

A Tutorial Paper

Creative Online Learning Environments

Donald G. Perrin

Introduction

Educational institutions add online options to extend Certificate and Degree programs to unserved and underserved learner populations. Potential advantages to the learner and provider of learning hinge on changes in pedagogy and ability to provide quality support for distance learning. The online experience is not necessarily better or worse than traditional classroom instruction, but it is different. This paper focuses on the transition process for teacher, student, and the provider organization. It discusses best practices, standards, and creative approaches to teaching and learning. It follows the design of an undergraduate business course at University of Maryland University College (UMUC) for online learning. This model is easily generalized or adapted for other online curricula and learning management systems.

A multiple section course for UMUC Department of Human Resources and Management (HRMN) is used to illustrate design, production, implementation, and management of an online course and how this is applied for education and training. HRMN 406 Employee Training and Development is a fourth year undergraduate course for Human Resource (HR), Training, and management personnel in business.

Needs assessment, goals and curriculum for classroom and online sections were predetermined by HRMN and Undergraduate Business Curriculum Committees. The assigned textbook is *Effective Training: Systems, Strategies, and Practices*, Second Edition, by P. Nick Blanchard and James W. Thacker, Prentice Hall, 2004. Online and classroom groups have similar syllabus, assignments, group projects, and a final proctored exam. Lecture discussion and other classroom techniques are replaced by conferences, study groups, chat, and email. For all sections, learning experiences follow the text. Class activities and materials for the online class are designed and managed by the instructor. The online and classroom sections are equivalent although pedagogy and schedules are different.

Saturday, April 16th, 2:22 PM

WebTycho

UMUC

Welcome to Online Study at
University of Maryland University College

User Name

Password

Guests: Use user name "UMUC Guest" and password "umuc".

[Newly Registered?](#) Click on Login Wizard (below) and follow the prompts to obtain your user name and password.

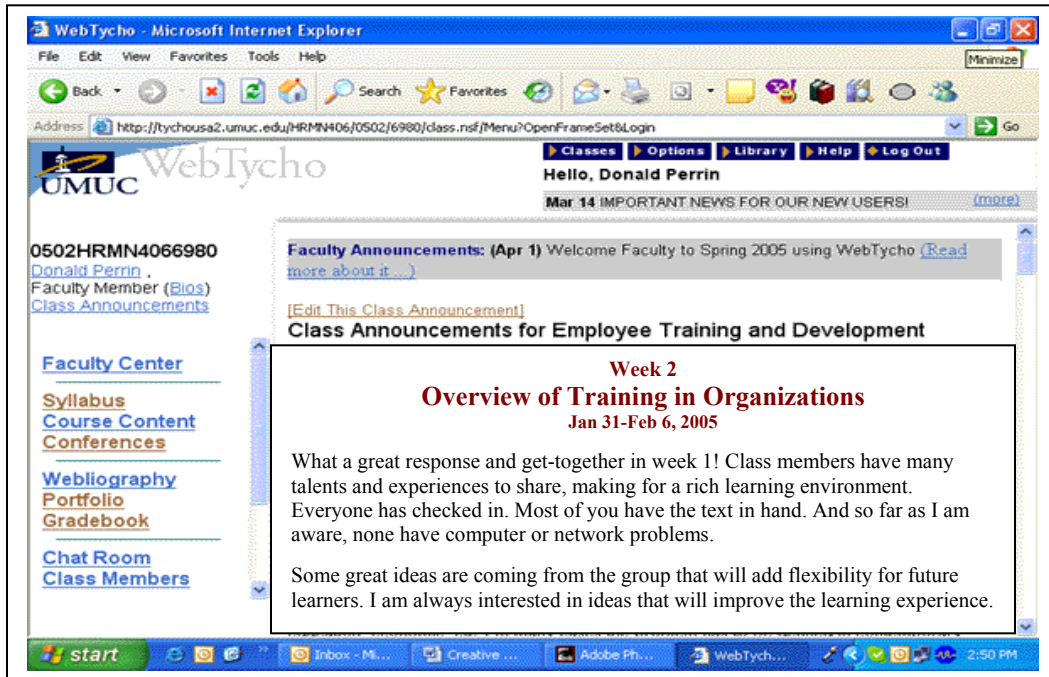
[Forgotten your user name and/or password?](#) Click on Login Wizard (below) and follow the prompts.

[Nondiscrimination Statement](#)

[About WebTycho](#) [Log In Wizard](#) [Check Your Browser](#) [Help and Support](#)

Online Instructor Training

Cohorts of instructors receive six weeks of online training to design, prepare, and manage online classes. This is an intense boot-camp-type experience to familiarize instructors with the various tools, give them first-hand experience in the role of student, and train them as instructors with rigor and procedures to design, produce, implement, and evaluate their online courses. There is no pretense about the work involved and new skills to be learned and mastered in a condensed time frame. The training of instructors is performed by online master teachers who model, demonstrate, and train the new cohort of instructors to be proficient and resourceful. Having mastered the tools, the creative part begins – designing and producing course materials for the rapidly approaching Semester.



Technology Base

UMUC developed its own technology for online learning called WebTycho. Currently it serves more than 50,000 students and 2,500 instructors each 15-week semester. Administration is centered in Adelphi, Maryland, and courses are taught interactively through server farms in USA, Japan, and Germany. The technology is simple, flexible, and transparent for instructor and students. Except for chat and online help by telephone, all functions are asynchronous. Classes are accessed 24X7 around the world using any web browser. This enables students and instructors to be mobile and participate in class activities almost anywhere in the world.

When students sign on, they are greeted with Class Announcements and a set of Menus. The instructor has a similar screen with management options including Faculty Center, GradeBook, and Faculty Announcements, and Class Announcements.

Collectively, the UMUC website and WebTycho duplicate all resources of a comprehensive university – administrative offices, library, class catalog, syllabus, course content, schedule, conferences, study groups, chat rooms, learning assistance, testing center, and related services. Most are accessible from the WebTycho home page. WebTycho also has excellent Help from responsive and highly trained personnel.

Students use dialup or broadband to access UMUC on their web browser from anywhere in the world. They can respond directly on the page or work offline and paste or attach new topics or responses. Attachments can be text with graphics, spreadsheets, PowerPoint, or Acrobat files.

Online Tools

Class Announcements are generated by the instructor to introduce activities each week.

Faculty Center links to a comprehensive range of faculty services and resources and a powerful Learning Management System (LMS).

Syllabus provides goals, curriculum, schedule, grading, and specific course information. It also addresses Library, learning assistance, and student rights. The instructor can revise or add information specific to his or her class section.

Conferences are the focus of activity. They are an online version of lecture-demonstration and discussion with a difference. The presentation is short and succinct and the dialog is extensive.

Study groups facilitate collaborative development where team members are geographically separated (Study groups appear in the menu when a study group is activated.)

Webliography provides annotated references and links to relevant web resources such as professional journals, research studies, articles, and white papers. .

GradeBook appears only on the Instructor screen. It links student assignment folders into one table for grading **Assignments** replace *GradeBook* on the student screen. Students paste or attach assignments in this folder and receive grades and instructor comments.

Chat Room can be scheduled by instructor or students as a place for real-time interaction.

Class Members is a list of students, instructor, and assistants by name with links to individual or collective email accounts and bios.

Instructional Design for Online Learning

In online instruction, the focus moves from teaching to providing environments to facilitate learning. Web advantages compensate for lack of face-to-face contact:

1. **Anywhere-Anytime Schedule.** Class does not occur at a particular hour on a particular day. It is available 7 X 24 on the Web. It can take place anywhere there is a computer and internet connection. It is even possible to complete class activities off-line and paste or attach them at the next web session. This flexibility enables instructors and learners to respond to job pressures, meet family emergencies, and even travel while participating in class. At the instructor's option, weekly conferences can be available ahead of schedule and open for additional weeks so all can participate fully.

2. **Interactivity.** Compared to traditional classroom instruction, the Web offers a multitude of interactive resources. Real-time (synchronous) options include Internet Phone (Voice On IP), Chat, NetMeeting, Live Meeting, and video conference media. Anytime (asynchronous) options includes email, chat rooms, conferences, study groups, “surfing” the web and using search engines to explore databases and libraries. Asynchronous communication can take place 24 X 7 using chunks of available time causing minimal interruption to work and family activities.
3. **Participation and Community.** For most students, success requires a community of learners – a [learning organization](#). The sense of community is developed by interaction, dialog, sharing, and collaborative activities. These enrich learning experience and improve course completion rates.
4. **Motivation.** Keller’s [ARCS Model](#) for Instructional design identifies four essential strategies to motivate the learner:
 - Attention strategies to arouse and sustain curiosity and interest;
 - Relevance strategies that link learners' needs, interests, and motives;
 - Confidence strategies to develop a positive expectation for achievement;
 - Satisfaction strategies for extrinsic and intrinsic reinforcement of effort.“Buy in” requires clear objectives, participation, value, and expectation of success.
5. **Theory, Practice, and Creativity.** Knowing why (theory) is important, but successful application (practice) is even more important. For that reason, practical experience, problem solving, simulations, and creative activities should be the culmination of each course topic. Knowledge *per se* is less important than ability to acquire current information, and *performance* involving higher levels of Bloom’s Taxonomy (comprehension, analysis, synthesis, and evaluation) is the yardstick for success. [Constructivist](#) theory is widely used by instructors, but [Connectivism](#) should also be examined.
6. **Working with Adult Learners.** UMUC attracts motivated persons. The majority are competent professionals in need of additional qualifications. The diversity of experiences they share in conferences is ideal for Peer Learning using the [Bensusan Method](#). It is also a rich resource for newcomers to the field.
7. **Best Practices.** Curtis Bonk performed a number of studies for industry and government that provide data on many aspects of training online. For example, using Kirkpatrick’s model, he determined that 80% of training organizations measured learner satisfaction, about 60% measured KSAs, less than 50% measured performance and only 30% measured Return On Investment. ([Online Training in an Online World](#), p. 60.) Even though this landmark study is over three years old, it is a treasure chest of valuable data on practices and trends prevalent in business and industry.

In the year 2000 the Higher Education Program and Policy Council of the American Federation of Teachers published a study entitled [Distance Education: Guidelines for Good Practice](#). Even though this study is directed to education rather than training, it highlights some of the issues such as ownership, control, quality, accessibility, media types, class size, evaluation, and support services. The questionnaire and data is included with the study.

AFT - 14 Best Practices:

1. Faculty must retain academic control.
2. Faculty must be prepared to meet the special requirements of teaching at a distance.
3. Course design should be shaped to the potential of the medium.
4. Students must fully understand course requirements and be prepared to succeed.
5. Close personal interaction must be maintained.
6. Class size should be set through normal faculty channels.
7. Courses should cover all material.
8. Experimentation with a broad variety of subjects should be encouraged.
9. Equivalent research opportunities must be provided
10. Student assessment should be comparable.
11. Equivalent advisement opportunities must be offered.
12. Faculty should retain creative control over use and re-use of materials.
13. All undergraduate degree programs should include same-time same-place coursework.
14. Evaluation of distance coursework should be undertaken at all levels.

Preparing the Online Learning Environment

Organizations and individuals who think putting syllabus and lectures on the web constitutes an online course should read [Current Myths and Future Trends in Online Teaching and Learning](#) (2002) by Curtis Bonk.

The web interface as an interactive environment for communication and learning that forces a paradigm shift from teaching to learning, from knowledge testing to performance measurement, and from regurgitating knowledge to performing at upper levels of Blooms Taxonomy of Behavioral Objectives - conceptualization, application, analysis, synthesis, and evaluation.

Instructional Design

Variations of the [Jerrold E. Kemp](#)'s Instructional design model have proven effective for over 35 years. Kemp proposed a cyclic model where revision would reinitiate the cycle to further improve learning outcomes. For team production, this version adds additional detail:

1. analyze needs, goals, resources, constraints, learner characteristics
2. determine outcomes, priorities, standards
3. write performance objectives, develop rubrics to measure performance
4. choose content, learning environments, learning strategies, delivery systems
5. produce, test, revise, validate prototype lessons and rubrics
6. develop and implement course modules
7. evaluate, repeat the cycle to revise

As with the Kemp model, it is not necessary to start at step one. For example, a pre-existing course can be modified starting with step 4. Earlier steps will be upgraded in the revision cycle.

If you are a production team of one, you may need to delete step 5 in order to produce your initial lessons and stay ahead of the students. The [ADDIE](#) Instructional Design Model (analyze, design, develop, implement, and evaluate) is widely by instructors for online development.

Before the first week of classes you need your final syllabus, course goals, course description, schedule of classes, operating procedures, evaluation plan, at least three completed lessons.

When the Semester begins, allow time almost every day to respond to emails, participate in conferences, provide guidance and “course corrections”, read and grade assignments. Some instructors schedule chat sessions and “office hours.” I offer my cell phone number 24 X 7 for “now” problems and emergencies. It is seldom used and rarely abused.

Expect a mixture of first-time online learners and persons at various stages of online degree programs. Begin with a welcome message, an introduction to the course, and simple instructions so students can move forward on their own. Here is an example:

Week 1
Introduction to Training
Jan 24-30, 2005

Welcome to HRMN 406 – Employee Training and Development. This course will enable you to develop a training plan and training materials for classroom or online instruction.

Start reading the textbook as soon as possible. The early chapters are an excellent foundation for the tasks ahead. Most chapters are about 50 pages so allow enough time each week to read the text, participate in conferences, and work on assignments that are due at three weeks intervals. Print the schedule from Syllabus > Course Schedule. To print the contents of any page, right-click inside the page and click Print in the context-sensitive menu.

Conferences and assignments follow the chapter sequence in the book so keep up-to-date as much as you can. Better still, read ahead. Later chapters in the textbook are lengthy and detailed. If you do not have time to read them in their entirety, scan them for main ideas and use them as a reference source for conferences and assignments.

Note the grading system. You start with 1000 points. 900+ is an A, 800+ is a B, and so on. My goal is to get you the highest possible grade based on your *performance* in the course. You can be late without penalty (if you are late you are already penalized because you are behind schedule). Also, you can redo one assignment to make up lost points.

Email or phone me if you need help, guidance, or clarification. If life is giving you a raw deal, talk to me about ways to complete this course rather than bail out, which would cost you time and money to repeat. I can bend to your schedule, guide you, cajole you, or whatever you need, but ultimately you have to do the work.

Assignments 1-4 take you through the stages of developing a training plan. In the Final assignment you combine and edit them into a total training plan. You also generate a training plan for your final proctored exam. This is not an exam in the traditional sense. It is a simulated real-life experience where management gives you a specific set of requirements and you have three hours to generate a customized training plan. Like the real-world, you can use your textbook and notes. (For the exam, you will not be able to use a computer or the Internet).

My mentor, the late Guy Bensusan, was a proponent of peer learning. He loved to be the sage-on-the-stage, but he found a rich resource within his classes that made teacher domination an interference. Learners are themselves a major resource. Their collective experience, knowledge and skills dwarf even the great Guy Bensusan. This course in Employee Training and Development draws heavily on class members sharing ideas and experiences from the real world. We are products - and sometimes victims - of training and education. Everybody knows how it works. Everybody knows how to make it better. In HRMN 406, we assess, design, create, implement, and evaluate at least one lesson to show the world, or an employer, we can do it right.

Some confidential information will help me to better support your needs. Please email and tell me if you are using WebTycho for the first time, if you have a disability that influences how you learn, if you are traveling or currently reside outside the continental United States, or if you are in a security zone where you cannot easily access the Internet. Alert me if family concerns or work pressures throw you off schedule. Tell me if you are about to graduate or preparing yourself for a specific job.

Share things you want everybody to know around the Water Cooler, or when you introduce yourself in Week 1. Last semester we had two births with baby pictures and that was a treat. Share the joy!

My goal is to make this a quality experience where you leave highly motivated, with an abundance of relevant knowledge, experience, skills, and techniques; a great portfolio, a good grade; and whatever it takes to make you a better professional and get you a better job. Of course, you have to do the work!

As needed, contact me at dperrin@itdl.org and cell phone (7x24) at 805-300-8080. Go to the **Class Members** menu, click the box next to my name, and send me an email with a few sentences about your goals and expectations for this course. I look forward to working with each one of you through the coming months!

When you are ready, go to Conferences – Week 1. Along the way, you might want to visit the Water Cooler.

Don Perrin

When the learner clicks on Conferences, Water Cooler is the top menu item. It is a place for informal communications - a relaxed place to talk about anything, ask questions, and get answers. Occasionally there is a call for help, a dialog, discussion, or free-for-all. It is a bulletin board, a place to meet and greet, spend a few minutes relaxing in cyberspace, to "listen" or join the dialog.

Beneath the Water Cooler link is the Conference for the current week. The preceding weeks move down as new weeks are added.

Conference is the focus of for learning activities. As in a classroom presentation, the instructor sets the stage with a presentation, case-history, reading or other resource. In online learning the presentation is short and succinct and the dialog voluminous. Online does not have time restriction imposed by classroom schedules. Conferences continue for a week, and students can *attend*, reflect and respond anywhere and anytime. Unlike the on-campus classes, there is time for every student to contribute ideas. There is time for interaction between students, and between students and instructor. There is time for research, reflection, and organizing what is presented. There is time for learning!

Peers sharing real-world experiences have value, freshness and reality that stimulate motivation, communication, and learning. Learner-practitioners provide relevant content and first hand experiences to reinforce, modify, or even eclipse information and case histories in the textbook and instructor presentations. Invariably, the online dialog is longer and richer than the lesson; a stark comparison to classroom learning where the instructor may dominate and leave little time for discussion.

My approach is to use conferences to complement the readings. Sometimes it is used to enlarge upon a topic which the text skims over, like learning styles, mission statements, or ways to modify lessons for use online. Three examples follow:

Conference Example #1:

In Week 2 we deal with Strategic Planning, Mission Statements, and Organizational Development. It appears that Training is an essential part of everything and funds are limited. Are there legitimate low-cost alternatives to training? This short conference elicits creative answers.

They fired the cook!!!



Well, not exactly. They never hired a breakfast cook for the Kellogg Center in Pomona. The pantry manager had already bought makings for waffles with strawberries and cream - enough inventory to last for weeks. It was estimated there would be 200 people for breakfast each morning. Approximately 40 people would order waffles between 7:00am and 9:00am.

The only staff member was the pantry manager, who ordered, stored, and set out the food, and two people who poured coffee and cleared tables.

The enterprising manager plugged in the waffle-maker beside a jug of rather liquid waffle dough, a bowl of strawberries, and a bowl of cream. She wrote a sign and posted it above the waffle maker.

1	Open waffle maker
2	Spray PAM on cooking surfaces (1-2 seconds)
3	Pour one full ladle of waffle mix on bottom plate
4	Close. Set timer to 2 minutes
5	Remove waffle with fork (Hot!)
6	Replace top
7	Add strawberries and cream

The waffle maker became the focus of attention. People gathered around and conversed while they made their breakfast. Clients liked it so much the Center had to buy a second waffle iron!

What the Pantry Manager created was a **Performance Aid**. No training was necessary. Performance-aids and checklists are widely used in the workplace and at home.

Respond to this conference by naming

1. Five performance aids in your workplace
2. Five performance aids in your home
3. One or two "non training" solutions other than performance-aids and checklists?



Try to avoid responses given previously by other students, and *have fun!*

Conference Example #2:

This Conference is borrowed from a statewide curriculum that I produced for the California State Department of Education. It draws attention to different learning styles that need to be considered in design and implementation of education and training programs.

THE LEARNING STYLES INVENTORY

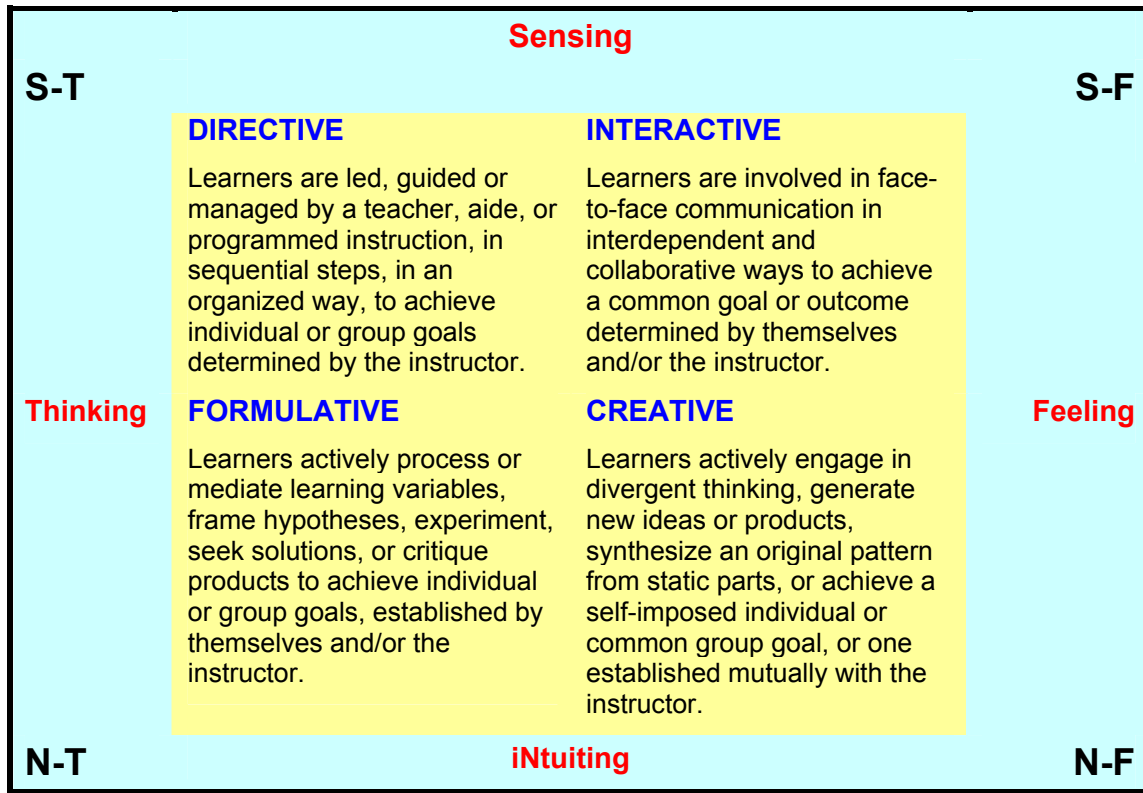
The *Learning Styles Inventory* identifies four learning styles – directive (traditional), inquiry (Formulative), creative, and interactive.

People learn in all modes, yet one style is usually dominant or preferred.

The lecture is a *directive* style of learning--a step-by-step development toward a goal set by the instructor. This style is not for everyone. Students who are curious explore and work things out for themselves. Students who are creative are frustrated by slow and linear presentation. Students who prefer team learning are stifled by lectures and lack of interaction. The result is that curious, creative, and interactive learners - non-traditional learners who act independently or in dynamically formed groups - are considered to be inattentive, disruptive, disobedient, or even poor students. Brilliant persons like Albert Einstein, Bill Gates, and Whoopee Goldberg belong in this category. Their different approach to learning caused them to be *learning disabled* in a traditional classroom.

Harvey Silver noted that mismatch between teaching styles and learning style may be as frustrating as trying to write with your other hand! He diagramed the relation between different learning styles as shown below. Because the inventory is based on Jung's theories and the Myers-Briggs Personality test, Myers-Briggs terms S-T-N-F are used in the descriptions.

The Learning Styles Inventory



DIRECTIVE (Traditional Classroom)

A **S**ensing-**T**hinking person (S-T) fits the traditional **DIRECTIVE** model of teaching and learning via lecture-demonstration, presentation, and tutorial. This learning style fits persons who are practical, matter-of-fact, and work oriented. This is the dominant instructional mode for adult learners and does not well serve the needs and preferences of those who are inquiry oriented, interactive, and creative.

FORMULATIVE (Independent Exploration)

An **i**ntuitive-**T**hinking person (N-T) has a mind that is **FORMULATIVE** or inquiry oriented. This learning style fits upper cognitive endowed persons (highly intelligent) who are logical, ingenious, and curious who learn best through exploration and experiment. This is the most natural way of learning since curiosity leads to experiment, or trial and error, and the results are learned. This person tends to be self directed and proceeds ahead of the instructor in examining and developing his or her own learning. What may seem to be an oppositional, very divergent, or baffling student behavior masks the powerful learning that *could* take place. In the hands of an insensitive teacher this learner is set up for discouragement and failure. The same person may excel in a science fair or a self directed project.

INTERACTIVE (Team Activities)

A **S**ensing-**F**eeling person (S-F) is **INTERACTIVE** and fun to know. This learning style fits persons who are sympathetic, friendly, and cultivate group harmony. This person is gregarious, likes to work collaboratively and is a productive team member. He or she functions better as part of a team than working alone. In school this person may be ideally identified as the helper to students new to the class or experiencing some lesson difficulties; and an eager helper to the teacher in problem solving whatever the situation may be.

CREATIVE (Multiple Intelligences and Divergent Thinking)

An **i**ntuiting-**F**eeling person (N-F) is invariably insightful, imaginative, and **CREATIVE**. This person is recognized as an innovator, inventor and artist in his or her chosen disciplines. Creative persons often seem disorganized because their minds move rapidly and simultaneously in divergent paths. Some do not fit well in traditional learning environments and may fail or do poorly in required courses because they do not meet scheduled deadlines; have trouble organizing information; or produce products divergent to the instructor's intentions. Fortunately they are capable of taking care of their own learning even if they do not respond well to traditional methods of teaching. However, as suggested above, they often suffer consequences and may dislike or drop out of school despite high academic potential.

Integration of Learning Style Preferences

In traditional or directive learning, the instructor controls lesson goals and presentation. In the other three quadrants, students participate in goal-setting and assume greater responsibility for learning. Harvey Silver advocates *teaching-around-the-wheel* which means combining a variety of teaching-learning styles within a lesson to involve a wider range of students. Note that WebTycho integrates all four methods of teaching and learning. Incidentally, our teaching and managing styles tend to reflect our learning style preferences because both are tied to personality.

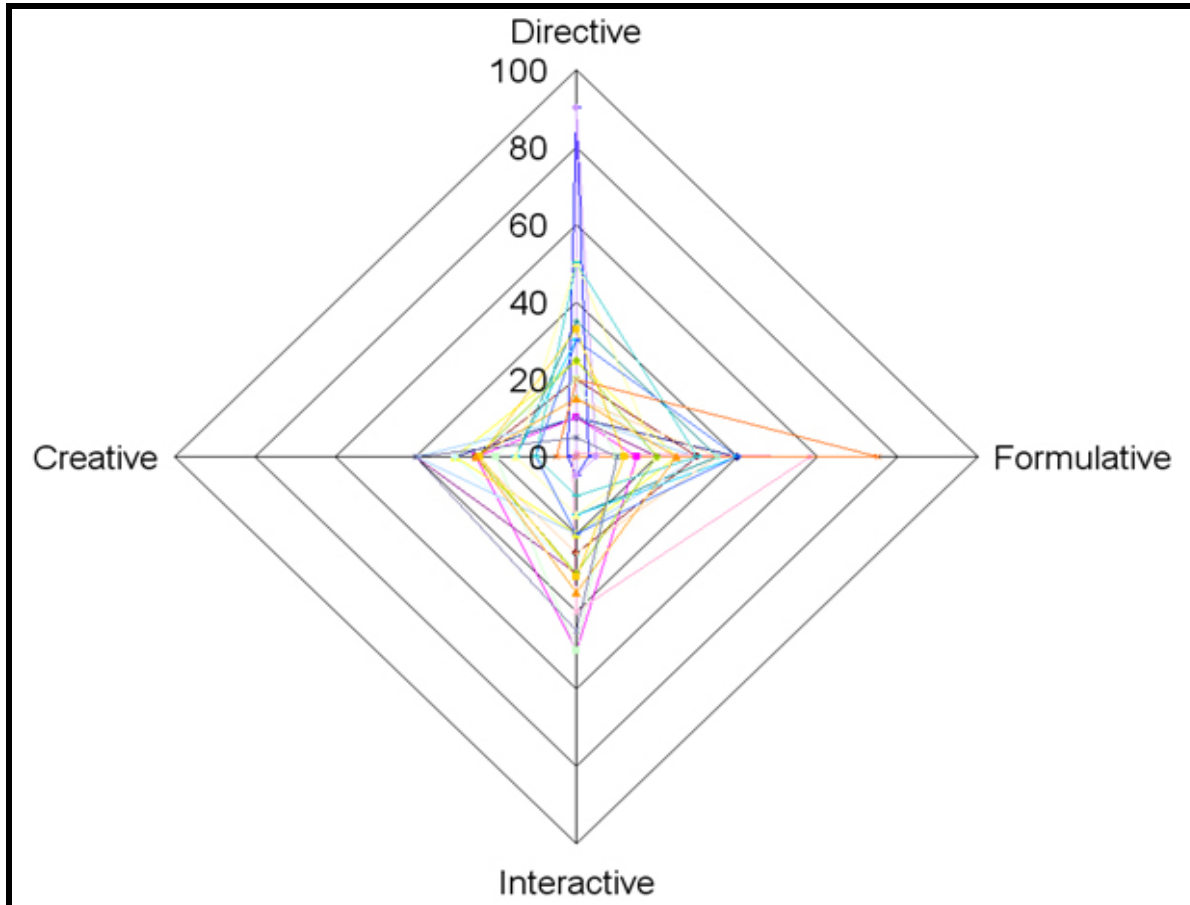
Project 3 #1

Rate your personal preferences for each learning style as a percent for each style that total 100%. Click **Respond** and post your data in the following format:

%Directive____, % Formulative____, % Interactive____, % Creative_____.

Data is tabulated, reproduced four times sorted by each of the learning modalities, and plotted graphically. This data is available for students to 1) find one or more members of the class with similar learning style preferences, 2) determine the dominant learning style (s) for this class, and 3) find clues to determine if specific professions attract similar profiles.

The graphic profile of a recent class is shown below:



From the beginning, peer interaction is an important component. For example, after the presentation on mission statement, the conference proceeds as follows:

Project Week 2 #1

Find the mission statement for the organization where you work or write one. Alternatively, write a mission statement for the organization you selected for your project.

1. Click **Respond** and change the header title to <Your Name> Mission Statement. Write your mission statement
2. Review two other mission statements posted by class members and **Respond** with suggestions to clarify the mission and sharpen the focus.

Mission statements take organizations months, sometimes years, to develop. I don't tell that to the students. Their first efforts are amazingly good and they help each other with comments like "I really like your mission statement because it is simple and succinct, but what does your organization do? Some students take the time to write out the suggested revision. It is a great collaborative exercise to establish the pattern of helping each other.

Conference Example #3:

In week 3, Writing Objectives becomes the focus of activity. At the risk of duplicating materials learned elsewhere, the entire process is spelled out so all participants are on the same page as they assist each other to write mission statements and objectives.

The Design Team

How would you define a Trainer, Instructional Designer, and Learning Architect?

Trainer

The **Trainer** instructs the learner using predetermined lesson plans, curriculum and instructional materials. The trainer adapts the lesson to maximize effectiveness, and guides, motivates, instructs, mentors, tutors, and evaluates students.

Instructional Designer

The **Instructional Designer** is a creative person with writing, curriculum, and media skills. The designer produces courses, lessons and workshops to meet a specific set of objectives. This involves selection and organization of content (KSAs), integrating content with appropriate methods of teaching and learning, and production of environments to facilitate learning.

Learning Architect

The **Learning Architect** (a relatively new term) coordinates design of total learning programs beginning with needs assessment of stakeholders and practitioners - community, employers, instructors and students. For many companies, their market is the global community

Setting Goals and Objectives

An overall mission statement provides a focus for prioritizing goals and objectives:

Mission Statement

A mission statement is the essence of what an organization desires to accomplish in terms of products and services, clients, community, and purpose.

Strategies

Strategies define how the mission will be accomplished and how to match the organization's internal operations to the external environment.

1. Set up short-and long-term business objectives for the organization;
2. Determine courses of action to achieve those objectives;
3. Establish schedule, management, and accountability systems; and
4. Allocate resources for each phase of the strategic plan.

Strategic plans attempt to maximize opportunity and minimize market uncertainty.

Goal Statements

Goal Statements describe the intended accomplishment or end result. For example, the National Institutes of Health, Heart and Lung Division, have a goal to:

Eradicate heart disease as a cause of death in the United States.

Implementation requires objectives that are observable and measurable. A standard determines when the objective is achieved. The following objectives are intended to reduce the cholesterol level of a defined population by an average of 50 points:

Legislation:

- Label all packaged foods for nutritional content, fat, and calories as specified by the FDA.
- Improve eating habits through education programs.
- Encourage participation in activities sponsored by local departments of Parks & Recreation.
- Reduce consumption of snack foods and cigarettes by 50%, and reduce obesity by 25% in the next two years

Workplace, schools and other organizations

- Offer "health food" alternatives at cafeterias and restaurants

Note how these objectives describe outcomes. [Mager](#) tells us there are three parts to a well-written objective:

1. The outcome is stated clearly and without ambiguity.
2. The conditions under which it is measured are stated.
3. Criterion performance is stated.

Note that objectives start with an action word with a precise meaning. Mager points out that words like *appreciate* and *understand* are too vague for measurement purpose.

Let us examine the first objectives based on Mager's model.

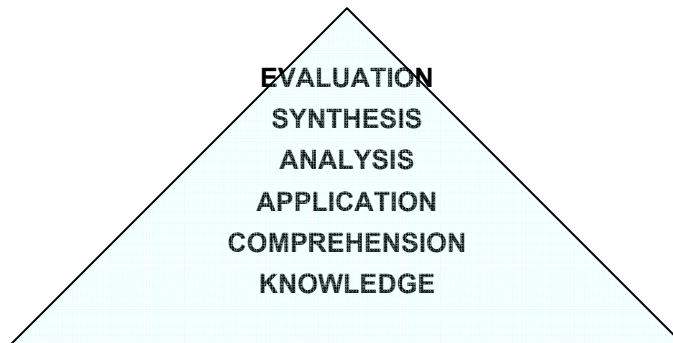
Label all packaged foods for nutritional content, fat, and calories as specified by the Food and Drug Administration.

1. The outcome is a nutrition label on packaged foods;
2. The condition - what is considered to be food and what is on the label - is specified by FDA.
3. The level or criterion is **ALL** packaged foods have nutrition labels.

This program was conducted 30 years ago with than intensive campaign involving print, electronic, and face-to-face communications for a defined community - Stanford CA. The program achieved its goal and results persisted for about 18 months.

Levels of Learning

Choosing the right action word establishes the level of learning. For example, knowledge is the base level for cognitive learning. Concept formation is the next higher level. The hierarchy, according to Benjamin Bloom, is knowledge, concept, application, analysis, synthesis, and evaluation. Each level requires an increasingly broader base of knowledge and experience.



When you are writing objectives, select an action verb at the appropriate level from the list on the next page:

Cognitive Level	Typical Action Verbs
Evaluation	appraise; compare & contrast; conclude; criticize; critique; decide; defend; interpret; judge; justify; reframe; support.
Synthesis	adapt; anticipate; categorize; collaborate; combine; communicate; compare; compile; compose; contrast; create; design; devise; express; facilitate; formulate; generate; incorporate; individualize; initiate; integrate; intervene; model; modify; negotiate; plan; progress; rearrange; reconstruct; reinforce; reorganize; revise; structure; substitute; validate.
Analysis	break down; correlate; diagram; differentiate; discriminate; distinguish; focus; illustrate; infer; limit; outline; point out; prioritize; recognize; separate; subdivide
Application	act; administer; articulate; assess; chart; collect; compute; construct; contribute; control; determine; develop; discover; establish; extend; implement; include; inform; instruct; operationalize; participate; predict; prepare; preserve; produce; project; provide; relate; report; show; solve; teach; transfer; use; utilize.
Comprehension	classify; cite; convert; describe; discuss; estimate; explain; generalize; give examples; make sense out of; paraphrase; restate (in own words); summarize; trace; understand.
Knowledge	define; describe; enumerate; identify; label; list; match; name; read; record; reproduce; select; state; view.

The portal for Bloom's Taxonomy is: <http://faculty.washington.edu/krumme/guides/bloom.html>
 It provides the following useful definitions:

Knowledge: terminology; specific facts; ways and means of dealing with specifics (conventions, trends and sequences, classifications and categories, criteria, methodology); universals and abstractions in a field (principles and generalizations, theories and structures): Also defined as remembering (recalling) information.

Comprehension: Grasp (understand) the meaning of informational materials.

Application: Use previously learned information in new and concrete situations to solve problems that have single or best answers.

Analysis: Break down information into its component parts, examine (try to understand) organizational structure to develop divergent conclusions by identifying motives or causes, making inferences, and/or finding evidence to support generalizations.

Synthesis: Creatively or divergently applying prior knowledge and skills to produce a new or original whole.

Evaluation: Judging the value of material based on personal values/opinions, resulting in an end product, with a given purpose, without real right or wrong answers.

Note: *There are Two Other Domains for Education and Training Objectives:*

Affective Domain (emphasizing feeling and emotion) and Psychomotor Domain (motor skills)

PROJECT 3 #2

1. **Apply Mager's criteria** to the health objectives listed in the Conference on Eradicating Heart Disease and rewrite them as necessary.
2. Based on the mission statement you created in week 2, **write one goal and three objectives** that meet Mager's criteria. Pay attention to action words used to describe the performance or outcome, and state **the cognitive level of each objective** (knowledge, comprehension, application, etc.) based on the action required.

Conference Example #4:

Students have difficulty in translating performance objectives into performance evaluation tools. In an earlier lesson, Likert scales were used for assessment. These quantify the estimates of employees, supervisors, employers, and clients about the knowledge, performance, and attitudes (KSAs) of a specified group on a five step scale. This provides valuable data for setting training priorities. The success of training must be measured by actual performance – not somebody’s opinion. If the objective is to reduce fat in the diet to lose weight, you measure weight to ascertain the degree of success. What people think or what they ate does not measure weight loss.

The Rubric measures steps toward the goal, when it is reached, and when it is exceeded. Consider the following rubric to measure ability to write a paragraph:

Rubric Template					
Writing a Paragraph					
Student _____			Instructor _____		
	Beginning 1	Developing 2	Accomplished 3	Exemplary 4	Score
Introduction/ Topic	Questions or problems are teacher generated .	Student(s) require prompts to generate questions and/or problems.	Student(s) generate questions and/or problems.	Student(s) properly generate questions and or problems around a topic .	
Conclusions Reached	A conclusion is made from the evidence offered.	Some detailed conclusions are reached from the evidence offered.	Several detailed conclusions are reached from the evidence offered.	Numerous detailed conclusions are reached from the evidence offered.	
Information Gathering	Information is gathered from one or two sources only .	Information is gathered from limited electronic and non-electronic sources.	Information is gathered from multiple electronic and non-electronic sources.	Information is gathered from multiple electronic and non-electronic sources and cited properly .	
Summary Paragraph	Weakly organized and poorly written.	Well organized, but demonstrates illogical sequencing and poor sentence structure.	Well organized, but demonstrates illogical sequencing or poor sentence structure.	Well organized, demonstrates logical sequencing and sentence structure.	
Punctuation, Capitalization, & Spelling	There are four or more errors in punctuation and/or capitalization.	There are two or three errors in punctuation and/or capitalization.	There is one error in punctuation and/or capitalization.	Punctuation and capitalization, and spelling are correct .	
Grammar	3 errors	2 errors	1 error	No errors	
				Total	

Criterion is reached at 3 leaving opportunity to recognize the exemplary student with 4 points. Requirements for each aspect of the activity are separately measured and the scores combined

Conference Example #5:

This Conference asks learners to relate Giuliani's 5-Points on Leadership to those required for a Director of Training position.

Rudolph W. Giuliani: 5-Points on Leadership

According to Elliot Masie, "Rudy Giuliani . . . used learning, training, and competency as a core tool to improve New York City and cope with the events of 9/11." Mayor Giuliani was effective in reducing crime and improving the quality of life in New York City. After the terrorist bombing, he brought strength and stability at a time of great uncertainty. He calmed, consoled and reassured the public and the nation, urging New Yorkers to return to their normal lives so that terrorists would fail to achieve their goal of fear and disruption. His presentation at the 1992 eLearning Convention in Washington D.C. was inspiring and rich in information about his goals and experiences.

Rudolph Giuliani presented the following five points on Leadership based on his experiences as Mayor of New York City:

1. **Philosophy or belief** - understand your internal values and articulate them for those who work with you. Be consistent in your statements and actions. Set new horizons for people to reach.
2. **Courage** - manage fear to enable positive action. Play "what if?" scenarios to familiarize yourself with options and determine most effective course of action.
3. **Relentless preparation** - know as much as you can possibly know. You can never prepare enough and educate enough. Engage in continual training and preparation. Learn from History.
4. **Build Teamwork** - Assess the environment as you apply what you have learned from 1-3 above. Lead your team and manage your resources.
5. **Communication** - find new ways to motivate people. Tell people what you expect of them; have people tell what they expect from you.

Former Mayor Giuliani explained how education and training, his knowledge of history, and years of preparedness-drills influenced his decisions as events of September 11 unfolded. He realized this disaster was larger than Pearl Harbor, directed at civilians rather than military, and required leadership more like Winston Churchill during 13 month bombing of London. He mobilized the collective experience (Knowledge, Skills, and Attitudes - KSAs) of fire, police, hospitals, local, state and national government, social agencies, businesses, and construction workers for rescue and relief. The rest is history.

Former Mayor Giuliani credited education and training as key factors in success of his programs to improve New York City and recover from the events of 9/11.

Conference 10/2

As the person in charge of training, what management / leadership style is most appropriate for you and your organization?

In a typical class, distribution across the five points is about even. Responses tend to be lengthy – often 100-200 words detailing the rationale for selection. This is a rich data source for researching a relevant job description. This is done in a later exercise.

The Final Proctored Exam

As stated earlier, this is a simulation of a real world situation based on an actual case history or a fictitious company problem. For the learner, there is an element of problem solving and creative activity to compose a viable proposal. A multi faceted problem is provided so each learner can choose a part consistent with his or her background and interests.

The successful training plan includes:

1. ADDIE tools to achieve the required objective(s).
2. A management plan and budget.
3. A way to evaluate performance
4. A simplistic ROI justification
5. All of the above in a clearly articulated proposal

Proposals that are well written and complete will receive full marks.

The Grade Book

Gradebook									
To begin, click Create Assignment (below.) To view or edit an assignment click on Manage Assignments .									
Overview	Abstract	Assign1	Assign2	Assign3	Assign4	FinalA	Exam	Conf	
Student	Abstract (10%)	Assign1 (10%)	Assign2 (10%)	Assign3 (10%)	Assign4 (10%)	FinalA (20%)	Exam (20%)	Conf (10%)	Final C
	95	100	100	95	100	198	195	60	94.3%
	90	100	97	94	100	180	190	66	91.7%
	100	97	100	96	100	192	190	75	95%
	90	88	92	94	100	175	165	55	85.9%
	90	92	88	96	96	195	185	80	92.2%
	88	92	100	93	95	193	190	100	95.1%
	96	98	97	92	100	195	198	100	97.6%
	97	98	99	100	100	196	192	75	95.7%
	95	96	95	92	95	185	180	90	92.8%
	98	98	100	100	100	190	200	100	98.6%
	97	93	100	95	98	195	192	80	95%
	45	94	95	92	94	184	172	75	85.1%
	0	88	0	0	0	0	185	95	36.8%
	97	91	93	95	96	183	195	100	95%
	100	98	95	100	95	200	180	70	93.8%
	80	88	96	100	98	185	180	60	88.7%
	97	85	93	97	96	195	185	100	94.8%
	96	95	90	80	90	192	175	90	90.8%
	96	100	97	97	95	195	180	100	96%
	96	98	94	100	0	196	0	100	68.4%
	97	97	100	97	100	195	185	95	96.6%

The instructor needs only to click on each tab to access student work, assign grades and add comments.

Conclusion - Creativity in Online Environments

The instructor combines art and science to develop an environment for online learning. Clear objectives and relevant interactive experiences facilitate the development of a successful learning organization. Online learning provides unusual flexibility for non traditional learner, persons who lead complicated lives, and persons distant from a college or university.

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About the Author

Donald G. Perrin has a Ph.D. in Communications and Instructional Technology from the University of Southern California. He won awards for research, creativity, teaching, and instructional media. Two of his scientific films were shown at Cannes and Edinburgh Film Festivals. He was first Chief of Instructional Technology in the Department of Defense and founding director of the Alquist Center for Innovative Learning at San Jose State University.

He was editor of the USDLA Journal from 1995-2003, and is founder and executive editor of the International Journal of Instructional Technology and Distance Learning.

Contact him at dperrin@itdl.org.