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Identifying, Exercising and Enhancing Right Brain Skills in the Business Classroom

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ABSTRACT

Scholars and popular writers agree that the art of "managing" is a right brain task. However, can right brain skills be identified in the business classroom? Can right brain skills be exercised and developed in the business classroom? This paper strongly suggests that they can be and offers a validated instrument and several pedagogical techniques toward achieving these goals.

OVERVIEW

Scholars and popular writers agree that the art of "managing" is a right brain task (11; 14; 17). Yet, criticism of business schools for not developing and evaluating right brain skills in business students has a long history (9; 14). First of all, can right brain skills be identified in the classroom? And, secondly, can right brain skills be developed, or at least exercised, in the classroom? This paper approaches these questions by offering discussion on a recently developed instrument which facilitates the identification of right brain skills. Next, several different pedagogical techniques are presented which can be employed in the business classroom to exercise and to enhance these skills so vital to future practicing business managers.

BACKGROUND

That the two sides of the brain are specialized is not news to the medical profession. Dr. L.A. Wigan announced in 1844 that the two halves of the brain have "separate and distinct processes of thinking." (1). The left brain is logical, analytic, mathematical. It is responsible for verbal communication, both oral and written (see Figure 1). Information is processed sequentially in the left brain to reach "rational" conclusions. The right brain is creative and artistic, arranging visual and musical sensations into patterns. In contrast to the orderly left brain, the right brain handles several thoughts at once, perceives the "whole" of things rather than the parts, and makes creative leaps when identifying and solving problems. This is not to say the right brain handles everything good while the left brain does all the dirty work. Happiness and pleasant experiences seem to be lodged in the left brain, while negative feelings such as anger and hate reside in the right brain (13). Even those not completely in agreement with the cognitive classifications that have been "grafted" to the two sides of the brain admit that the notion has some merit. After reviewing the literature, Corballis concluded:

Such evidence may be taken as support for the idea that the left hemisphere is the more specialized for abstract or symbolic representation, in which the symbols need bear no physical resemblance to the objects they represent, while the right hemisphere maintains representations that are isomorphic with reality itself...(2).

Clearly, it is easier for educators to develop and evaluate left brain skills. Indeed, the curricula found in most schools of business accredited by the American Association of Collegiate Schools of Business (AACSB) could be described as a left brain track to a college degree. Of course left brain skills are important for fledgling managers. They are crucial. But good left brain skills are not enough. Managers, especially top level managers, must have a balance between left brain and right brain skills. According to Mintzberg, managers "engage in their share of logical analysis" (left brain), but "...the important policy processes of managing an organization rely to a considerable extent on the faculties identified with the brain's right hemisphere." (11). Business schools need to do a better job of identifying and developing right brain skills.

IDENTIFYING RIGHT BRAIN SKILLS

To identify right brain skills the authors suggest the Decision Style Inventory. The Decision Style Inventory (DSI) developed by Rose (16)

Figure 1

THE PROPERTIES OF BOTH HEMISPHERES

The Left Side

Connected to the right side of the body, and the right side of each eye's vision.

Deals with inputs one at a time.

Processes information in a linear manner. Has a lineal and sequential mode of operation.

Deals with time. Responsible for the faculty of verbal expression, or language.

Responsible for verbal and mathematical functions.

Specializes in memory and recognition of words or numbers.

The Right Side

Connected to the left side of the body, and the left side of each eye's vision.

Demands ready integration of many inputs at once

Processes information more diffusely. Has a nonlinear and simultaneous mode of operation.

Deals with space. Responsible for gestures, facial and body movements ("body language") tone of voice, etc.

Responsible for spatial and relational functions; awareness of our bodies; for sports and dancing; our orientation in space; recognition of faces; artistic endeavor; musical ability and recognition of pitch.

Specializes in memory and recognition of objects, persons, and places, music, etc.

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<p>Normally tends to specialize in logic and analytical reasoning or thinking.</p> <p>The seat of reason.</p> <p>The crucial side of the brain wordsmiths, mathematicians, and scientists.</p>	<p>Normally tends to specialize in intuition and holistic perception or thinking.</p> <p>The seat of passion and dreams.</p> <p>The crucial side of the brain for artists, crafts people, and musicians.</p>
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SOURCE: Robert E. Ornstein. The Psychology of Consciousness, New York: Harcourt Brace Jovanovich, 1972.

is used to classify individuals into four decision styles: Directive, Analytic, Conceptual, and Behavioral. The DSI, used extensively in management development programs, has been completed by more than 10,000 practicing managers. Directive and Analytic styles are considered left brain, Conceptual and Behavioral right brain.

The DSI is an outgrowth of the work of Driver and Rose (3) who investigated cognitive decision styles. Rowe developed a cognitive-contingency model to describe how the four decision styles fit within an organizational setting (Table 1). Tests of the DSI support the model (Table 2). Rose reported that 80 top level executives tended to have Analytic or Conceptual decision styles (18). Mann (10) found that financial planners in a sample of 30 executives tended to have dominant Analytic decision styles (left brain), while strategic planners had dominant conceptual decision styles (right brain).

Rose posits the following characteristics for the four DSI styles:

<u>STYLE</u>	<u>UNDER STRESS</u>	<u>MOTIVATED BY</u>
Directive	Becomes annoyed	Power/Status
Analytic	Follows rules	Challenge
Conceptual	Is erratic	Recognition
Behavioral	Avoids	Acceptance
<u>REACTS USING</u>		<u>STIMULI SEEN</u>
Precepts		Serially
Insight		Logically
Creativity		Spatially
Instinct		Behaviorally

The DSI consists of 20 statements, each with four responses corresponding to Directive, Analytic, Conceptual, and Behavioral decision styles. Respondents must rank the four responses to each statement by scoring the response most "appropriate" for them with an "8," the next most "appropriate" response with a "4," than a "2," and finally, a "1" for the least "appropriate" response. The sum of the 20 subscale responses is the score for that decision style.

Respondent style scores are compared to the average DSI scores for the population as a whole. A style score that exceeds the average by seven points or more is considered the respondent's dominant or most frequently used style. Scores with a range of plus or minus seven points from the average are considered backup styles. Least preferred styles are identified by scores seven points or more below the average. It is possible for a respondent to have two dominant styles or no dominant style.

Reliability testing of the DSI (7) provided the following Alpha scores for the four decision style subscales:

<u>Directive</u>	<u>Analytic</u>	<u>Conceptual</u>	<u>Behavioral</u>
.744	.793	.766	.788

Not only has the DSI been widely used but these results provide assurance that the DSI has good internal validity. The DSI provides a method of classifying respondents into two left brain decision styles (Directive and Analytic) and two right brain styles (Conceptual and Behavioral). The short amount of time required to administer and the ease in scoring makes the DSI an ideal instrument to utilize in the classroom to identify right brain skills.

EXERCISING AND DEVELOPING RIGHT BRAIN SKILLS

The identification of right brain skills is a very valuable notion to educators and management trainers. However, of equal, if not greater value, is the exercise and development of right brain skills. The following discussion presents several techniques, which can be employed into a business pedagogy to foster and to enhance the right brain skills of business students.

Simulations

Business simulations provide an ideal vehicle to allow business students to exercise and to enhance their right brain conceptual and behavioral skills (7). A simulation is usually a one time experience for business students. Therefore, it is something new and different from other academic exercises. Students are forced to deal with uncertainties of demand and competition -- a situation calling for right brain skills. Perhaps left brain skills that are successful in other academic work are not equally successful in gaming. Participants must view the operations of the firm as a whole, not a collection of parts. The interrelationships between marketing, production, and financial operations become quickly apparent.

In most cases, students work in groups with all members receiving the same grade for simulation results. Suddenly, interpersonal skills not required in other courses are necessary to get a good grade. The pressure of time is paramount. Students must make decisions based upon incomplete information. As in the real world, good, creative decisions can create a competitive advantage. There is not time for students to plod through all available information and the results of decisions depend upon unpredictable market forces (For a review of gaming literature, see Wolfe, 21).

Guided Imagery

A cognitive expansion procedure which is gaining rapid acceptance in other levels of education is guided imagery. It is a technique for increasing the utilization of the intuitive and creative activities of the right hemisphere of the brain (19). The process involves having the instructor vocally deliver a script to the students which has been designed to conjure up images for the topic at hand - products of tomorrow, changes in customer demographics or any other business related area. During this delivery the students relax and try to envision images induced by the script.

Guided imagery has become a very popular and well received technique wherever personal and professional improvement is desired. In a recent study involving the business policy course (20), guided images was found to have a very positive affect upon the scenario building and goal-setting productivity of the students involved. Both of these activities require strong right brain skills.

Brainstorming

This is a common method applied to group situations to stimulate a greater fluency of ideas. This technique has been publicized in management and industry. It can be adapted to fit many situations (4). The technique involves the group focusing on a specific problem (i.e., what do you think of more

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U.S. import restrictions? What consequences might arise from this action?) The students spontaneously generate answers, which the instructor may record on the blackboard for further analysis later. Important ground rules to be established in brainstorming are: no criticism allowed (may stifle the free flow of ideas); the more ideas generated, the more likely the chance that a good idea will be among them (20); integration and combinations of ideas are welcome; evaluation should occur when ideas begin to lag.

Open-ended questions/tasks

This technique is easily adaptable to all sorts of subjects and situations. Answers are non-structured which gives the exercise a quality of flexibility for solving the task. Open ended stories may be used in which the instructor presents a story, leaving off the ending. Students supply the rest of the story. Other open-ended questions may involve the student generating unique solutions to consequence problems, such as values clarification exercises or examining the consequences of pollution. The students' analysis of possible consequences of situations provides an excellent measure of fluency and flexibility in divergent thinking

Redefinition

This process involves finding ways to improve existing products, processes, or situations. Some examples of redefinition situations are: how to improve public education, space exploration and living on other planets vs. living on earth, alternate life styles, and how to improve toys. Another type of redefinition involves finding different uses for a product, for example a screwdriver. Some answer might be to pry open lids, to use as a drum stick, to poke holes in artwork to create texture.

Free Association

This technique is useful for generating alternative choices. The instructor may give students a key word, such as "regulation." Students may write or respond orally with words associated with the key word. Responses are judged for uniqueness and reasonability.

Discovery Approach

Rather than emphasizing reproduction! regurgitation of concepts and ideas, the discovery approach requires that information be transformed and processed in new and unusual ways, and as such, relates closely to processes of both imagery and verbal symbolism (6). Instructors lead students through a series of tasks designed to help the students "discover" and focus on all possible solutions to tasks. This may take longer than simply telling students the information, but it may generate unique answers and free students from creative inhibition. Students are more likely to really become involved in the learning process.

CONCLUSION

The above discussion provides a method to identify and enhance right brain skills in the classroom. These different pedagogical technique which will accomplish these ends are definitely experiential in nature. The age old notion that experiential exercises are nothing more than fun and games will always exist. However, the bottom line is that many management skills, so vital in the workplace, are better developed through this experiential technology than through some other traditional methods.

To truly meet the needs of the professional manager, business colleges need to explore avenues that will allow for the training of business college students in insight, perception, and creativity -right brain skills. Hopefully, this paper will add impetus to that movement.

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Table 1
Rowe Cognitive Contingency Model

		Left Hemisphere (Logical)	Right Hemisphere (Relational)	
Tolerates Ambiguity		ANALYTIC	CONCEPTUAL	Thinking (Ideas)
		Enjoys problem solving Wants best answer Wants control Uses considerable data Enjoys variety Is innovative	Is achievement oriented Has broad outlook Is creative Wants independence Is humanistic/artistic Initiates new ideas	Proactive Change
C O G N I T I V E E Y	C			
	O			
	M			Leader
	P			
	L			
	E			
	X			Action (Doing)
	I			
	T			Reactive Change
	Y			Manager
Need for structure		DIRECTIVE	BEHAVIORAL	
		Expects results Is aggressive Acts rapidly Uses rules Needs power/status Uses intuition	Is supportive Uses persuasion Needs affiliation Is empathetic Communicates easily Prefers meetings	
		Is verbal	Uses limited data	
		TASK/TECHNICAL	PEOPLE/SOCIAL	
VALUES ORIENTATION				

Table 2

Summary of Decision Style Subscale Scores by Occupational Groups

Group	N	Directive	Analytic	Conceptual	Behavioral
General Population	10,000+	75	90	80	55
Female Managers	93	74	88	74	64
Female Architects	224	65	95	85	55
Police Chiefs	151	71	90	81	58
Ph.D. Psychologists	5	62	75	103	60
Male Architects	141	65	95	86	54
US Male Managers	54	72	94	81	53
Japanese Managers	21	69	79	84	68
Financial Planners	19	75	100	74	51
Strategic Planners	11	62	81	100	57
Top Level Executives	80	70	90	93	47
Business School Seniors	268	77	88	73	62

Source: Rowe et al., 1985, p. 235.