# You Can Lead A Horse to Water, but Can You Make Him Think? Human Cognition's Impact on How Well Our Administrators Can Juggle The Management of Human Performance in Today's Schools

**Kimberly G. Griffith**
Associate Professor
Department of Professional Pedagogy
Lamar University

**Mohammad Khalid Hamza**
Associate Professor
Department of Professional Pedagogy
Lamar University

## ABSTRACT

**By understanding human cognition and the significant role it plays in regard to human performance, management at all levels can be more effective and better equipped to develop ways of sustaining optimal human performance in the workplace. A review of current management research suggests a skill set of special attributes is required for effective strategic or executive management. Models of instructional design propose successful methodologies for creating, implementing, and evaluating programs as well as instructional systems. The essence of human cognition is based on the synthesis of plethora of human learning theories that drives the field of systematic design of instructions that suggest that targeting diverse domains of human learning and behaviors, can improve people management and organizational behaviors. In this article, the authors present a unique relation between human cognition, instructional design, and management. By learning the significant role each factor plays, effective as well as creative management strategies can aid human performance improvement to excel beyond its own limitations.**

## Introduction

Corporations as well as schools today are faced with increased competition and a rapidly shifting environment that is surviving a world of chaos, hostile competition, and swift decision-making. Most recently and due to the rise of globalization and the rapid pace of technology, the modern competitive world we once knew to be certain, has become one of abrupt change (Hassellton & Nettle, 2006). Emerging technologies allow the cultivation of integrated markets that employs a mix of software, hardware, and firmware, or clients' choice of off-the-shelf hardware and quality operating systems, the world is fostering a newly high-end information technology that is functional and affordable. As the scope of management responsibilities widens in involvedness, public and private organizations alike are investing much of their prized resources in enlargement of administrative development programs. The time, energy and financial allotment of such activities reflect a growing concern of that vital, but often underdeveloped resource often referred to as leadership. Hence, one might notice that for decades, paradigm shifts in management might have caused unstable phenomena due to the rise of young and non-traditional corporations, intuitive leadership styles, conflicting traditional leadership theories, and diverse styles of management.

According to many leadership experts and scholars (Capelli & Crocker-Hefter, 1996; Davis, 1990; Gunn, 1995; Kanter 1977), students of leadership and educational administration learn that usually there are different originators of executive development within an organization: training experts, manager's supervisor, senior management, and the individual manager. Reliance on these sources of executive development, for example, proposes that emphasis may be placed on human resource administered programs, supervisor directed on-the-job development, mentoring programs, and executive self-development. The objectives, methodologies, and intent of a management development-training expert, from within an organization, or of being sourced out as an outside consultant, may be identical, differing only in the expertise of the targeted area. Mentoring programs all over the nations seem to indicate that having a leader-mentor is critical to career success and administrations' executive development. Finally, as a natural progression, emphasis is being stressed on self-directed learning within the framework established by the individual organization. New "best practices" require that individuals assume major responsibility in managing their own competency development. Yet, a number of studies have been conducted on the effectiveness of group productivity were researchers and practitioners alike found that a combination of specific goals with performance feedback is the optimal situation for both groups and individuals.

Advancement in computer technologies has become a relatively permanent mechanism for teaching skills and abilities in contemporary organizations. In 1996, 82% of organizations with over 10,000 employees reported relying on some form of technology-driven delivery system for teaching employees technical knowledge and skills. Yet, the 1998 American Society for Training and Development (ASTD) State of the Industry Report indicated that while industry variations were evident, technology-

mediated and self-paced instruction methods accounted for only 6 to 21 percent of all training (Edmonds & Pusch, (2002); Cohen and Rustad, 1998; Spector & Anderson, 2000). Since technical knowledge and skills are frequently delivered electronically, the role of technology in management development needs to be examined as technical skills are but a subset of a broader knowledge base required for effective leadership. Therefore, the purpose of this article is to suggest how human learning theories that focus on domains of learning and Instructional Systems Design (ID) provide a more potent groundwork from which to develop strategic management skill-building programs.

## What Management Literature Offers

ID, is a systematic process in which parts of the learning system function as a whole. It uses learning and instructional theories to ensure quality instructions that are effective. Moreover, it includes the development of instructional materials and other learning activities; and implementation, evaluation, and revisions of the complete process as needed by the designer. Therefore, such a crucial process is vital to the success of the learning/teaching process (Dick & Carey, 2004; Gagne' et al, 1992; Morrison et al, 2003). With an ever-increasing proliferation of information disseminated, and daily advances in information technologies developing, an immense need to learn more about the process of learning and its most propitious delivery systems emerges. The purpose of ID is to facilitate effective learning, assist peoples' learning, develop systematic documentations and implementation of instructional systems, but for these systems of instructions to be effective, systems' production and implementation must be planned systematically—to assure effectiveness and efficiency to minimize error and system failures. Hence, planned instruction, for example, will help individuals better develop in their areas of expertise as comprehensively as possible. Simply stated, ID aids the individual in learning and consists of short- and long-range phases corresponding to human development. ID should be conducted by means of a systematic approach based on knowledge of how humans learn (Gagne', Briggs and Wager, 1992). A prime example of a systematic approach to developing effective training programs is the five-stage ADDIE model. The ADDIE model is a general and basic instructional systems design model. It is short for Analyze, Design, Develop, Implement, and Evaluate (Strickland, 2006). In the analyze phase, the instructional problem is clarified, the goals and objectives are established, and the learning environment and learner characteristics are identified. The design phase is where the instructional strategies are designed and media choices are made. In the develop phase, materials are produced according to decisions made during the design phase. The implement phase includes the testing of prototypes, putting the product in full production, and training learners and instructors on how to use the product. The evaluation phase consists of two parts: formative and summative. Formative evaluation is present in each stage. Summative evaluation consists of tests for criterion-related referenced items and providing opportunities for feedback from the users. Thus, an administrator can utilize the analysis phase of the ADDIE model to identify her organizational, learner, and job

needs to determine the skills and knowledge required to administer organizational functions effectively. Moreover, management models of the systematic process of developing training programs also suggest beginning with a needs assessment phase. For example, when an administrator is assessing an employee, the assessment of this employee performance often involves subjective measures, which are associated with rater biases. One such bias is the *halo effect*, which occurs when a rater's rating of an employee on one dimension of job performance affects his/her rating of the employee on other dimensions. Training raters using instructional design tools in the use of rating scales will increase the accuracy of ratings; research on the other hand, has demonstrated that comprehensive systematic training (e.g. using ID tools) can significantly reduce the halo effect.

Contemporary management literature, however, traditionally refers to the four basic functions of planning, organizing, leading and controlling as the primary governing process. Carrying out the management functions require the individual to possess a set of attributes that include knowledge, skills, abilities, and other characteristics generally referred to as KSAO's. A skill may be defined as: (1) "proficiency, ability, or dexterity"; (2) "knowledge of the means or methods of accomplishing a task"; (3) "the ability to do something well, as a result of knowledge, practice and aptitude". Mintzberg (1973) proposes that analysis of the roles performed by managers in an organization leads to the identification of the particular skills essential for management. In this manuscript, the executive management and strategic management functions are interchangeable, as all higher-level managers must be concerned with strategic objectives in the competitive environment of the contemporary corporation.

Waters, 1980 suggested that management education might be directed towards an area that could be called "content" skills. Content courses, those typical of MBA programs and executive seminars, are generally organized into distinct subjects that are traditional in nature (e.g. finance or management theories). In focusing on the behavioral aspects of a manager's job, these programs would encompass such topics as developing a business plan or analyzing ordering quantities. Waters proposes four types of management skills: (a) practice skills, (b) context skills, (c) insight skills and (d) wisdom. Practice skills are performed over a relatively short time and may be identified by reasonably specific behavioral objectives. Practice skills such as active listening, public speaking, nondirective interviewing, report writing, performance appraisal, and managing conflict, might be readily rehearsed within the confines of a training program. Context skills also may be characterized as behaviorally specific, but may be difficult to foster in training programs, as the learning takes place over time. Examples of context skills might include setting goals, planning work, managing time, making demands, asserting authority, building commitment and motivation, designing controls, and introducing change (Sayles, 1979). Insight skills are less behaviorally specific and while the fundamentals may be acquired through training, proficiency requires time and practice. Working in groups, dealing with authority, empathizing, coping with ambiguity, introspection, dealing with peers, creativity, dealing with cultural differences, bargaining, negotiating, and assessing readiness for change are all examples of insight skills. Insight skills may best be developed through encouraging the learners to design their own learning experience and use the trainer as a resource (Harrison, 1973). Finally, "wisdom"

is behaviorally non-specific, and generally develops over time. Examples of "wisdom" include gaining power, selecting senior managers, working the hierarchy, formulating strategy, allocating resources, and becoming an entrepreneur.

Overton (1991) categorizes levels of managerial skills as technical, business, or personal. Technical skill proficiency refers to the understanding and development of competencies unique to a particular industry. Business skills, purportedly developed through undergraduate or graduate education, are precursors for analyzing and understanding the goals established by the firm, its environment of operation, and for developing the plans required to propel the firm toward its stated goals. Personal skills include the ability to write and speak effectively, manage time judiciously, promote new ideas and programs, and analyze data.

Stewart (1996) identified three domains of essential management skills: (1) skills related to managing yourself, (2) skills related to managing others and (3) skills related to managing business. Self-management skills include time management skills, information management skills, writing skills, and verbal communication skills (especially public speaking). Listening skills, people skills, counseling skills, influencing skills, and interpersonal communication skills are considered essential for managing other people. Goleman (1998) defines these as social skills, but observes that social skills are not just a matter of friendliness (Goleman, 1982). Socially skilled individuals move people in the direction they desire, whether it is towards agreement on a new marketing strategy, or enthusiasm for a new project. Decision-making, problem-solving and negotiation skills are essential for managing the business.

Burack, Hochwarter & Mathys (1997) argue that human resource planners should be concerned with three different groups of general competencies: (1) general mobility skills (2) general manager core competencies and (3) detailed job-specific competencies. General mobility skills and knowledge include written and oral communication skills, interpersonal skills, self-knowledge, effectiveness in group processes, and flexibility and adaptation in changing situations. General manager core competencies may include approximately 20 functional competencies, such as "being able to build a cohesive team" or "being able to persuade one's employees to accept change". And finally, detailed job-specific competencies are more focused and provide specific targets for coaching, job assignments, training and knowledge building.

Kotter (1999) proposes that the executive management process is one of setting agendas, building networks, and then convincing the networks to implement the agenda. Traditionally, top-level managers have tried to engage employees intellectually through Persuasive logic of strategic analysis (Bartlett & Ghoshal, 1994). In contemporary organizations, the emphasis includes identifying, communicating and shaping organizational values. However, throughout much of the literature, complete identification of executive skills remains somewhat illusive. For example, while considerable attention has been given to the need for leaders to create visions for their organizations (Bennis, 1989; Mintzberg, 1994; Nanus, 1992), little is known about this skill (Thomas and Greenberger, 1995). Vision is not only an idea, but a force in the workforce heart that yields impressive power (Senge, 1990). Yet scant evidence exists to support the success of training programs charged with developing visionary skills among managers.

Gardner (1990) argues persuasively that the increasing complexity of our global systems dominating society can stifle leadership development, vision and the development of effective management skills. Increasingly, managers need to be facilitators of personnel and organizational development of a global scale. Given the complexities of the global environment, managers must be attentive to and developers of organizational values and beliefs that reach well beyond the managers' own cultural, technical and managerial background. Effective global management requires the development of six basic managerial skills: (1) managing competition, (2) managing complexity, (3) managing alignment, (4) managing change, (5) managing teams and (6) managing learning (Rinesmith, 1996). Managing competition and complexity are components of administering structure and strategy. Effective management requires environmental analysis of the customer, market, competitive environment, and supplier conditions as well as the socioeconomic and political trends of the market place for fluctuations that are likely to impact the organization and its strategic business plan. Managing alignment and change are instrumental factors in fostering corporate culture while managing teams and learning are functions of managing people.

Strategic managers are challenged to develop processes for identifying their global competitors, and adapt to the increasing complexity and rapid rate of change in a dynamic competitive environment (Thomas, Pollack & Groman, 1999). The strategic management process includes evaluations at the firm, industry and national levels. Firm-level strategic analysis fundamentals include identifying and understanding core competencies (Prahalad & Hamel, 1996). According to the resource-based view of the firm, evaluating the basic building blocks of growth- financial, human, physical, organizational, intangible or technological resources are also included in the process (Penrose, 1959). Understanding the nature and structure of the industry requires analyzing the dominant influences in relationships between the firm and its buyers, suppliers and competitors, as well as industry barriers to entry and availability of substitute products (Porter, 1980). Strategic management then requires sound analytical and problem solving skills as well as the high-level of people skills identified by Cox and Cooper (1989).

Moreover, executives are not only responsible for external relationships, but also must supervise internal affairs, which require such skills as communication, managing change, and social networking (Koter, 1982). Another area of focus is that of cognitive approaches. This focuses less on behavioral changes and more on changes in how managers think. It helps managers to develop coherent and orderly interpretations of their environment, which in turn provide orderly representations of complex problems (Spillane, Halverson, & Diamond, 2004).

The upper echelon perspective suggests that effective governance depends upon the match between functional executive skills and the strategic orientation of the firm (Raelin, 1997). According to this perspective, marketing skills are best developed for environmental relations; production and accounting skills are essential for internal operations; and legal and financial skills are most desirable for firms focusing on divestitures and diversifications.

A general weakness of management literature is evident in the manner by which skill topographies are defined. Executive management skills are often characterized by

topographies such as (1) technical, (2) human and (3) conceptual skills (Katz, 1955), or (1) general mobility skills, (2) general manager core competencies and (3) detailed job-specific competencies (Burack, Hochwarter & Mathys, 1997). Such classifications, while useful for providing an organized framework for study, provide less functionality for developing training programs.

Learning theories used in contemporary training and development programs emanate from foundations practiced in behavioral psychology and cognitive science. Learning theories provide individuals with explanations about the underlying mechanisms involved in the learning process. Thus, known facts and results of diversified research studies can furnish business management with invaluable learning principles which provide consistent guidelines in human development and methods structuring learning climates that facilitate human learning to the greatest possible magnitude (Ormrod, 1999).

Learning, according to Gagne' (1985-1992), is the process of behavior change, and the situation that sets the process into effect is called a learning situation. The relationship between the situation and the behavior change is called the conditions of learning. It is these conditions, internal (mental processes- cognitivism) and external (observable behavior- behaviorism) to the learner, that make learning occur. Thus, if the intention is to help individuals learn, trainers must not only systematically plan and arrange the conditions of learning; they must also search for learning theories that pertain to the conditions of learning as well.

The cognitive perspective on knowledge acquisition concentrates on memory, categorization, problem solving and decision-making (mental associations and an internal change that is not outwardly observable). Behaviorism is primarily concerned with the consequences of behaviors that are tangible and observable responses or behaviors. Five fundamental steps guide the behavior change process under behaviorism guidelines: (1) set behavior goals, (2) determine the appropriate reinforcers, (3) select procedures for changing behaviors, (4) implement procedures and record results and (5) evaluate progress and revise as needed (Skinner, 1953). Behavioral principles influence the development of both programmed learning and Computer Aided Instruction (CAI). In its various configurations, as in drill and practice routines and tutorials, experientially-based approaches such as action learning or role-playing, are mechanisms applied under a cognitive epistemology.

Bloom (1956) attributes findings in cognitive psychology to three domains of human performance: (1) cognitive, (2) affective and (3) psychomotor. Learning that requires the recall or recognition of knowledge and the development of intellectual skills and abilities transpires in the cognitive domain of human performance. The cognitive domain embodies several levels in ascending order of complexity: (1) knowledge, (2) comprehension, (3) application, (4) analysis (5) synthesis and (6) evaluation. Knowledge requires merely remembering previous material – more commonly described as memorization. Application is the ability to apply rules, methods, concepts, principles, laws or theories. Analysis is the ability to break down information into its component parts, while synthesis is the ability to assemble those parts into a novel aggregate such as taxonomy for cataloging information. Evaluation outcomes, which often encompass all the suborder components of the cognitive domain, are circumscribed by the ability to

judge the relative merits of statements or reports for some conveyed purpose.

While Bloom suggested three domains of learning, Gagne' (1985) proposes that individual skills may then be categorized into one of five domains of learning: (1) psychomotor skills, (2) intellectual skills, (3) verbal information, (4) attitudes and (5) cognitive strategies. Psychomotor skills are characterized by the exertion of muscular activity to achieve specific objectives. While most psychomotor skills embody some degree of cognitive activity, for the purposes of instructional design, any measures of performance are dependent upon the skillful activity designating physical ability.

Intellectual skills, those that require some unique cognitive activity on the part of the learner, may be comprised of four common types of skills: (1) discrimination, (2) forming concepts, (3) applying rules and (4) solving problems. Developing verbal information involves no symbolic manipulation – no problem solving or rule applying – but merely requires the learner to supply specific responses to relatively specific stimuli (Dick and Carey, 1996; 2004). An attitude is recognized as the tendency to make particular choices or decisions to act under particular circumstances. The development of skills depicted, as attitudinal will most often target consequential long-term orientations that would be difficult to evaluate in the short term. Cognitive strategies are the meta-processes utilized to ensure our own learning. Each of these domains presents different implications for training and development.

Management skills proceed by constructing new knowledge and interpretations from connections with existing or prior knowledge. Managers need to learn about how individuals learn and how to progress from creating and making connections (schema theory), to developing thinking strategies. The movement from schema generation to metacognition is the transition from data, to information, to knowledge (Maruer & Davidson, 1998).

Classifying executive skills by learning domains targeted, rather than by applying existing management skill topographies, enhances the program development process by guiding the selection of delivery media. With the possible exception of stress management, virtually no psychomotor domain executive-management skills are emphasized for development. Most strategic management skills are intellectual skills requiring some unique cognitive activity on the part of the learner. Skills in written communication, negotiating, planning, time-management, budgeting, and decision-making generally involve applying learned rules to new situations, which suggest that they are application level skills in Bloom's cognitive domain. Gagne's topography suggests that these abilities are intellectual skills encountered at the level of rule applying or problem solving. Strategic analysis also requires cognitive or intellectual skills, as rules, principles, and theories are explored in the process of predicting the impact of changes in the competitive and global environment. However, these skills also demand a higher level of cognitive ability (recognized in Bloom's Taxonomy as synthesis) which is the ability to assemble parts to form a new whole, as in a new or unique plan of operation. And finally, while skills in communication, managing relationships with others, effectiveness in group-processes, conflict resolution, networking skills, and team-building skills often may be dissected into component rules, to describe these as cognitive skills or intellectual skills appear inadequate.

Proficiency in communication may be instituted within a set of rules, principles

and theories that can be analyzed into elemental parts and can guide potent intercourse. While these elements might be synthesized to produce new and unique themes or speeches, meaningful interchange would seem to require greater cognitive skills. Mastery of interpersonal communication is predicated upon active listening, empathic contributions to the dialog, and genuine concern for others. All these characteristics depict an attitude that emphasizes the value placed on certain behavior, rather than stressing the application of a rule or principle. Communication skills require some learning in the affective domain. Tracing management skills to a single domain of learning must then be a partial, if incomplete, solution for building effective management development programs. Such a solution only addresses one of the two inherent weaknesses the authors suggested in executive skill topographies.

## Hierarchy of Learning

Metcalf (1982) argues that the common thread in leadership research remains principally and inappropriately focused on general descriptions of behavior at a macrolevel. Yet, the most efficacious skills training would seem to require a microanalysis of skills into their component elements. For example, skills fundamentally labeled as people skills may be divided into 6 fundamental subskills: (1) analyzing the situation, (2) establishing a realistic objective, (3) selecting appropriate ways of behaving, (4) controlling our behavior, (5) shaping other people's behavior and (6) monitoring our own and others' behavior. Effective skills training programs must be designed with care and are based on the analysis of the specific behaviors to be taught.

Gagne (1968) proposed the term "learning hierarchy" to refer to a particular set of specified intellectual capabilities possessing an ordered relationship to each other. To analyze this final capability, it is important to begin with a clear statement of some terminal objective of instruction. Skills must not be subordinated to the point that lower-level skills could be predicted to generate positive transfer to higher skills (Gagne, 1996). For example, skillful interviewing, while characterized as a human skill, is a highly complex behavior requiring prerequisite knowledge in perception, selection of information, decision-making, sensitivity, empathy, verbal dexterity and motor control (Metcalf, 1982). Effective mastery of the terminal objective is contingent upon subordinate skill proficiency. Proficiency in each subordinate skill is promoted by techniques appropriate to that particular learning domain.

The major developmental objectives of management training and development are (1) to facilitate the acquisition of knowledge, (2) to change attitudes and (3) to change behaviors (Malick and Strumph, 1998). Programmed learning, lectures, discussion, the case study method, and management gaming are appropriate techniques if the targets are knowledge acquisition and behavioral changes in the cognitive domain. Sensitivity and laboratory training, behavioral simulations and action learning are the applicable techniques for affecting knowledge acquisition, behavioral changes and attitudinal changes in both the cognitive and affective domains.

The success of any executive development program ultimately rests on the degree to which trained executives implement the principles established in organizational solutions training. The need for continual learning and reinforcement is most prevalent for learning targeted at the affective domain. Objectives in the affective domain are growing more important as work becomes more intellectually oriented. Furthermore, learning objectives of the affective domain are more often concerned with general patterns of personal, social, and emotional adjustment (Rothwell and Cookson, 1997). Attitudinal goals are quite characteristic in that they are not likely to be achieved by the end of the instructional period (Dick and Carey, 1996). Furthermore, the attainment of attitudinal objectives is often evaluated through the outcome of some other objective, possibly psychomotor, verbal or intellectual. This phenomenon suggests that effective development of many managerial skills is not achievable in a short-term training program. As Davis (1997) suggested, a combination of developmental sources provides the broadest support for managerial evolvement.

Disturbing discrepancies exist between academic recommendations regarding training, and organizational practice. A recent survey revealed that although larger organizations precede training or development endeavors with a formal needs analysis, the majority of all classes of respondents do not (Bernardin and McKinney, 1997). Less than 20% of the companies reported relying on any formal control group for evaluation and 50% relied solely on trainee reactions to assess the training. All but the largest firms fail to delineate a set of written performance objectives to be realized through training. Given the lack of reliance on needs assessments and the deficit of structured performance objectives, how do human resource departments administer training programs? As one training director observes, " A lot of companies buy off-the-shelf training programs . . ." Clearly management development efforts are likely to be hampered by the lack of adherence to structured implementation systems.

Management models of training and development parallel the ADDIE model outlined previously. However, management practices as observed above, deviate significantly from the recommended models. Human resource training professionals may mitigate some of the more ambiguous results of development through careful consideration of the ADDIE model. In particular, a needs assessment of critical skills required of strategic and executive managers may suggest an evolving executive skills hierarchy. Reducing terminal skills into component subskills, as in Gagne's hierarchy of learning, will undoubtedly uncover a smaller set of similar foundation skills common to more than one terminal objective. For example, developing negotiation, conflict resolution, and motivational skills must be predicated upon mastery of a common set of interpersonal skills in communication. Targeting the cognitive domain is the crux of instruction in developing terminal strategies in negotiation, conflict resolution and motivational skills. Additionally, this instruction requires a foundation based on interpersonal communication, especially in the area of developing attitudinal skills such as, "choosing to engage in empathic conversation" or "valuing the contribution of others." The third stage of the ADDIE Model, development of instructional strategy, is a combined phase of needs analysis and design in executive development, which identifies and organizes the terminal behaviors and requisite subskills needed for effective strategic management supports. As the HR professional proceeds with the analyses of needs and

establishment of objectives, learning experiences for the organization are ready for design. The ADDIE model reviewed above is appropriate when using the directive approach, but many would support the Action Learning Model for the organization that is more collaborative and non-directive (Rothwell &Cookson, 1998). Just as the HR professional evaluates the terminal behavior and attendant sub-skills and identifies the learning domain targeted, the instructional strategy under development should address the inherent delivery limitations. Terminal behaviors or subskill learning of the affective domain – those that targets attitudes – are not likely to be accomplished solely through instruction. Meaningful changes within these domains of learning suggest that longer term coordinated development efforts by the HR professional should be paired with coaching, mentoring, and other feedback and practice opportunities provided by superiors.

## Conclusion

This article suggests the need for a more complete model of the skills for effective executive or strategic management. Clearly, management literature is inadequate in two fundamental aspects: (1) the lack of empirical work to connect the relationship between suggested executive skills and effective management and (2) the failure to understand proposed management skills according to an epistemology that necessitates strategies for developing those requisite skills. Models of instructional design propose a productive recipe of success for designing administrative development programs. A topography that organizes management skills in a hierarchical fashion implies that developing lower level skills is a precursor to favorable development of terminal behaviors. Adhering to principles of ID forces the recognition that not all skills, subskills, or entry behavior skills are subject to effective and immediate development through training programs. In sum, a successful management development formula begins with a professional analysis of organizational needs and learning objectives, continues with programs designed to develop skills in accordance with their hierarchical relationships, and are steadily reinforced by development through mentoring, supervisor support, and executive development, culminating in optimal Human Resource output.

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