



Institute for Interactive Technologies



White Paper:

Designing Instruction to Teach Principles (softskills)

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Introduction

Principles deal with the development of communication, leadership, ethics, team building, and other social skills or what some call *soft skills*. The need for teaching principles is critical for an organization's long-term success. The inter-relationship between people is what makes an organization effective. Ruth Clark calls principles "Far-transfer" learning. Principles can also be thought of as *guidelines* as opposed to *procedures*. Procedures are step-by-step. Guidelines are general processes that can be applied to different situations but are not applied exactly the same in every situation.

An example would be the principle of leadership. Sometimes a leader must act as a coach and sometimes he or she must step-up and take absolute control. Knowing when and how to do those different actions, changes depending upon the situation, personalities involved and criticality of the outcome.

Simply memorizing guidelines for a particular principle does not mean the learner has learned anything. To teach principles the learner must be placed into the context in which the principles must be applied. The learner then needs to apply what he or she thinks is the right principle and observe the results. Klappers (2000) summarizes this as a shift in focus from "learning as acquisition" to "learning by interaction". You learn leadership, for example, by leading...not by reading about it on a screen.

While it may not be possible to place every employee in a real-life leadership position and hope they turn out to be a leader, it is possible to place employees in "virtual" leadership positions and teach them the desired reactions. This is one of the advantages of using online learning to teach principles.



Four Step Method

Principles are best taught using a four-step method. The first step is to present a model of the desired behavior to the learner. For example, in an opening lesson on team building the steps of *forming*, *storming*, *norming*, and *performing* would be presented or modeled. The modeling of the skills to be learned could be presented as written information but is more effective if shown through motion or activity. A short video clip or a montage of moving images on team building could show the interaction of a successful team and how it was able to function effectively to solve a difficult issue. Principles have a variety of intricacies that must be observed first-hand to be fully understand and appreciated.

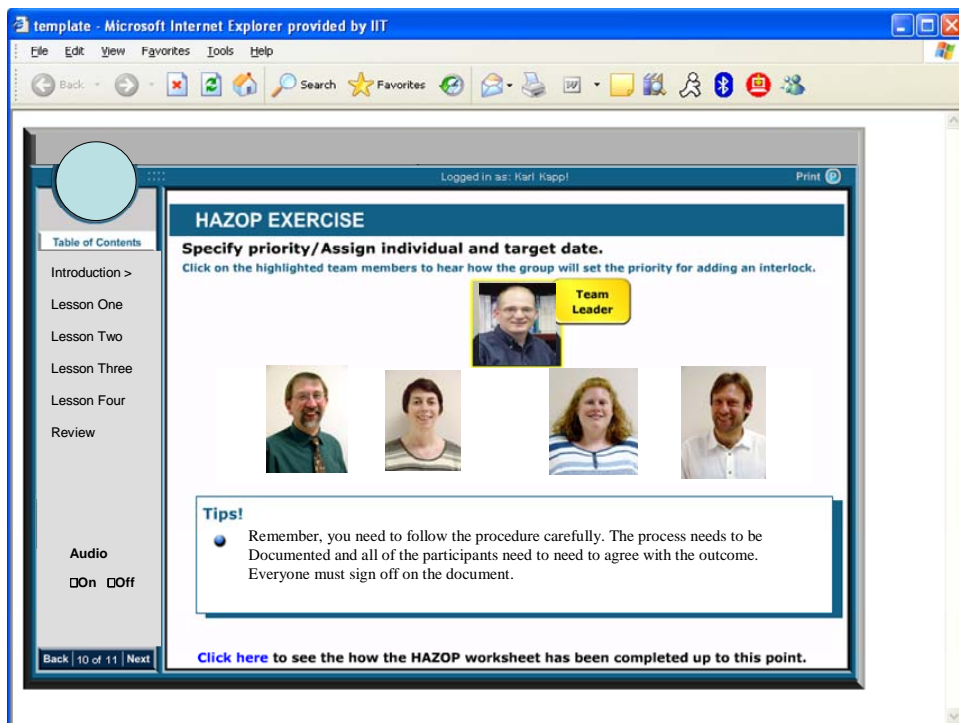
The second step is for the learner to develop a mental checklist of the key behaviors of a particular principle. For example, in team building, the skill of active listening is important. Active listening involves paraphrasing, acknowledgement, and understanding how something was said in addition to what was said. It is best when learners are asked to deduce those behaviors from the video model presented in step one. While this poses a problem we designing online instrucion, it can be over come by including a button or a link like “What the Expert Would Do” or “Ask the Expert.” Or having a “Frequently Asked Questions” button or link.

The third step is to provide numerous examples of the applied principle in the form of scenarios. This usually involves case studies of the skills being applied in a variety of situations. It can also involve discussion of what the learner would do if



confronted with a situation in which the particular principle was required. This is the place where Frequently Asked Questions can assist.

Step Four is that the learners need to have the opportunity to practice the principle in an environment that provides feedback on their actual behavior. This can involve role-plays and play acting of a particular scenario that is likely to occur. This can also be done electronically for soft skills.



A screen capture from a course designed to teach a person how to lead a team to determine possible hazards related to the expansion of a chemical plant.

In an electronic version, a learner is immersed in an environment where he or she must apply skills to navigate through a series of events or situations successfully.

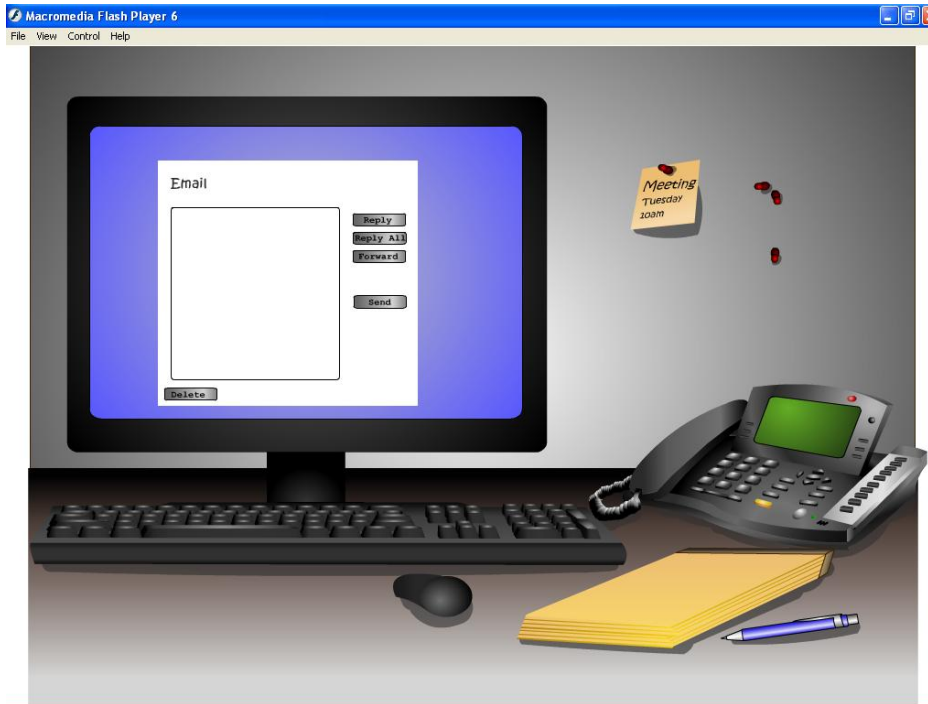


Ruth Clark in her book *Developing Technical Training* provides a list of features that should be incorporated in a principle-based online learning model.

- Use case problems and examples
- Give learners the opportunity to seek advice from experts while applying the principle
- Compress time so consequences of actions can be experienced sooner than “real-life”
- Give feedback that tends to play out consequences and stresses tradeoffs rather than present right or wrong alternatives.
- Provide learners with the opportunity to try again.

Social Simulators

In order to transfer the necessary knowledge, skills and abilities and to foster social skills within an organization, Kriz (2003) states that interactive-learning environments are needed. A form of this type of soft skill role-play is called a “social simulator.” A social simulator accomplishes for the principle-based training what a tank or flight simulator accomplishes for military training. The key feature of a tank simulator is that the soldier is allowed to practice a skill in an environment that mimics the real world as closely as possible, except that in the simulated environment, it is ok to make a mistake. In an actual tank battle that same mistake may kill the soldier.



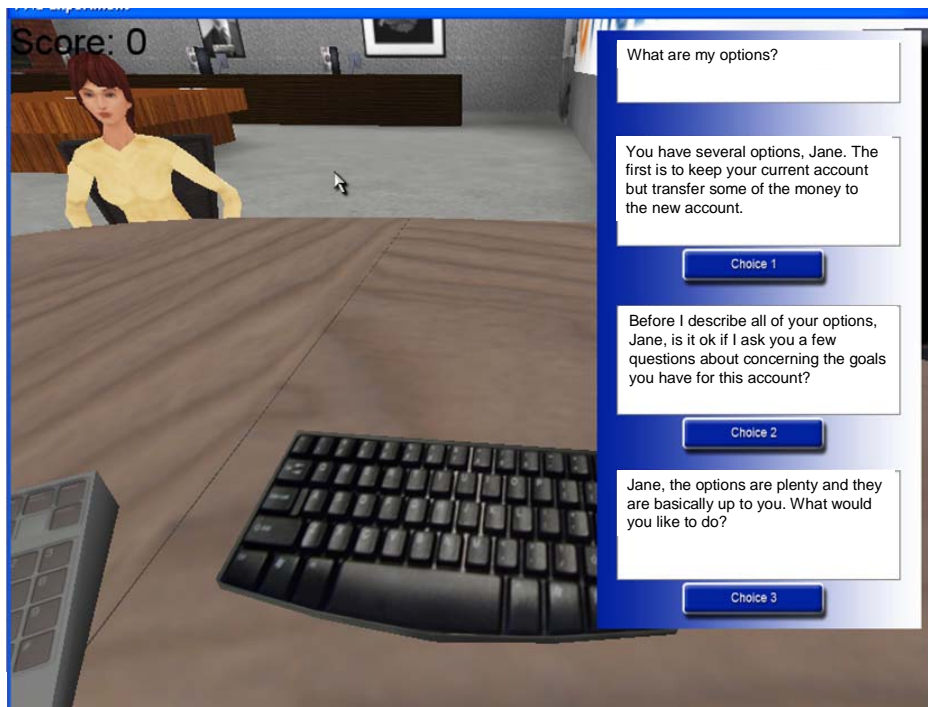
A screen capture of a course where the learner sits behind his or her desk (ala cockpit) and controls the environment through interactions with email, phone calls and online resources. It simulates the person functioning at their desk.

Similarly, a social simulator permits discovery-based learning through open-ended experimentation. While not teaching life and death skills, a social simulator can play a valuable role in teaching principle-based concepts and skills. Social simulation software offers a work environment in which the employee can interact with simulated characters through conversations and on-line discussions.

As students move around in the simulated world from the shop floor to the customer's place of business, images of the scenes and characters provide visual realism. Kriz (2003) identifies that simulations are "...perfect learning environments for the training of social skills, the (re)construction and sustainable development of social systems, and dealing with the complexities of modern corporate life."



The real benefit of simulators is their ability to reduce trivial computations and to allow students to deeply discover and test hypotheses. There is hardly ever one correct way to implement principles. Not only are there countless ways principles may be applied, but there are even more ways that principles are received by the recipient. For example, fellow employees will react differently to a leader that steps up and takes absolute control. A social simulator is an excellent way to account for the variability of human perceptions.



A screen capture of a course where the learner meets with clients and attempts to cross-sell services.

The students using the social simulator can use multiple-choice options, clickable hot spots or pull down menu choices to interact with characters on the screen like an angry general manager or the upset customer. Characters visually respond to the user though digitized video displays, 3D characters or still photographs. Each method



allowing for the showing a range of emotions and feelings regarding the choices of the employee of the simulation.

Analogies

Analogies can be an effective methodology for teaching principle-based instruction. Analogies are most helpful when they directly tie to the new principle being learned and when the learner has no prior experience with the principle. In addition, the analogy must contain at least one element that is within the prior knowledge of the learner while the other elements may be new to the learner (Reigulth, page 210)

Here are a couple of examples. The first example works well if the learners are familiar with being coaches or with how coaches interact with a team. When using a sports analogy, one must always be cognizant of learners. If you are speaking with a sports oriented audience—they would respond better to a coaching analogy than a group that is not as interested in sports.

An analogy can be expressed as written text throughout a WBT or a lesson. An example would be the teaching of leadership skills. Often an instructor or an online instructional program will present the analogy that a good leader is like a good coach. The coach must work with his or her team on fundamentals; the coach must know when to discipline a player or when to encourage a player. The coach creates the overall strategy and the players execute the strategy. If the strategy and the execution work together, the team wins. If they do not, the team may lose. Leadership is the same, a good



leader must teach his or her subordinates the fundamentals of the business, a leader must know when to discipline and when to encourage employees and the leader must create the overall strategy while the employees make the strategy a reality.

Another method of presenting an analogy might be through a table or a chart. In the table below, a conductor of an orchestra is being compared to a project manager. This is a form of an analogy because the table is implying that a project manager is like a conductor in the following areas. This is also effective because it highlights the differences as well.

Conductor	Project Manager
Must lead a large group to create music.	Must lead a small project team to accomplish a task.
Maintains the tempo and pacing of the piece.	Keeps the individual project team members on task by informing them of upcoming deadlines and tasks that need to be completed.
Coordinates the entrance and exit of certain sections or instruments.	Coordinates the different tasks of the project so that all tasks are completed at the right time.
Uses a sheet of music as a guide but can vary from it if necessary.	Uses a project plan as a guide but varies from the plan when necessary.
Understands all of the instruments in the orchestra but doesn't necessarily know how to play them.	Understands the different roles and talents of the team but doesn't necessarily know how to perform each individual task.



Including the Attitudinal Aspects in Principle Learning

Attitude and employee morale play a large part in the learning of any principle that needs to be applied in a corporate environment. As Malcolm Gladwell points out in his work “The Tipping Point,” it only takes one or two disenchanting employees to spread bad morale like a contagious disease. Organizations most devote some of their resources to teaching the correct attitude toward issues like ethics and compliance.

While most of the time, we do not think of teaching attitudes, organizations like Habitat for Humanity and the United Way attempt to teach attitudes toward helping other people who are not as fortunate. Advertisers attempt to teach attitudes toward certain products. Public awareness groups teach attitudes toward smoking, drugs, and unsafe sex. Many of the same techniques used by these groups can be used to help influence the attitudes of employees.

Several methods have been found effective in teaching and influencing attitudes. These methods include endorsement of the concept by credible role models, awareness of the likelihood of success, emotionally charged media, a display of confidence and enthusiasm by those in charge and active participation in the event.



Celebrity Endorsement

One method used frequently by advertising agencies is a celebrity endorsement of a product. Whether people like it or not, they are influenced by celebrities or people who have achieved a great deal of success. Companies have been known to hire individuals well known in a particular field to discuss issues like leadership and ethics. Using an individual of high caliber, an author of several books, the president of a company, or a well-known management guru adds credibility to effort to teach principles (or actually to re-enforce principles). It also sends a message to the employees that the company is not alone in the need for this type of education. It projects a positive message that the company is seriously approaching the topic and is seeking advice and council from some of the best minds available.

Been There, Seen It, Done It

A second effective method is to let the employees know that successfully implementing the principle is possible. In the 1950's it was thought that no human could break the four-minute mile barrier. In fact, some psychologists of the time claimed that it was impossible for humans to perform the feat. On May 6, 1954 Roger Bannister stunned the world by breaking the four-minute mile illustrating that the seemingly impossible task was, in fact, quite possible. While that news is fascinating and interesting, the really exciting result of Bannister's achievement was the next year when 37 other runners broke the four-minute mile barrier.



What Bannister had done was shown others the feasibility of breaking the record. He provided proof that it could be done. Once other runner's attitudes changed from one of believing that breaking the four-minute barrier was impossible to knowing that breaking the barrier was possible, they too could break the barrier.

This same technique is effective for teaching principles. Have scenarios or actual situations described to the learner where the principle was followed and a positive outcome was the result. When employees know that success is possible, they will work toward that success knowing that they can make it happen. They can be ethical in the face of an unethical situation or they can lead as another has led in a certain situation. Providing employees with an example of what is possible helps to influence attitudes and increase morale.

Add Emotion to the Learning

Emotionally charged learning can "fire up" employees and leave them with an enthusiasm that is lasting. The purpose is to provide the learner with a sense of excitement and energy that they will take with them back on the job and into the work place.

It is amazing how effective playing upbeat exciting music can be for motivating learners. Music has a deep impact on our attitudes and can influence behavior dramatically. Today with ease of use of presentation software, the availability of digital images, music, and video it is not hard to put together an engaging e-learning event.



Teaching attitudes is not a familiar process and is not commonly undertaken by e-learning companies. However, the above ideas are proven techniques and methods for helping employees to develop a positive attitude when applying principles.

Writing Principle-based Objectives

The following is an incorrectly worded objective for principle-based instruction; the focus here is on memorization and not application. It is not enough to memorize a principle; the learner must apply the principle to demonstrate mastery or understanding.

The newly appointed manager will be able to properly name the four elements of an ethical decision with 100% accuracy.

Notice the Audience, Behavior, Condition, and Degree format of the objective as shown below.

A: Newly appointed Manager

B: will be able to properly name

C: the four elements of an ethical decision

D: with 100% accuracy

The next example shows a properly worded example for principle-based instruction. Notice that the learner needs to actually apply the elements and not simply name them.



You, the newly appointed manager, will be given a specific situation in which you will be required to make an ethical choice; you must make the ethically correct choice through the application of the four elements 100% of the time.

- A: Newly appointed Manager
- B: must make the ethically correct choice
- C: when given a specific situation
- D: 100% of the time

The following are action verbs that can be used when writing objectives for teaching principle-based instruction.

...exhibit leadership traits when confronted with a situation where leadership is required

...distinguish between an ethical and unethical act

...resolve communication issues with fellow employees

...apply guidelines on a consistent basis

...choose the correct outcome of a situation by following the guidelines



Evaluation

The evaluation of principle-based instruction consists of several different methods.

- 1) Create a checklist to see if learner is following the correct guidelines
- 2) Allow learner to compare his/her answer with that of a credible source
- 3) Evaluate the learner's choice when confronted with a situation requiring the application of the principle. This can be done effectively with branching stories.



Sample Lesson Outline I

- 1) Introduction of the elements of the Principle to be Taught (this may use analogies, scenarios...contains explicit steps or concepts to be applied, this could be by a celebrity or via an emotional appeal, it also needs to be fairly specific, i.e. There are four stages of team development, you must recognize and work through those stages for the team to be successful, these stages are *forming, storming, norming* and *performing*)
- 2) Example of Principle being Applied Correctly in a Variety of Settings (multiples)
- 3) Presentation (or learner developed) Checklist of Behaviors Necessary for Correctly Application of Principle.
- 4) Provide Examples and Non-Examples of Application of Principle (learner checks off scenario against earlier learned checklist)
- 5) Learners practice applying the newly learned principle and receive feedback on whether the principle was applied correctly or not.



Sample Lesson Outline II

- 1) Example/Non-Examples of Principle being Applied in a Variety of Settings
- 2) Presentation of the elements of the Principle (this may use analogies, scenarios...contains explicit steps or concepts to be applied)
- 3) Presentation (or learner developed) Checklist of Behaviors Necessary for Correctly Application of Principle.
- 4) Learners practice applying the newly learned principle and receive feedback on whether the principle was applied correctly or not.

Sample Lesson Outline III

- 1) Learner is presented with a case
- 2) Learner is presented with various resources to help apply the required principle and to gain additional information about the case.
- 3) Learner must apply elements of principle by answering questions about the case.
- 4) The feedback for the questions does not provide right or wrong answers; rather guidance to lead learner to the correct decision based on application of the principle.
- 5) Learner eventually arrives at desired solution by applying the principles
- 6) Summary of “lessons learned” is presented to learner.



Summary

What will make your training impactful is the proper instructional design methodology. Carefully considering the elements that make the teaching principles effective will allow the learners to apply the knowledge both within the educational setting and back on the job.



References

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