

**Developments in Business Simulations and Experiential Learning, Volume 32, 2005**  
**FACILITATING THROUGH COLLABORATIVE REFLECTIONS TO**  
**ACCOMMODATE DIVERSE LEARNING STYLES FOR LONG-TERM**  
**RETENTION**

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**ABSTRACT**

*In today's business schools, affective teaching of business topics such as ethics has become a high priority due to inappropriate behaviors of some businesses or individuals associated with such names as Enron, WorldCom, Knight Trading Group, Inc., Adelphia, Tyco, Martha Stewart, Goldman Sachs, and Siebel. These companies and individuals associated with the inappropriate actions have severely disgraced the U.S. business market, possibly due to top executive greed. The instructor in today's business environment must provide students with practical and valid exercises that will embrace student understanding and long-term learning towards appropriate business standards and ethics through effective Collaborative Learning Objectives. Students' today have to take personal responsibility for gaining knowledge by becoming self-reliant learners and understanding their own best learning styles. The paper, written in an essay format, provides a review of interactive styles of education, Bloom's Taxonomy of Learning, theories of learning, and learning for long-term retention. The assumption is that if students learn better, then there is less tendencies toward cheating in the educator sector, which will carry over to the work arena, thereby reducing inappropriate behaviors and corporate greed.*

**COLLABORATIVE LEARNING AND  
BLOOM'S TAXONOMY**

Learning, like eating and socializing, is a natural human desire and, for most people, it starts at a warp speed when they are born. The process of learning involves seeing, hearing, sometimes reflecting, as well as the storing and retrieving of information. Researchers have stated that human beings have three memory storage areas: the sensory register, short-term memory, and long-term memory. The information in the long-term memory affects how the

sensory register filters the information from the surroundings. If people can improve the quality of the information in their long-term memory, their sensory register will work more accurately, providing more of the information needed. Understanding how people store and recall information is only part of the learning process. Formal theories on how individuals learn have existed since the 1800s. Over time, three main categories of learning theories have developed and they are known as the behavioral theory, the cognitive theory, and the humanistic theory. The *behavioral* learning theory involves learning (a result) through direct interaction with a stimulus. The *cognitive* learning theory involves learning through the use of learning tactics and the incorporation of a learning strategy. The *humanistic* learning theory involves learning through interpersonal relationships, which include a nurturing of the learner's needs and emotions. All three of the learning theories are valid and all three provide the ability to accurately store information in long-term memory. The learning theory one chooses to incorporate depends on learning style and the situation around which the learning is based.

Learning tactics include rehearsal, mnemonics, self-questioning, and note taking. Rehearsal is the technique of repeating information to keep information in short-term memory long enough for current use or one can elaborate the rehearsal process to store information in long-term memory. Mnemonic tactics include making rhymes, making acronyms, using the pegword method, using the location method, and using keywords. Self-questioning involves asking oneself specific questions pertaining to the information. Note taking is, as the name suggests, writing notes dealing with a larger set of information. The use of a learning plan helps organize the way people accomplish a learning goal. To develop and implement a learning plan, one must first have an understanding of meta-cognition. Meta-cognition is an awareness of how people think and how the thoughts affect academic progress. A learning plan includes analyzing the learning situation, planning which

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learning tactics will be used, implementing the plan, monitoring progress, and modifying any parts of the plan that need altering. Through the use of learning tactics and learning plans, students will be able to learn more effectively and efficiently as life-long learners. Students and teachers who are aware of these learning tactics and learning plans can collaboratively (jointly) work toward effectively achieving the learning outcomes of the course, including topics that are packed with sensitive content such as cultures, diversity and ethics.

College professors and instructors today could teach business ethics more effectively by using Collaborative Learning Objectives. Collaborative learning objectives bring forth structured open discussions on the course material and lectures with students in order to obtain effective learning in the classroom. The level of student participation in the college classroom must be increased to include the students' point of view, such as in the case analysis method. When analyzing a case in the classroom during the discussion phase of the lecture, it is paramount that the student be called upon to discern specific factors from the case, which relates to the topic of the instructor's lecture or course learning outcome. The student should be held accountable for his/her participation and remarks based on the facets of the case material covered in the classroom.

According to Sims (2004), teaching business ethics without effective two-way dialogue is a recipe for failure. The instructor must provide for open (structured) discussion on the business ethics topic. It is a proactive step that educators must perform in all college classes in order to identify business ethical issues of the time while increasing long-term retention. An open structured discussion in the classroom concerning the topic at hand provides students with encouragement and a collaborative effort on the part of the instructor and student, which fosters the affective learning of business ethics. Structured classroom discussions are necessary to prevent students from taking the discussion to a different topic or providing any unrelated or erroneous material to the discussion. Waters (1988) substantiated that many people fear this type of forum, due to its undermining affects of an authority's credibility. However, according to Sims (2004), open classroom discussion on the topic enhances higher commitment to teaching business ethics.

The basis of business in the United States is "Capitalism." According to Adam Smith's theories in his work "The Wealth of Nations," people produce products or services other people want or need; thus, the business owners' strategy is to create the greatest profit for the business, referred to as the "Invisible Hand" (Wren, 1994, p. 31). Business leaders seek ways to dismantle any hindrance to the business, in which the organizational leaders seek to obtain the maximization of profit and to sustain it as long as possible which is the nature of business under Capitalism. However, according to Daly (1996), there are limits to growth based on biological, physical, and ethical factors. Daly states that a major paradigm shift is needed to bring

forth a conscientious result of economic activity, because the realization to sustain perpetual business growth under capitalism is erroneous and flawed, especially when one realizes the scope of the world's natural resource constraints and world poverty levels. Businesses such as Enron, WorldCom, and others sought the benefits for the few key executives, without any moral consciousness towards their stakeholders. Thus, to envision proactive ethical morality of business leaders for the future, academia must set the right teaching standard through effective collaborative learning, which provides realistic insights for students who will be future business leaders.

Desjardins & Diedrich (2003) created case scenarios in which students conducted their own research and developed the life-cycle of the product(s) they were investigating. Thus, the student, through the active facilitation by the professor creates case scenarios that are totally encompassing, from product initiation and design through its actual resource allocation and assembly. Desjardins & Diedrich's (2003) article depicts their students' course expectations of business ethics, which are to develop and write the case study in its entirety, including visiting sites, interviewing people, and learning about the product's consequences. Desjardins & Diedrich's main aspect of the life cycle case study approach is to compel students to concentrate on specific business standards.

One of the best methods of teaching students using the case analysis is the use of the student's textbook. Business textbooks of today should not just provide content of the material to be covered in class, but actual cases of both positive and negative outcomes of business performance based on their particular field. When examining these cases, the instructor should develop a theme based on the objectives of what the student should accomplish in the course. For example, when discussing the Enron situation in class with students, the instructor should want students to lead a discussion to determine the factors leading to the demise of Enron. Then, the instructor provides insights to accentuate the continuing details of the case to provide a practitioner point of view. During this process the student must be able to explain in critical thinking approaches, the factors that are pivotal in this case, such as the actions by the company, the erroneous and deceiving manner of its executives and finally the consequences of the firm affecting all stakeholders. The last step is vital during the last part of the in-class discussion since remedies of determining how one can prevent this from happening again should be sought through real world approaches and the use of realistic methods by other businesses should be sought and adopted. Thus, by having students disclose their opinions, based on factual relevance of the case and real world situations, the instructor creates effective student collaborative learning in the classroom. The instructor facilitates the learning process by creating relevancy from actual cases and through his/her effective facilitation during the entire process.

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The Critical Thinking Approach, according to Kubasek, Brennan & Brown (2003), and the edited version of Bloom's Taxonomy of learning enhances the business students' ethical approaches in six consistent steps. The students' overall understanding of the content is revealed in a way that purports practioner relevancy for the students' overall implication to the business world. Thus, critical thinking addresses the ideas of reality in today's business world. Bloom's Taxonomy of learning is a hierarchy of six cognitive operations. The operation at the higher level subsumes all those at the lower levels. Critical thinking according to Bloom answers the questions in regard to each of the following areas:

- ◇ *Knowledge*: The lowest level of learning for students and it is a prerequisite for all other steps to follow. This level relies on the students' ability to recall information through memory.
- ◇ *Comprehension*: The student must seek the knowledge and show understanding through collaborative learning, through open structured classroom discussion. Students must explain their reasoning and understanding through case citations or references by what they have read.
- ◇ *Application*: The student applies what they have learned by using examples and comparable analogies. During this step, the instructor must encourage effective facilitation of Collaborative Learning (open structured discussion) in the classroom.
- ◇ *Analysis*: The student must have the ability to distinguish the parts of knowledge applied & comprehended in the case; thus, the student must be able to discover the underlying structure and hidden meanings and assumptions of the case.
- ◇ *Synthesis*: The student must be able to creatively combine the knowledge obtained during the analysis from several points of view, from the instructor, other students, from the case or other citations. Thus, the students can reassemble component parts into a "New Structure or Thought Process" not previously apparent from the case.
- ◇ *Evaluation*: This is the highest level the student must master in order to think critically and reach. The student must be able to critically appraise the knowledge of the case and apply it within a similar situational factor. Thus, the student must be able to analyze and synthesize business related situations based off of the case method. Students then will make final critical judgments of the case during the Collaborative Learning class session.

The Critical Thinking Approach by Kubasek, Brennan & Brown (2003) and the edited version of Blooms' Taxonomy of Learning correspond to the skills of knowledge, comprehension, application, analysis, and synthesis for effective student case analysis. The latter steps correspond to the highest thinking skills for both the Critical Thinking Approach and Bloom's Taxonomy of Learning, through the final evaluation section of both

models. The instructor who is facilitating the business ethics course should encourage and pursue the highest thinking skills for students in each case using the critical thinking approach and Bloom's Taxonomy of Learning. Only through effective Collaborative Learning on the instructor's part will the student be successful. The Critical Thinking Approach and Bloom's Taxonomy of Learning seek to evaluate and determine the realities of varying businesses by applying ethical standards to specific business scenarios.

There are different levels at which people operate during the learning process. Two people may use the same learning tactic, but get very different results. Part of the difference in results may be because of the differences in the level of interactivity between the learner and the learning process. Benjamin Bloom believed in the cognitive learning theory. Bloom's *Taxonomy of Educational Objectives* (more commonly known as "Bloom's *Taxonomy*") is the most popular method of organizing the level at which people operate during the learning process. By utilizing the *Taxonomy*, one can better judge the level at which s/he is working and the level at which s/he wants to work. One can refer to table 1 (Blooms Taxonomy of Learning Levels) to learn the *Taxonomy* levels, a characteristic of the level, and some action verbs associated with each level.

Bloom's *Taxonomy* can be an extremely valuable set of information. As one proceeds from the knowledge level to the evaluation level, the complexity of the work increases. If people utilize the *Taxonomy* levels when they are "doing" or learning (activities, exercises, using learning tactics), they will have an understanding of the level at which they are working. Realizing one's level of interactivity can help a person to stay focused on the task at hand. For example, when asking questions and using the self-questioning learning tactic, people don't want to limit themselves to only the lower levels (knowledge, comprehension). It is best to be in the higher levels so that one can get the most out of the experience.

## LEARNING AND LIFELONG LEARNERS

Getting a good education is important to survival and advancement of the human species. And how a good education process is learned and ingrained in students' minds can vary greatly according to learning styles, reading habits, and experiences. Each person has his or her own identity, which stems from his or her own habits, experiences and learning styles. While habits and learning styles become routine and somewhat dominant (difficult to change) at various stages of life, they can be enhanced and/or replaced with different habits. People can change less effective learning styles and acquire or replace them with better and enhanced learning styles. Learners need good reasons and an understanding of their dominant/preferred learning styles, learning habits, as well as their left and right brain activities.

**Table 1 – Bloom’s Taxonomy of Learning Levels**

<b>Level</b>	<b>Level Characteristics</b>	<b>Action Verbs</b>		
Knowledge	<ul style="list-style-type: none"> <li>• specific</li> <li>• ways and means for dealing with specifics</li> <li>• remembering previously learned facts</li> </ul>	cite label name reproduce	define list recall select	identify match recognize state
Comprehension	<ul style="list-style-type: none"> <li>• translation</li> <li>• interpretation</li> <li>• extrapolation</li> <li>• understand and grasp the meaning of information</li> </ul>	convert describe estimate explain	extend examples illustrate interpret	paraphrase summarize translate
Application	<ul style="list-style-type: none"> <li>• using abstractions</li> <li>• using previously learned information in new and concrete situations</li> </ul>	apply compute construct discover	modify operate predict prepare	relate show solve use
Analysis	<ul style="list-style-type: none"> <li>• breaking a whole into its parts</li> <li>• relationships and organization of parts to the whole</li> </ul>	analyze associate	infer outline	point out
Synthesis	<ul style="list-style-type: none"> <li>• putting the parts together in a new form</li> <li>• plan for operation</li> <li>• unique communication</li> </ul>	combine compile compose create design develop	devise iterate modify organize plan propose	rearrange reorganize revise tell write
Evaluation	<ul style="list-style-type: none"> <li>• making judgments</li> <li>• evidence of logical consistency</li> <li>• ability to make decisions</li> </ul>	appraise assess compare	conclude contrast evaluate	judge weigh

In primary schools, most people were taught to read “out loud” and “sound” the words in order to understand and comprehend them better. This is especially true for those who learn a second language at an adult age. For example, non-English speakers have a tendency to read a sentence word for word because of having to learn English and not knowing many words during initial years in the United States of America. This creates a habit of reading much slower than one’s potential and therefore reading can become boring and difficult. However, through research and learning about reading, it has been said that one can double and triple his or her reading speed and comprehension by altering his or her reading habits. Evelyn N. Wood, guru and founder of Speed Reading for Business Professional, says that speed-reading is not an invention but a discovery. After seven years of study and research, she discovered that speed-reading is a skill, which people can learn to enable them to read several thousand words per minute. She teaches people to avoid sounding out words in their minds and instead move their eyes across the page in a “stop-and-go” pattern. She is able to train people to read a group of words and lines instead of reading words. The human mind functions and comprehends much better and faster than the average human being can read. Therefore, the more words and sentences one can see at a given time

the more he or she will be able to read, learn and comprehend. In order to increase learning ability, people can always attempt to read better and comprehend more of what they read because the average person forgets about 80% of what he or she hears within 24 hours. In long-term, most individuals have a tendency to retain:

- 10% of what they read,
- 20% of what they hear
- 30% of what they see
- 50% of what they hear and see
- 70% of what they say, and
- 90% of what they say and do.

So, learning is a personal vendetta and no one can force it upon people without one’s own personal desire. Therefore, one needs to take personal responsibility and accountability for his or her own learning in order to fulfill his or her goals and obligations. Furthermore, learning requires steadfastness in order to stay with the chosen course of action and mission. Nothing comes easy for people; however some people are better at finding the way of getting things done because of their experience and dedication. So, patience and perseverance are the keys to a successful learning process and getting results. Personal

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responsibility and perseverance can help an individual fulfill his or her dreams and obligations through life-long learning or becoming a self-reliant learner. Self-reliant learners seek active learning opportunities, are committed to life-long learning, are self-motivated, constantly seek and provide feedback as appropriate, know their preferred learning styles, and continuously learn, apply, and evaluate the learning process. Jac Fitz-enz (1995), author of the book titled *How to Measure Human Resources Management*, discussed four abilities that are required in order to be successful in today's changing environment. First is the ability to excel at one's job. Second is to learn enough about the technology of the industry to be able to earn a partnership with the customer. Third is the ability to acquire fluency in financial terminology. Fourth is the ability to extract objective data and present it in an influential manner. Since jobs, technology, terminology, and data change continuously it is necessary to be a life-long learner. Being a life-long learner requires learning visually (seeing), verbally (hearing), and vocally (voice, touch, smell, and so on) at all times.

In order to be a life-long learner (self-reliant learner), one must understand the conditions that make up the learning experience. For example, most people are great visual learners and should attempt to acquire knowledge in that fashion when possible. However, sometimes one cannot control the conditions under which one receives information. Some of the conditions might be within one's circle of influence or control and some are not. For example, there may be background noises coming from next door, airplanes, parties in the neighborhood, government military training, and other such cases that can distract a person while trying to meditate or focus. Depending on the location and circumstances, one may, or may not, be able to control those external conditions and variables. As one gains control over the variables, which contribute to (or harm) the learning process, one can improve his or her ability to make the most of the learning experience. Examples of some possible controllable learning conditions include dedication to the topic or information, input one has in the learning process, self-confidence, personal biases or paradigms (conscious or subconscious preconceived notions about something), level of motivation, the amount of preparation for the learning experience, location and time of learning, and the kind of clothes one wears.

Many times one may feel as if a condition is not controllable when it may or may not be. One's ability to control the learning conditions within his or her circle of influence is dependent upon the level of patience, endurance, commitment, and personal responsibility. Examples of some uncontrollable learning conditions that are difficult to change and fall in one's circle of concern can include the teachable moment, physiological conditions, past experiences, and predominant learning style. The *teachable moment* is that time at which there is learning readiness and the timing is appropriate for active learning. During the teachable moment, the entire learning process

falls directly into place. People generally experience teachable moments in school when the whole class is actively involved in the discussion and everyone in the class is actively tuned in and participating. Professional sports teams also experience a type of teachable moment. Athletic sport teams exhibit this teachable moment type of experience when their own teams play together, effortlessly, and accurately. Parents experience teachable moment when they are preparing to have their first baby. They go to classes, watch other parents, ask other parents, read books, and watch educational movies and television channels to be the best parent they can be. During this time of preparation their motivation is very high, their intention is sincere, and their reasons for doing so are clear and meaningful.

Generally, the circle of concern in learning conditions is much smaller than the circle of influence because as adults people are able to control many of the variables that affect the learning process. Therefore, adults are 100% responsible for their own education and life-long learning responsibilities. As a rule of thumb, the only real learning conditions one cannot change are those that involve the past, because when the opportunity to learn is gone at a specific moment, it is gone forever at that specific moment. However, one can learn at new "learning moments" when they arise. Some people are born with certain learning disabilities that require them to learn differently. For example those who are blind and/or deaf need special training, equipment, and resources to help them become self-reliant learners or life-long learners. Helen Keller is a prime example of a person who is a life-long or self-reliant learner and consequently has made great contributions to the various ways people learn, to literature, and to the society in general by being a great role model. When she was asked what is more hazardous than not having the ability to see, she said "having sight without a vision." So, taking responsibility and having a vision of the future are the precursors to accomplishing pre-determined goals. In order to continue learning and grow as individuals, people need strong and clear reasons in order to stay on track and persevere.

### REMEMBERING, THINKING, & LEARNING

In today's fast-paced business world most people do not think for themselves. Many people confuse the term remembering with thinking which is not thinking at all. While thinking develops the mind, remembering simply reinforces long-term retention. So, remembering is simply being able to recall information from the past, which can be done without thinking or learning. While remembering is a good quality to have, learners should spend more time thinking, which is about creativity and originality. Often the terms "learning" and "thinking" are used interchangeably, yet they have different implications and meanings. Learning is the process of gaining comprehension, knowledge, or mastery through experience or laborious study and contemplation. Conversely, thinking

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is the process of formulating, concisely understanding, reasoning, or reflecting in one's mind. Therefore, simply thinking about something does not guarantee that the information transferred into memory or that it can be recalled at a later date. Learning is the process of getting the information through thinking from the mind and storing it in the memory. Of-course, repetition and reinforcement can increase retention of the learned information. There are two general ways of learning: active and passive. When one participates and interacts during learning, s/he is learning actively. When one does not participate or interact during learning s/he is learning passively.

### PASSIVE LEARNING

When a toddler is watching a children's television program, the toddler may dance and sing with the music. The toddler is not interacting; he or she is *reacting* to what is playing. The responses toddlers exhibit during a children's television show are examples of information learned passively. While watching a television show, the viewer "passively" watches the show develop. A viewer has no way of interacting with the program. One can obviously learn while being passive, but passive learning is not the best way of learning complex information. Passive learning takes more time to assimilate the information into long-term memory than active learning. Do you remember all of the information from the television shows watched last week, last month, or last year? Perhaps not as effectively or in a detailed manner; especially, given the number of hours spent and attention given to the characters and storylines while watching them.

### ACTIVE LEARNING

Watching a television program is a form of passive learning, but the television isn't always a passive device. With the development of new technologies like digital television, one can interact with what is happening on the television screen. Digital televisions and digital programs permit the viewer to select his/her favorite television shows and choose how the show will develop. Digital televisions and digital sports programs permit one to pick one's favorite camera angle for the "big game." Because there is interaction and choice, using digital television programs can be a form of active learning. The more involvement people have during any learning experience, the better they will remember and be able to apply the knowledge. This is why on-the-job training has been so effective and the least costly with many individuals in so various industries. The cliché "It's like riding a bike," is accurate because most people do

not forget how to ride a bike. People remember how to ride a bike because they were on it and interacted with it, not because they watched someone else ride it.

### LEFT AND RIGHT BRAIN LEARNING

In order to improve, learners must understand their strengths and weaknesses. Furthermore, they should use their strengths often and improve on those weaknesses as much as possible. Once the weaknesses are identified, one can then start a plan for making improvements and accomplishing his or her goals. In learning, one should not compare him or herself to another person because every person in this planet is different in how he or she learns best. There is no best method of learning that fits every individual in all situations, except that one should learn in a manner that best fits his or her learning style and needs. A left brain/right brain inventory is a tool that shows a broad view of how people learn. Taking an inventory is a useful first step in learning how one learns. The purpose of such inventories is to provide one with a general understanding of the way one thinks. This understanding will help one to become a more productive learner. Refer to table 2 to see how people normally use their left-brain and some of the characteristics of left-brain dominant people.

Similarly, table 3 shows how people use their right-brain and some of the characteristics of right-brain dominant people. Although everyone uses characteristics from both of the lists in tables 2 and 3 in different situations, non-dominant people usually do not have a preference. Non-dominant people use a variety of techniques daily during their interaction and learning process. While a Left Brain/Right Brain inventory can help people recognize the way they think, the Learning Style Inventory can provide an understanding of the way they learn. This information helps people become more efficient learners if they choose to use them appropriately. The past and current researchers and writers such as Carl Rogers, David G. Myers, Lou Tice, James V. McConnell, Peter Senge, Anthony Robins, Dean E. Wooldridge, Lawrence Kohlberg, J. Piaget, H. W. Magoun, Stephen R. Covey, Alexander P. Spence, Darley et al., Lindgren et al., Robert Smith, Carol Gilligan, Earl Nightingale, James William, Wayne Dyer, and others have done an excellent job of advancing the research and helping people reach their full potential. It is due to their research, writings, and advancements in the field that today's learners are able to analyze and determine their best learning styles. Although personality surveys cannot be, and are not, absolute indicators of one's learning style, the well-designed surveys and inventories can help pinpoint general tendencies in certain situations.

**Table 2- Left Brain Activities**

People use their left brain for:	Left brain dominant people:
<ul style="list-style-type: none"> <li>• speaking,</li> <li>• reading,</li> <li>• writing,</li> <li>• analyzing,</li> <li>• categorizing,</li> <li>• logic,</li> <li>• reasoning,</li> <li>• mathematics, and</li> <li>• managing time.</li> </ul>	<ul style="list-style-type: none"> <li>• are rational and logical,</li> <li>• are verbal,</li> <li>• solve problems through structure,</li> <li>• remember names,</li> <li>• make objective judgments,</li> <li>• prefer multiple choice tests,</li> <li>• prefer hierarchies in formal structure, and</li> <li>• “see the trees.”</li> </ul>

**Table 3- Right Brain Activities**

People use their right brain for:	Right brain dominant people:
<ul style="list-style-type: none"> <li>• awareness without description,</li> <li>• seeing whole things at once,</li> <li>• recognizing similarities,</li> <li>• understanding analogies and metaphors,</li> <li>• intuition,</li> <li>• insight,</li> <li>• synthesizing,</li> <li>• visualizing,</li> <li>• spatial perception,</li> <li>• recognizing patterns,</li> <li>• “feeling” your way, and</li> <li>• relating things to the present.</li> </ul>	<ul style="list-style-type: none"> <li>• are intuitive and open-ended,</li> <li>• are visual/spatial,</li> <li>• are fluid and spontaneous,</li> <li>• solve problems through synthesis,</li> <li>• make subjective judgment,</li> <li>• remember faces,</li> <li>• prefers participating informally,</li> <li>• prefers essay tests, and</li> <li>• “sees the forest.”</li> </ul>

**SAVING & REMEMBERING INFORMATION**

People store and recall information to and from their short-term and long-term memory. Short-term memory is like the refrigerator where one stores food that will be used soon. On the other side, long-term memory is like the freezer which keeps things in good shape for a long time when rapped appropriately. Short-term memory is also called the “working memory” because it contains the information people are presently using. Short-term memory can hold roughly seven unrelated pieces of information for about twenty seconds. When information in short-term memory is needed for more than twenty seconds, one must decide whether it will be needed in the future or just for a short time. When people need the information soon, they use retention techniques like repetition or written notes to keep track of it. For example, when a person looks up a number in the phone book, s/he may repeat the number several times until s/he is able to recall it without any hesitation. However, often s/he may forget the number once the dialing is finished and the ringing of the telephone on the opposite end is heard. If people need the information for longer periods of time, then they must study and learn the information and then transfer it from short-term memory into the long-term memory. Keeping information in the short-term can be equivalent to keeping food fresh in the refrigerator or cooler for a few days. However, if one needs

the information for long-term, then it should be transferred in the freezer (long-term memory) as the cooler would not keep it in good shape.

The more common studying or learning tactics include rehearsal, mnemonics, note taking, and self-questioning. Also, putting more importance and finding strong reasons for having to commit the information into the long-term memory can be very valuable. This way the information becomes meaningful and with ongoing rehearsal and attention, one will better remember the information. The long-term memory has an unlimited storage capacity and the information is stored for an indefinite period of time. Although the information is stored indefinitely, the information can be difficult to retrieve at times when it is needed urgently. How well one recalls the information in long-term memory depends on how well it has been stored.

One can better store and recall information by interconnecting new information with previous experiences or stored information. The process of interconnecting new information with previously stored information is often called pigging, associating, or linking. For example, one can associate hearing a poem to a certain experience of the past such as a song, a friend, a parent, the home, the family life, or even the first romantic occasion with the spouse. When one hears the poem, the sensory register alerts him or her to the song that is playing and compares it to the experience that has been stored. The experience is

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remembered because the song triggered the memory. The ability to link new information becomes easier as one gains more experiences. Just as having more assets or money can produce more money and more assets when used effectively, people need experience to link, associate, and store more information for better recollection at a later date.

Everyone has different experiences that he or she can relate information to and store it in his or her long-term memory. Since people base new learning on their experiences stored in long-term memory, every person can interpret the same experience in a unique way. In other words, people recognize and pay attention to information from their surroundings differently according to their paradigms. The more a person's life experiences differ from others, the more likely the person will experience things differently from others. Being aware of the fact that every person has different life experiences better equips one with an understanding of how an individual learns from and interprets his or her surroundings.

### THEORIES OF LEARNING

As previously stated, there are three main learning theories, which researchers have been discussing since the 1800s: the behavioral, the cognitive, and the humanistic. Even though these theories have developed over time, the three theories are valid and useful in today's changing environment. The behavioral learning theory is similar to Sir Isaac Newton's *First Law of Motion*, "For every action, there is an equal and opposite reaction unless acted upon by an outside force." According to behavioral learning, the learner reacts because some kind of stimulus has been provided to cause the action. The cognitive learning theory is more of a problem solving approach. The learner collects as much information as possible and then makes a decision. Whatever the decision, it is calculated and structured which

can minimize the risk of making a bad decision. The humanistic learning theory is much like a nurturing parent. This "human" approach involves understanding the emotional needs of the learner and helping to develop those needs. Table 4 provides a brief description of the three learning theories.

Understanding and effectively utilizing the learning theories can be very advantageous to one's progress in his or her career. Using the theories can help to direct people toward a desired outcome that is favorable to the company or the individual. Just like other philosophical theories, these three theories have their strengths and weaknesses. The use of any of the theories depends on the personality style of the person involved and the situation at hand. See table 5 to identify the strengths and weaknesses of each of the learning theories.

To better illustrate the differences between the learning theories, let us apply each of the learning theories to solve a common problem dealing with a challenging customer. As an employee, you are confronted by an irate customer. You ask the customer if there is anything you can do for him or her to make the trip more pleasurable. The customer says that s/he is very upset about a product purchased from your organization and served to important guests the night before. Refer to table 6 for an example of how each of the learning theories can be applied.

As can be seen from table 6, all three learning theories can solve the problem and each be effective at different situations. Similar to the concept of situational leadership, as demonstrated by Paul Hersey and Kenneth Blanchard, one's personality style and the personality style of the other person(s) in the situation will determine the theory best suited for the case. This can be easily applied with co-workers, peers, students, suppliers, family members, and others on a regular basis.

Table 4 – Behavioral, Cognitive and Humanistic Learning Theories

Theory	Key Element(s)	Common Methods	Example
Behavioral	stimulus creates a response	rewards punishment time-out imitating other's behavior	When a child makes a bad choice, he or she is immediately sent to time-out.
Cognitive	information processing learning tactics learning strategies	problem solving techniques reasoning memorization comprehension	When a student needs to read a chapter from a text book, he or she takes notes, outlines, and re-reads the chapter.
Humanistic	emotional and interpersonal aspects of learning student's needs and emotions	I-messages clarification of values pass/fail grading systems empowering the learner by providing learning choices	When learning a particular type of information, the teacher lets the student choose how to learn the information (e.g. reading, discussing the information, watching a video, computer, experimentation, etc.).

Table 5 – Strengths and Weaknesses of Learning Theories

Theory	Strengths	Weaknesses
Behavioral	<ul style="list-style-type: none"> <li>• easy</li> <li>• quick results</li> </ul>	<ul style="list-style-type: none"> <li>• may be too aggressive, considered “bossy,” coercive</li> </ul>
Cognitive	<ul style="list-style-type: none"> <li>• long lasting results</li> <li>• can be extended to many learning situations</li> </ul>	<ul style="list-style-type: none"> <li>• takes time</li> <li>• not easy, often considered the “hard way”</li> </ul>
Humanistic	<ul style="list-style-type: none"> <li>• empathetic</li> <li>• considers the learners emotional needs</li> <li>• nurturing</li> </ul>	<ul style="list-style-type: none"> <li>• takes time to understand the learner before acting</li> <li>• not all personality types are receptive to nurturing</li> <li>• learner may feel intimidated by revealing too much of himself or herself</li> </ul>

Table 6 – Application of Learning Theories

Theories	Examples
Behavioral	I’m sorry that you were disappointed with the product. Would you like the product replaced, or would you like your money refunded?
Cognitive	I’m sorry that you were disappointed with the product. How did you prepare the product? How long did the product remain un-refrigerated? When I prepare this product, I like to.... Would you like the product replaced, or would you like your money refunded?
Humanistic	I’m sorry that you were disappointed with the product. I understand how you feel, you must have been embarrassed. I want to assure you to that I will do whatever can be done to make you feel better. Would you like the product replaced, or would you like your money refunded?

SUMMARY

People learn in different ways. Just because a person learns differently from someone else does not mean that his or her learning style is better than another. Learning is storing in memory, and thinking is the use of information in the mind. Thinking about something does not always translate into, or mean, storing the information in long-term memory. Today’s business world requires all individuals to become self-reliant learners in order to function successfully. Becoming a life-long learner (self-reliant learner) requires taking personal responsibility and the initiative to learn voluntarily. Understanding the internal and external learning conditions that are within one’s circle of influence and those conditions that are outside one’s circle of influence can help during the learning process. The key is to use one’s strengths appropriately while strengthening one’s weaknesses. Twenty first century adult educators can greatly help students learn more by using collaborative learning strategies, and by encouraging students to become self-reliant learners.

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