning

Description

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learning in new ways that do not come easily (Chickering and Gamson, 1987).

Many examples of field practices were suggested such as:

- Allow students to shape their own coursework by choosing project topics
- Attempt to learn about the different backgrounds and interests of the students
- Encourage students to express their diverse points of view
- Include learning exercises filled with real-life examples that represent diverse, unique perspectives

Examples

1. *How an Understanding of Student Learning Styles can be Applied in the Online Environment:*
   http://www.mscd.edu/~options/online/styles.html

   This article is an overview defining learning styles and how they might be linked with teaching styles to encourage improved interactions between faculty and students. Includes a short list of additional references.

2. *Teaching and Learning Styles in Engineering Education.* Richard M. Felder*:*
   http://www2.ncsu.edu/unity/lockers/users/f/felder/public/Papers/LS-1988.pdf

   Dr. Felder addresses the question of matching learning styles of engineering students to teaching styles of engineering professors. Although the article dates back to 1988, he has modified some of research and noted in a foreword what changes have been reconsidered.

3. *Social Dynamics of the College Classroom: Issues and Ideas for Distance Educators.* O'Connor, Terry.
   http://web.indstate.edu/ctl/cta/home.html

   This article introduces ways to create social dynamics for distance education situations by discussing three specific topic areas; Communicating Direction, Creating Community and Power and Leadership.   It addresses the needs of the instructor to create deliberate social interactions with the student.

Implementation

1. *Incorporating Learning Styles to Enhance Mechanical Engineering Curricula by Restructuring Courses, Increasing Hands-On Activities, & Improving Team Dynamics:* http://www.asme.org/educate/awards/cia00/jensen.pdf

   2000 ASME Curriculum Innovation Award Winner. This article describes how the curriculum was redesigned to incorporate learning styles and multimedia tools to enhance and improve the Design Methodology courses at the U.S. Air Force Academy and University of Texas at Austin.

2. *Facilitator Web Pages*: *Use a learning-oriented approach to outline your course* http://web.indstate.edu/ctl/styles/web3.html

   A web-site designed for problem-based instruction where the focus of the   curriculum is on learning processes. This site demonstrates an example from a history course in completing a history project.

3. *Using Learning Styles to Adapt Technology for Higher Education. O'Connor, Terry.* http://www.ntlf.com/html/lib/faq/ls-indiana2.htm

   A review which examines the topic of learning styles and the adoption into a higher education curriculum.

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II.   Support and Facilitation through FEEDS

*This section is a collective summary of services delivered from all the universities who participate in FEEDS. Each university sets its own guidelines and as such, some of services listed below may not apply to your particular university.

1) **Delivery**
   a) Continuous research to keep current with new delivery technologies
   b) Live and Archived Streaming Video via Internet Delivery
      i) Classes are available through streaming video over the Internet using Real Player® Quick Time® or Microsoft Windows Media®.
      ii) Handouts are distributed electronically by posting to the FEEDS website, on faculty websites, or through course management software such as Blackboard® or WebCT®.
      iii) Each online streaming class video archive is accessed either by password provided by the instructor or by registering as a FEEDS student
      iv) Archived media files are available a minimum of two weeks after the original class takes place.
   b) Synchronous and asynchronous course delivery in support of different learning styles.
   c) Multiple types of delivery methods available to meet industry/individual demands of anytime, any place delivery.
   d) Instructional Television Fixed Services (ITFS) point of sight, short-range broadcasting services
   e) Video tape
   f) CD rom

2) **Course Materials**
   a) Students can now track the status of their course materials package. There is a direct link to UPS's tracking information for their package.
   b) Course materials may be sent electronically to either the student or the site liaison.
   c) Course materials may be shipped and/or faxed.
   d) Materials distribution to/from sites and individual students
   e) Assistance with course materials loaded to websites

3) **Production Services**
   a) Online services interfaces that integrate chat, white board, lecture notes and streaming video are available (depending on your specific University).
   b) Video taping and editing services available for pre-production taping of lectures, workshops, labs, virtual field tours, and guest speakers either on-site or off-site.
      Pre-taping of courses, seminars and workshops
      b) Field production services
   c) Full linear and non-linear productions services
   d) updated laboratory software on studio computers

4) **Student Support**
   a) When local students can't reach their distance professor, long-distance phone access to make the connection.

b) Problem solving from start of the distance course, to finish, until the student is satisfied.
c) Videotaping their student presentations for their distance courses.
d) Coordination of course tape delivery, CD-ROM and printed support materials.
e) Coordinate and facilitate problem solving.

5) Faculty Training and Support
   a) Individualized training of technology in support of pedagogical theories
   b) Course management software and training available
   c) Web-development assistance
   d) Content population of course materials

6) Communications - websites

a) Individual university websites maintained and updated for information dissemination to students, faculty and industry partners.

b) Collaborative contributions to Statewide website.

III. University Faculty Development

University faculty support and development

University	*Course Management Software*	*Centers for Faculty Development*	*Faculty Training*	*Student Development and Training*
FAMU/FSU	*v*	*v*	*v*	*v*
FAU	*v*	*v*	*v*	*v*
FGCU	*v*	*v*	*v*	*v*
FIT	*v*	*v*	*v*	*v*
FIU	*v*	*v*	*v*	*v*
UCF	*v*	*v*	*v*	*v*
UF	*v*	*v*	*v*	*v*
UNF	*v*	*v*	*v*	*v*
USF	*v*	*v*	*v*	*v*
UWF	*v*	*v*	*v*	*v*

FAMU/FSU: http://online.fsu.edu/

1. **Course management software**
   a. BlackBoard - http://online.fsu.edu/
      Syllabus Toolkit - http://online.fsu.edu/onlinesupport/instructor/syllabus.html
   b. Web-MC, Web Mediated Course Assistant - http://webmc.fsu.edu/

2. **Centers for faculty development and training**
   a. Office for Distributed and Distance Learning
      Online Learning @ FSU - http://online.fsu.edu/instructor/

   b. ODDL Workshops & Event Calendar -
      http://forms.oddl.fsu.edu/online/workshops/index.jsp

      i) Faculty
         (1) Electronic Campus
         (2) Instructional Development
         (3) Teaching Conference
      ii) Graduate Students
         (1) Electronic Campus
         (2) PIE (Program for Instructional Excellence)/PFF
         (3) Teaching Conference

   c. Technology Enhanced Classrooms (TEC) - http://tecs.fsu.edu/

   d. Getting and Managing Course Websites -
      http://online.fsu.edu/onlinesupport/instructor/

e. Learning Resources - http://online.fsu.edu/learningresources/index2.html

   f. Digital Media Group – Instructional Media Production -
       http://www.fsu.edu/~dmpg/

   g. ODDL Digital Media Server – Online Photo Database -
       http://www.fsu.edu/~dmpg/server/index.html#

   h. *Instruction at FSU: A Guide to Teaching & Learning Practices*
       http://online.fsu.edu/learningresources/handbook/instructionatfsu/
   i. Fall 2002 Teaching Enhancement Workshop for Faculty -
       http://www.fsu.edu/~ids/fac2002/2002_announcement.htm

   j. Proposals and Funding
       Faculty may apply for funding for developing online degree programs;
       enhancing instruction via technology; receiving training in using and/or
       developing course websites; and other technology-related instruction and
       support.
       http://online.fsu.edu/proposal/

   k. *147 Practical Tips for Teaching Online Groups: Essentials of Web-Based
       Education.* Donald E. Hanna, Michelle Glowacki-Dudka & Simone Concicao-
       Runlee, Atwood Publishing.

       i)   These trade size paperback books were found at an ASEE conference
            and purchased off the FAMU-FSU College of Engineering SUCCEED
            grant and given to faculty who attended the Technology Based
            Curriculum Development (TBCD) Faculty Workshop last year.
       ii) More were purchased and all faculty now have this book as part of their
            teaching reference books here at the College.

3. **Student development and training**
   a. The Mentor Role @ FSU
       To ensure that "learning" is the operant word in distance learning, FSU has
       pioneered the **mentor-supported distance-learning** model, in which
       mentors are the bridge between students and their success.
       http://online.fsu.edu/instructor/mentor/

   b. BlackBoard Student Online Manual
       http://company.blackboard.com/Bb5/manuals/Bb5-LevelThree-Student/

   c. Student Handbook for Online Learning -
       http://online.fsu.edu/student/Media/studenthandbook.pdf

FAU: http://www.fau.edu

1. **Course management software**
   a. Blackboard

2. Centers for faculty development and training
   a. Instructional Technology Support System (ITSS)

   Instructional Services:
   - Design or redesign courses for non-traditional delivery.
   - Design and develop on-line courses.
   - Familiarize faculty and staff with instructional technologies by:
   - Conducting faculty workshops/seminars focused on using new technologies.
   - Conducting faculty workshops/seminars focused on internet instruction.
   - Conducting faculty workshops/seminars focused on television instruction.
   - Conducting faculty workshops/seminars focused on educational and instructional games, activities and simulations.
   - Conducting faculty workshops/seminars focused on individualizing instruction.

   Technical Services:
   - Design and produce multimedia courseware or multimedia course components. Some examples of multimedia course components are the following:

   - Digitize media such as audio, video, photographs or other imagery and edit the media in electronic form to support instruction.

   - Design and produce digital motion picture montage sequences or animation from digital media to support and illustrate instructional concepts.

   - Design and produce interactive activities or simulations.

   - Design and develop custom web sites to support academic endeavors.

   - Design and develop professional non-traditional multimedia-presentations incorporating digital media to support faculty and FAU department's needs and functions.

   - Design and conduct formative evaluation of instructional media and materials.

   - Investigate and maintain current information on the application of the latest instructional technology tools and test their performance.

3. **Student development and training**

   a. FAU LIBRARY RESOURCES:
   http://www.fau.edu/library/services.html

   Services: Catalog; Indexes/Databases; Electronic Journals; Course Reserves; Campus Libraries; Contact Us; EZ-Proxy; Interlibrary Loan (ILLiad); Instructional Services; FAU Search; FAU WebMail; Ask A Librarian! (Send us your reference questions!); Reserve information for faculty and students; ADA Services; Library assistance for students with disabilities; Distance Learner (Important information for our distance learning students); Request It Online (Links to important electronic request forms, such as the Recall/Hold Request form)

FGCU: http://www.fgcu.edu

1. **Course Management Software**
   a. WebCT

2. **Centers for Faculty Development and Training**
   a. Instructional Technology/Broadcast Services (ITBS)

   Center for technology services with the following available resources: Course and Faculty Development, Computer labs and classrooms, Multimedia Services, Network Support, Equipment Loan, Print Services, Web Services, Audio/Video Production, and Video Conferencing

4. **Student Development and Training**
   a. The Writing Center

   The Writing Center develops student-writers through free, accessible, learning-based, writing consultations that are available to all FGCU students. Our primary goal is to improve the writer's ability to think and write critically, necessary steps for success in FGCU's demanding, academic environment.

FIT: http://www.fit.edu

1. **Course management software**
   a. Blackboard

2. **Centers for faculty development and training**
   a. Center for Distance Learning
   http://www.fit.edu/ctle/

   Assists the entire Florida Institute of Technology community in providing quality education, furthering knowledge through basic and applied research, and serving the diverse needs of our local, state, national and international constituencies by delivering, through the appropriate technologies, courses and programs in discipline areas where Florida Institute of Technology has significant, recognized

strengths. Identifies policies and procedures needed by the development of distance education programs, coordinates the marketing of distance education programs, and provides leadership and expertise related to teaching and learning at a distance.

b. Technology-Enhanced Content (TEC) Center

Seeks to enhance instructional design and course delivery through designing, implementing and supporting multimedia instructional resources, and coupling these resources with a comprehensive training program for University students, faculty, and staff.

3. **Student development and training**
   a. Academic Support Center (ASC)

Direct instructional assistance is provided to Florida Tech students by the Academic Support Center (ASC). The ASC provides free one-on-one tutoring in all required first year courses and many other undergraduate courses. The ASC also offers small weekly study groups and a library of self-help materials.

FIU: http://www.fiu.edu

1. **Course management software**
   a. WebCT

2. **Centers for faculty development and training**
   a. University Technology Services (UTS)
   http://www.fiu.edu/~irmsc/aboutus.htm

The center has the following services available to faculty: Administrative Software Unit, Baynet Computing, Broadcast Video, Computer Support Team, Computer & Networking, Computing Labs, FIU Libraries, Hardware Maintenance, Instructional Photography & Graphics, Media Equipment, Network Engineering & Telecommunications, Operations and Enterprise System, and Training Center.

3. **Student development and training**
   a. University Technology Services – Training Centre
   http://www.fiu.edu/~irmtrain/

The University Technology Services are committed to providing quality hands-on training to facilitate the academic and research goals of the University Faculty and students and to improving the efficiency of the administrative and support staff. The centers are located at : UP Campus: PC 421 and BB Campus: ACI 393.

UCF: http://www.ucf.edu

1. **Course management software**
   a. WebCT at UCF
   www.http://reach.ucf.edu/%7Ecoursdev/webct/support.html

2. Centers for faculty development and training
    a. Course Development and Web Services
    http://cdws.ucf.edu/

    CD&WS is made up of instructional and graphic designers,
    Web programmers and software engineers, who comprise the Virtual
    Development Team. Located on the first floor of the Library in room 107.

    b. Faculty Center for Teaching and Learning
    www.http://fctl.ucf.edu

    The focus of this center is related to the development of pedagogically sound
    courses.

3. Student development and training
    a. Course Development and Web Services
    www.http://cdws.ucf.edu/

    CD&WS is made up of instructional and graphic designers,
    Web programmers and software engineers, who comprise the Virtual
    Development Team. Located on the first floor of the Library in room 107.

UF: http://www.ufl.edu

1. Course management software
    a. WebCT
    http://webct.ufl.edu/

2. Centers for faculty development and training
    a. The Center for Online Teaching
    http://www.fiu.edu/idc/

The Center for Online Teaching's primary goal is to support faculty in their
endeavors to learn, design, and develop online courses for web-assisted,
campus/online, and fully online delivery. To accomplish this goal the COT
provides the following services and facilities:

•Workshops covering all aspects of design, development, instruction, and
implementation of online courses

•Individualized faculty/staff consultation in instructional design, technical issues,
and multimedia development

•Consultation for departments and colleges in developing initiatives to create
online degree programs

    b. The Center for Instructional Technology & Training

As part of the services offered to faculty, the CITT mission is to provide training, technical support, and access to equipment for the development of multimedia for instruction.
While priority is given to faculty members engaged in the development of web-based courses, the CITT staff and equipment is available for use by any faculty members who are actively working on media based instructional projects.

The CITT staff presents workshops on the use of technology and software, assist in the evaluation of software for media-based instructional development, consult with faculty on the pedagogical issues related to web-based instruction, and provide access to equipment for media production.

The Center for Instructional Technology & Training:
• provides one-on-one training, classroom instruction and individual consultation to increase users' knowledge base and to promote the use of technology in instruction;
• houses experts in the development of curricula, in the coordination of project development, in the pedagogy of instructional design and learning, and in the use of various technologies to enhance traditional, Web-based, and CD-ROM-based courses; and
• creates dynamic learner-centered approaches to curriculum development and course delivery to fully engage the learner using sound, texture, and images through computer generated interfaces and multimedia development.

The Center for Instructional Technology & Training
2215 Turlington Hall
PO Box 117345
University of Florida
Gainesville, FL 32611-73456
Phone: (352) 392-7249

3. **Student development and training**
   a. AT Computing Help Desk
   http://helpdesk.circa.ufl.edu/

UNF: http://www.unf.edu

1. **Course management software**
   a. Blackboard
   http://www.unf.edu/dept/cirt/Techelp.html

2. **Centers for faculty development and training**
   a. Division of Computing Services

   Offers numerous faculty and staff short training courses in software and applications, and the Division of Continuing Education and Extension offers short courses available to
   faculty and staff.

b. Center for Instruction and Research Technology

CIRT will offer expertise, resources, and training to assist faculty in ways that enable them to develop greater capacities for using technology, especially electronic and computer-assisted technologies, for teaching and research. CIRT will also disseminate ideas, frameworks, and materials that apply pedagogical knowledge to the teaching and learning process

3. **Student development and training**
   a. Current Students website
   http://www.unf.edu/view/current/students.html

   Available student services: computer labs, computing services, OspreyNet telephone services and student computing guide.

USF: http://www.usf.edu

1. **Course management software:**
   - Blackboard portal (myUSF)

   With the intent of unifying diverse online campus systems into one fully integrated platform that incorporated the university's pre-existing administrative systems, specifically SCT® Banner™, Academic Computing Technologies used the Blackboard Learning and Community Portal System™ to create an academic environment that links students, faculty, and staff to the courses, organizations, and Web-based services that are relevant to their academic lives.

   - Blackboard course management software
   On-line course management software
   On-line Faculty Blackboard manual:
   http://www.acomp.usf.edu/myUSF/Bb55-LevelOne-Instructor.pdf

   - WebCT course management software
   On-line course management software
   http://www.acomp.usf.edu/faqs.html

2. **Centers for faculty development and training:**

   Academic Computing   http://www.acomp.usf.edu/: Provides unique services for faculty as they deploy computer technology to their research and teaching efforts. WEBCT and Blackboard sites are available for instruction, intensive number processing is also available.

   Center for Teaching Enhancement   http://www.cte.usf.edu/: Promotes personal reflection and scholarly dialogue on the art, science and craft of university teaching. The Center sponsors publications, workshops, and research which critically examine and promote instructional excellence. In addition, the Center offers opportunities for individuals to improve their teaching effectiveness using classroom visitations and/or mid-semester student feedback.

Educational Outreach   http://www.outreach.usf.edu/: Educational Outreach oversees the largest distance and distributed learning program in Florida with approximately 14,700 enrollments in more than 300 courses offered annually. Educational Outreach provides comprehensive distance learning and instructional technology support services for faculty engaged in both synchronous and asynchronous distance learning classes University-wide including those on USF's regional campuses. Services include but are not limited to: helping faculty integrate instructional technologies into teaching and learning, web development of credit and non-credit courses and programs, instructional design and consultation for all distance-learning options, multimedia development of digital learning objects to enhance course content, and instructional audiovisual support. Educational Outreach also assists faculty in connecting with global research opportunities through distance learning.

Evaluation and Testing   http://www.usf.edu/ugrads/eandt/etpurpose.htm: Provides assistance with scanning test forms, developing scannable research forms, computerizing testing online, and academic evaluation and assessment. Evaluation and Testing also is where students may take the GRE, GMAT, TOEFL, CLEP and a wide variety of other standardized and University-unique tests.

USF Bookstore   http://www.bookstore.usf.edu/:   You can now look up fall textbooks or reserve your fall textbooks online. Distance learning textbooks and the latest USF merchandise are also available for purchase online. You can also order a copy of our latest merchandise catalog.

USF Library System   http://www.bookstore.usf.edu/:   One of your best resources at the University is the USF Library System. They offer you everything from the latest journals (off and online), web development resources, Library instruction for your students, digitization services, copyright assistance, to faculty carrels. New faculty especially are invited to participate in focus groups about library resources and services. Please contact Pam Tucker, 813-974-2484, if you are interested.

VITAL   http://www.usf.edu/VITAL : VITAL offers a collaborative support system for faculty members interested in integrating technology into on-campus courses, or who wish to prepare course materials for distance learning initiatives. Interested faculty receive assistance from this support system for added expertise in instructional development and course planning, computer programming, multi-media production and graphic arts, video and television production, and information management and integration.

WUSF-TV16 http://www.wusftv.usf.edu/ **:** WUSF-TV 16**,** a vital resource of the University, provides outstanding educational, cultural and public affairs television programming, productions and community outreach service to our customers. As the public television service of USF, the station for over 30 years has excelled in supplying educational services and programming to the fast growing region of west central Florida. Housed on USF's Tampa campus, WUSF-TV is a positive alternative to commercial broadcasting as a community-based institution.

3. Student development/training

Academic Computing **http://www.acomp.usf.edu/** : We provide computing assistance to USF students and faculty through our call center (**974-1222** in Tampa or toll-free **1-866-974-1222** statewide), electronic mail (help-ac@usf.edu), walk-ins (**LIB 608**) and on-site services. Our Help Desk is staffed all hours the Tampa Campus Main Library is open. However, you are welcome to use our online customer service and support tool at any time.

UWF: http://www.uwf.edu

1. Course management software
a. Prometheus
http://uwf.edu/its/services.cfm

Web-based course management

2. Centers for faculty development and training
a. Information Technology Services (ITS)
http://uwf.edu/its/

The central University organization supporting information technology at the University of West Florida. Our mission is to enable UWF students, faculty, and staff to productively use information technology and information resources. ITS pursues this mission through maintaining an University-wide information technology infrastructure and providing associated support.

3. Student development and training
a. Student Technology Guide
http://uwf.edu/helpdesk/stg/

Web site to assist students in locating on-campus support services like classroom technology services and campus-wide databases.

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See additional References and Resources on the FEEDS statewide website:
http://www.feedsnet.org