DOWNLOAD PDF A PRIMER ON COGNITIVE THEORY

Chapter 1 : Cognitive Learning Theory - Using Thinking to Learn

Development is a broad spontaneous process that results in the continual addition, modification and recognition of psychological structures. For defining development four factors are important: Maturation: maturation is the process where biological changes take place and it is controlled by innate mechanisms.

Formal operational stage 1. Sensorimotor Stage In the earliest stage of development, children experience six substages of spatial and sensory learning and growth. Gruber and Jacques J. According to Gruber, this is the circular or reaction stage when infants begin to repeat motions that will become habits, such as moving a hand or foot in a similar movement from time to time. Passive reactions, called classical or operant conditioning, emerge at this stage too. Coordination begins to develop between comprehension and vision. Three new skills become evident. One is the repeated reaching for an object. The second is a secondary repeating motion respecting an external object, such as dropping a rattle repeatedly. Lastly, an awareness of distinguishing methods and means of accomplishing a task. The child learns to explore the world and conduct small experiments to learn how things work. Children no longer resort to simply crying to get their way. The month-old child is capable of cajoling, sweet-talking or even exploiting to obtain what she wants. Imitation becomes an essential behavior that leads to mental symbolism. As the child discerns the shape of an object and studies its function, she gains clarity about what the object represents as well as what might be expected of it. In this stage a child acts on a particular object. This stage occurs between the ages of 2 and 7 and includes the following processes: Animism is demonstrated when children attribute living qualities to inanimate objects, such as toys. Classification allows a child to combine similar objects in clusters according to shared criteria such as size and color. For example, a wide cup and a tall cup holding the same amount of liquid could look different to a child eying the difference in height. Intuitive thought reveals belief in something without understanding why one believes in it. This is a critical area for the development of trust and faith in what others tell the child. Serialization is the ability to organize things by progression, such as by size, numerical values or color shadings. In understanding the preoperational stage, it becomes clear why tasks typically associated with preschool, kindergarten and the lower primary grades focus less on language development skills and more on the learning of colors, symbol identification such as the alphabet and numbers and shapes. Conservation evolves so that a child retains the understanding of quantity, length or numbers associated with an object or process. Reversibility is the understanding that an object or number can change and then reverse into its original state. She learns to focus more on alternative perspectives and can see other possibilities to the problems or situations she faces. This is when children entering puberty begin to think abstractly and create meaning from available data. This critical fourth stage is responsible for creating global problem solvers and creative thinkers who can analyze a situation and not be confined by concrete ideas or previously accepted logic. These are the children marching to the beat of their own drum, even at an early age. Some experts believe that many people fail to successfully complete this stage to varying degrees. Many adults are bound by a rigid sense of order or sequential thinking that prohibits alternative solution development or limits their creative processes. Each of the four stages comprises new learning that builds upon prior skills and abilities. The four stages are believed to be universal rather than cultural, and follow the same sequence of development despite timing or geographic relevance. These include James W. Each of these offers insight to the way in which human brains develop into distinct but related branches of thought. Is Your Child A Bully? The information contained on www. This information should not be used for diagnosing or treating a health problem or disease, or prescribing any medication. Always seek the advice of a qualified health-care professional regarding any medical condition. Information and statements provided by the site about dietary supplements have not been evaluated by the Food and Drug Administration and are not intended to diagnose, treat, cure, or prevent any disease. Lifescript does not recommend or endorse any specific tests, physicians, third-party products, procedures, opinions, or other information mentioned on the Site. Reliance on any information provided by Lifescript is solely at your own risk. The four stages are believed to be universal rather than cultural, and follow the same sequence of development despite the variance of timing or

geographic relevance. People who have children seldom take into account this theory of human development. General awareness exists with respect to mental processes, but clear understanding of each phase and its relationship to those preceding and succeeding remains in academic and psychological domains. Anyone who would like to understand the development of thinking and reasoning abilities can research these processes at the library, in a bookstore or online by visiting pertinent websites. Finding out your child is the victim of a bully is one thing, but it is perhaps worse when you realize your child is the bully. If you suspect your child may behave as a bully when you are not looking, take this quiz to see if you are reading the right signs and stop bullying once and for all. Sign up for our Healthy Living Newsletter! Thanks for signing up for our newsletter! You should see it in your inbox very soon. Please enter a valid email address Subscribe.

Chapter 2 : Part 2: Cognitive Behavioral Therapy (CBT) Primer

Cognitive Theory Cognitive theory is based on the idea that cognitive processes are at the center of behaviors, thoughts and emotions. It is largely based on the work of Albert Ellis and Aaron Beck, which emphasizes what people think instead of what they do.

Types[edit] Positive and negative priming[edit] The terms positive and negative priming refer to when priming affects the speed of processing. A positive prime speeds up processing, while a negative prime lowers the speed to slower than un-primed levels. The representation is already partially activated when the second stimulus is encountered, so less additional activation is needed for one to become consciously aware of it. Negative priming is more difficult to explain. Many models have been hypothesized, but currently the most widely accepted are the distractor inhibition and episodic retrieval models. Later, when the brain acts to retrieve this information, the tag causes a conflict. The time taken to resolve this conflict causes negative priming. Perceptual priming is based on the form of the stimulus and is enhanced by the match between the early and later stimuli. Perceptual priming is sensitive to the modality and exact format of the stimulus. An example of perceptual priming is the identification of an incomplete word in a word-stem completion test. The presentation of the visual prime does not have to be perfectly consistent with later testing presentations in order to work. Studies have shown that, for example, the absolute size of the stimuli can vary and still provide significant evidence of priming. For example, table, will show priming effects on chair, because table and chair belong to the same category. When a stimulus is experienced, it is also primed. This means that later experiences of the stimulus will be processed more quickly by the brain. Semantic[edit] This image shows a priming web built from different types of priming. The lines in this web indicate associations that an individual might have. If two words are more closely linked in the web, then they are more likely to be more quickly recognized when primed with a nearby word. The dotted lines indicate morpheme primes, or primes from words that sound similar to each other, while the straight lines indicate semantic primes or words that have meanings or associations that relate to each other. In semantic priming, the prime and the target are from the same semantic category and share features. Semantic priming is theorized to work because of spreading activation within associative networks. Even if they are not words, morphemes can prime for complete words that include them. In support with further detail, when an individual processes a word sometimes that word can be affected when the prior word is linked semantically. Previous studies have been conducted, focusing on priming effects having a rapid rise time and a hasty decay time. For example, an experiment by Donald Frost researched the decay time of semantic facilitation in lists and sentences. Three experiments were conducted and it was found that semantic relationships within words differs when words occur in sentences rather than lists. Thus, supporting the ongoing discourse model. Context priming works by using a context to speed up processing for stimuli that are likely to occur in that context. A useful application of this effect is reading written text. These later words are processed more quickly than if they had been read alone, and the effect is greater for more difficult or uncommon words. The distinctive feature of response priming is that prime and target are presented in quick succession typically, less than milliseconds apart and are coupled to identical or alternative motor responses. These response conflicts have observable effects on motor behavior, leading to priming effects, e. A special property of response priming is its independence from visual awareness of the prime: For example, response priming effects can increase under conditions where visual awareness of the prime is decreasing. The term "masked" refers to the fact that the prime word or pseudoword is masked by symbols such as that can be presented in a forward manner before the prime or a backward manner after the prime. These masks enable to diminish the visibility of the prime. The prime is usually presented less than 80 ms but typically between ms in this paradigm. Results from numerous experiments show that certain forms of priming occur that are very difficult to occur with visible primes. One such example is form-priming, where the prime is similar to, but not identical to the target e. A unique feature of kindness priming is that it causes a temporarily increased resistance to negative stimuli in addition to the increased activation of positive associative networks. Tests such as the word-stem completion task , and the word fragment completion task

measure perceptual priming. In the word-stem completion task, participants are given a list of study words, and then asked to complete word "stems" consisting of 3 letters with the first word that comes to mind. A priming effect is observed when participants complete stems with words on the study list more often than with novel words. The word fragment completion task is similar, but instead of being given the stem of a word, participants are given a word with some letters missing. The lexical decision task can be used to demonstrate conceptual priming. Priming is demonstrated when participants are quicker to respond to words that have been primed with semantically-related words, e. Other evidence has been found through brain imaging and studies from brain injured patients. Another example of priming in healthcare research was studying if safety behaviors of nurses could be primed by structuring change of shift report. Priming studies on amnesic patients have varying results, depending on both the type of priming test done, as well as the phrasing of the instructions. Amnesic patients do as well on perceptual priming tasks as healthy patients, [31] however they show some difficulties completing conceptual priming tasks, depending on the specific test. For example, they perform normally on category instance production tasks, but show impaired priming on any task that involves answering general knowledge questions. When performing a word-stem completion test, patients were able to successfully complete the task when asked to complete the stem using the first word that came to mind, but when explicitly asked to recall a word to complete the stem that was on the study list, patients performed at below-average levels. Aphasia[edit] Perhaps the first use of semantic priming in neurological patients was with stroke patients with aphasia. This dissociation was extended to other linguistic categories such phonology and syntactic processing by Blumstein, Milberg and their colleagues. Results are conflicting in some cases, but overall, AD patients show decreased priming effects on word-stem completion and free association tasks, while retaining normal performance on lexical decision tasks. Focal cortical lesions[edit] Patient J. This demonstrated intact perceptual priming abilities. This leads to a more selective activation of neurons representing objects in higher cognitive areas. An individual is unaware of this, and this may lead to behavior that may not agree with their personal beliefs. Subjects were implicitly primed with words related to the stereotype of elderly people example: While the words did not explicitly mention speed or slowness, those who were primed with these words walked more slowly upon exiting the testing booth than those who were primed with neutral stimuli. These findings have been extended to therapeutic interventions. For example, Cox et al. Making memories of her competence more salient should reduce her self-stereotype of incompetence. Known effects are e.

Chapter 3 : Jean Piaget's Theory of Cognitive Development | Simply Psychology

A Primer on Cognitive Dissonance not suffer (Aronson & Mills,). Let's say we enlist in the United States Navy and suffer mental and physical stress at the hands of a.

For defining development four factors are important: Neurological changes occur through physical growth and for the sequencing of qualitative changes. Social transmission occurs when information, attitudes and customs are transmitted from one group to another. It is the most crucial of the four factors because it plays an integrative as well as a motivational role in the cognitive development. Basic concepts for cognitive development: Physical action is the basic for cognitive development. Adaptation is a continuous process of interacting with the environment, leads to the development of schemas. It is a mental structure that provides an organism with a model of action in similar or analogues circumstances. Assimilation is the process which uses an existing schema to handle an environmental demand Disequilibrium: It is the process of modifying existing schemes to satisfy the requirements of a new experience. Disequilibrium leads to curiosity and explore which facilitates development. Piaget described four stages of intellectual development. Sensorimotor stage years: In this period, intelligence is demonstrated through motor activity without the use of symbols. Knowledge of the world is limited because it is based on physical interactions and experiences. Some symbolic abilities are developed at the end of this stage. There are some characteristics of this stage: Aimless or lack of goal directedness. Accomodatory change in structure. Focuses of his own body No differentiation between own world and external world. There are 6 sub stages under this stage: Two important characteristics of this stage are: No differentiation between the self and the external world. Tends to become more adaptive to the increasing demands of the environment. Important features of this stage are: Focus is only his own body. Circular pattern of having a stimulus and responding. Occurs a great deal of trial and error learning. Develops some notion of causality. Modification of existing schemas. Concentrated on the objects outside his body. Practice the same thing again and again. Dependent on others for information about the world. Becoming aware of casual relationship. Begins to understand that certain events in the outside world are under control. True intentionality is not achieved. Co-ordination of secondary schemas: Two major land marks take place in this stage: Begins to use already learned behavior pattern and more than one schema to prolong events that are new or unusual. This is the first true sign of intelligence. The infants realizes that objects in environment are clearly separate from him or herself and have distinct qualities of their own. Uses new means to solve new problems. Examine the cause-effect relationship through experimentation. Engaged in experimental thinking. Inventions of new means through mental combination: Symbolic thought becomes the primary mode of thinking. Beginning of language becomes apparent. Use mental representations instead of the physical objects. It is called action oriented stage. Action means operation or movement. The important features of this stage are described below: The child is no longer bound by perceptual experience but can go beyond what the environment offers. The child is progressing from sensorimotor type of intelligence to a symbolic type of intelligence. Development of language is the most significant event during this stage. Child can not mentally rearrange a sequence of events into the reverse order form that in which they originally occurred. Inability of the child to perform mental operations or transformations that would reverse a sequence of logic or events thereby restoring the original condition. They have lack in three conservation: Conservation of number ii. Ability to order a series of event in succession. The important characteristics of this stage are described in the following: Inability to assume another perspective. Thinking now is becoming less restricted by egocentrism, centration and irreversibility. Concrete sequential problems are learnt to solve. Faces problem to solve hypothetical, futuristic and abstract problem. Dramatic transition from illogically based thought to logically based thought. Deals with problems of all times. Work like a scientists-accepting hypothesis, actual testing of these hypotheses and revaluating of the hypothesis. Able to approach the problem with a logical and complete plan. Ability to formulate and consider all the possible outcomes of a situation. Little differentiation between the organismic structural equipment and the demands of the environment. Making attempts to maximize the success of adapting to the world.

Chapter 4 : Cognitive Theory | The History of Dream Analysis

Dynamic Thinking: A Primer on Dynamic Field Theory introduces the reader to a new approach to understanding cognitive and neural dynamics using the concepts of Dynamic Field Theory (DFT). Dynamic Neural Fields are formalizations of how neural populations represent the continuous dimensions of perceptual features, movements, and cognitive decisions.

Multimodal Assessment And Treatment A. Whereas many of the psychotherapeutic approaches used today are trimodal addressing the familiar affect, cognition and behavior or "ABC" , the outcomes of several follow-up inquiries have pointed to the importance of therapeutic breadth if treatment gains were to be maintained. Thus, MMT provides clinicians with a comprehensive assessment template. By separating sensations from emotions, distinguishing between images and cognitions, emphasizing both intraindividual and interpersonal behaviors, and underscoring the biological substrate, MMT is most far-reaching. Students and colleagues frequently inquire as to whether particular modalities are more significant and thus, should be more heavily weighted than others. My typical response is that, whereas for thoroughness all seven modalities require careful attention, it is the biological and interpersonal modalities that are the most significant. Clearly, the biological modality wields a profound influence on all the other modalities: It is, of course, essential when any doubts arise about the probable involvement of biological factors, to have them fully investigated by a qualified professional. Hence perhaps it is best to picture the biological modality serving as the base of a pyramid that contains each of the modalities, with the interpersonal modality at the apex. It must be emphasized, however, that the seven modalities are by no means static or linear, but instead exist in a state of reciprocal transaction. How does a clinician assess each of these modalities? Typically, through the use of a range of questions. The clinician may also ask, "What relationships give this particular client pleasures and pains? I am also very angry with my father". To deflect the emphasis too soon onto other matters that may seem more important is only inclined to make the patient feel invalidated. Once rapport has been established, however, it is usually easy to shift to more significant problems. It should be noted, however, that before fleshing out the details, any competent clinician would likely begin by addressing and investigating the presenting issues e. Can you please elaborate on them for me? Every clinician, regardless of his or her level of experience, reaches treatment impasses. When this occurs, a more detailed inquiry into the associated behaviors, affective responses, sensory reactions, images, cognitions, interpersonal factors, and possible biological considerations may help to shed some light on the situation. For example, an unassertive person who is not responding to the usual social skills and assertiveness training methods, may be asked to spell out the specific consequences that an assertive way of living might have on his or her behaviors, affective reactions, sensory responses, imagery, and cognitive processes. Of course, interpersonal repercussions would also be examined and, if relevant, biological factors would be determined e. Quite often, this procedure can bring to light reasons behind such factors as noncompliance and poor progress. A case in point was a man who was not responding to role-playing and other assertiveness training procedures. Consequently, the treatment focus shifted to a thorough examination of his entitlements. The technique is best described through the use of an example. The therapist might ask, "How did you feel when your father yelled at you in front of your friends? Instead, in situations of this kind, bridging is usually more effective. The therapist might say, "So you see it as a consequence involving judgments and priorities. Please tell me more. For example, the therapist may say, "Tell me, while we have been discussing these matters, have you noticed any sensations anywhere in your body? The client may respond to this question by referring to some sensations of tension or bodily discomfort - for instance, "My neck feels very tense" -- at which point the therapist may ask him to focus on the specific tension. The therapist may then venture to bridge into the affective domain. The therapist might say, "Beneath the sensations, can you find any strong feelings or emotions? Perhaps they are there lurking in the background? The client might say, "I feel angry, and a little sad. Tracking Tracking is a strategy that may be employed when clients are puzzled by affective reactions. In true multimodal form, the client is then asked to consider what behaviors, affective responses, images, sensations, and cognitions come to mind. As was the case with

bridging, this technique is best described through the use of an example. The client had initially become aware that her heart was beating faster than usual sensation. This brought to mind a memory of a time in which she had passed out after drinking too much alcohol at a party image. This memory still brought about a strong sense of shame affect. As such, the client started believing that she would pass out again cognition and, as she dwelled on her sensations, this cognition was intensified and culminated in her panic attack. Thereafter, the client was asked to note whether any subsequent anxiety or panic attacks followed a similar "firing order. This alerted the therapist to focus on sensory training techniques e. While tracking can be useful in uncovering fairly reliable patterns behind negative affective reactions that clients find puzzling, clinicians should never assume that these patterns are universal and then use the same treatment techniques, in the same sequence, for all clients. For example, some clients dwell first on unpleasant sensations palpitations, shortness of breath, tremors , followed by aversive images pictures of disastrous events , to which they attach negative cognitions ideas about catastrophic illness , leading to maladaptive behavior withdrawal and avoidance. This page questionnaire frequently facilitates treatment when conscientiously filled in by clients as a homework assignment, usually after the initial session , by providing detailed background information and allowing for a more comprehensive problem identification sequence to be derived than would typically occur from the interview alone. Of course, seriously disturbed e. The SPI may also be particularly useful in couples therapy, where differences in the specific ratings may indicate potential areas of friction. Discussion of these disparities with clients can result in constructive steps to understand and remedy them. A series of studies e. Of special interest is the fact that Herman , has also shown that client-therapist similarity on the SPI is predictive of psychotherapy outcome. Multimodal therapists may also make use of several other specialized assessment instruments e. It should be emphasized, however, that wherever applicable, multimodal therapists will also strive to administer additional well-known and preferably, empirically supported assessment measures such as the Beck Depression Inventory Beck, , and YBOCS Goodman et al. Clinical Indications And Exclusions While MMT offers a comprehensive orientation that is extremely flexible and ardently strives to match the best and most effective methods with the appropriate treatments for each individual, there do exist several situations in which one may elect not to work multimodally. For example, as mentioned above, a clinician treating a client with serious psychopathology e. In addition, certain situations call for an immediate, highly focused crisis intervention sequence, in which the emphasis would be on methods that are more likely to be limited but intense. Similarly, there is often no need to delve into broader or deeper issues with clients whose problems call for immediate and obvious interventions. For example, a business executive who is uncomfortable flying may seek treatment because her job calls for frequent air travel. In this case, the entire treatment may entail no more than three desensitization sessions coupled with mental imagery and autohypnotic skills that she can use as needed. It is also not uncommon to encounter high functioning individuals whose problems call for a bimodal intervention e. Thus, in practicing MMT, one does not mindlessly apply the multimodal spectrum across the board, but instead, when indicated, the well-trained multimodal clinician has an imposing armamentarium of assessment and treatment strategies at his or her disposal. Recall that MMT is a clinical approach that rests on a social and cognitive learning theory, and is therefore not a unitary or closed system. Instead it uses technically eclectic and empirically supported procedures in an individualistic manner. Obviously, there is no one therapist who can be well versed in the entire gamut of methods and procedures that exist today. Therefore it should go without saying that if a problem or a specific client falls outside their sphere of expertise, the competent clinician will endeavor to effect a referral to an appropriate resource. Empirical Support For MMT A common question is whether there is evidence that MMT or any other broad spectrum approach is superior to more narrow or targeted treatments. Historically, the data on this subject have been mixed. For example, in the s and s, researchers found that for some disorders, specialized or highly focused interventions were indeed superior to broad-spectrum or multimodal-like approaches. One example would be the finding that in weight-loss programs a specialized stimulus-control procedure was often superior to multidimensional treatments. Conversely, a strong argument was made for a broad-spectrum approach in the treatment of alcoholism. Here, studies found that those treated only by aversion therapy were more likely to relapse than their counterparts who had received aversion

therapy plus relaxation training. It is, of course, far easier to study the impact of a specific technique than to measure the effectiveness of an entire clinical armamentarium such as MMT. Nevertheless, colleagues in Scotland and Holland have attempted to do so. For example, in a carefully controlled outcome study conducted by Dr. Tom Williams, MMT was compared with less integrative approaches in helping children with learning disabilities, with the results clearly supporting the use multimodal procedures Williams, In this case, implementing MMT resulted in substantial recoveries and durable nine-month follow-ups. Aside from outcome measures, there also is research bearing out certain multimodal tenets and procedures. Factor analytic studies gave rise to several versions of the SPI until one with good factorial stability was obtained. For example, the reliability and validity of this instrument was investigated in a series of studies by Dr. One of the most important findings was that when clients and therapists have wide differences on the SPI, therapeutic outcomes tend to be adversely affected Herman, Summary Multimodal therapy draws on the same principles of experimental and social psychology, as do other cognitive-behavioral therapies. This results in broad-based assessment and treatment foci. It may be stated that a specific MMT theory is that the reciprocal reactions among and between the seven modalities comprise the essence of human temperament and personality, and point the way to rapid and durable therapeutic tactics and strategies. Whenever feasible, multimodal therapy practitioners use empirically supported treatment methods. The therapeutic relationship is pivotal. Rapport and compatibility between client and therapist is the soil that enables the techniques to take root. Multimodal therapy is technically but not theoretically eclectic. It makes effective use of methods from diverse sources without relinquishing its social learning and cognitive theoretical underpinnings. Fitting the requisite treatment to the specific client and not vice versa is an essential goal. Psychometric properties of the Beck Depression Inventory: Clinical Psychology Review, 8, Update on empirically validated therapies II. The Clinical Psychologist, 51, H , Rasmussen, S. Development, use, and reliability. Archives of General Psychiatry, 46, Client therapist similarity on the Multimodal Structural Profile as predictive of psychotherapy outcome.

Chapter 5 : Multimodal Therapy: A Primer, Article by Arnold Lazarus, Ph.D., ABPP

A Primer on Cognitive-Behavioral Therapy April 3, Mental Health, Personality and Character Disorders, Psychology, Relationships, Social Issues, Therapy character disturbance, cognitive therapy, cognitive-behavioral therapy, personal empowerment, self-efficacy, therapy Dr. Simon.

A scientist put a laboratory mouse in a box with six rooms. The mouse soon learned the cheese was in room three. Therefore, it always ran directly to room three upon being put in the box. One day the scientist put the cheese in room five. Upon entering the box, the mouse ran directly to room three. He or she would have continued to return to room three again and again and again â€" expecting and then demanding cheese. This is where it has always been. I have rights you know. Meanwhile, the cheese remained in room five. So what is the difference between mice and people? Mice get their cheese. Because of this bond, it would be naive to assert we should stop using behavioral instruction altogether. Behaviorism suggests that 1 teachers ensure learners attain defined learning objectives, usually specified as observable, behavioral outcomes. Most of us were raised in families offering tokens for completing tasks. We grew accustomed to external rewards and altered our behavior to acquire more. Schools carried this approach forward by offering grades, stars, and attention based on the way we behaved. Shrewd students noticed that well-behaved children were treated better than those who misbehaved. As adults, companies pay and provide bonuses to those who follow the rules. We lock into routine tasks and low-level processing. Do something enough and it stays with you for a lifetime. Control what we practice and teachers control what we learn. Behavioral instruction offers little opportunity or context to develop independent thought. Adult education often capitalizes on these despite the facts. Authors, such as Robert Mager, advocate behavioral objectives that break tasks into small, measurable pieces. His books profoundly influence the instructional technology field despite the fact they can instruct educators to measure things too narrowly. They teach novice instructional designers a limiting approach to development. They may not have a thorough enough understanding of their changing business needs to know when this approach will end up inhibiting learning. As a result they may use this methodology in all of their courses. This type of objective reflects the belief that at a pre-determined, externally controlled time, a learner will know or be able to do something new. The time and place are vital because the test of a behavioral objective lies in its ability to be measured. The behavioral approach to instructional design is teacher-centered. To evolve, we must be flexible and adaptable when needed. Testing from behavioral objectives proves just as problematic. Drill and practice programs are only moderately effective at increasing test scores and reinforce educational practices with little bearing on the modern workplace. They need people who get the job done. We need learners who have acquired a very different skill set than those required to solve multiple choice problems under the pressure of a stopwatch. Does this imply there is no place in the field of adult education for behaviorism? There are some tasks that lend themselves to drill and practice, as well as condition and response. Examples might be learning to give an injection, learning a computer program, learning accountancy procedures, learning to swim, or learning to operate a sophisticated machine. Although no learning is without elements of reflection or emotive dimensions, these examples are all located primarily in the domain of task-oriented, instrumental learning, and it is this domain that fits most easily with the behaviorist approach. In the information age, rules change daily. If we face variation, we may need a different approach. Cognitivism Teaching methods based on research in cognitive science are the educational equivalents of the polio vaccine and penicillin. Yet, few outside the educational research community are aware of these breakthroughs or understand the research that makes them possible. There is more to education than cognition, but studying what goes on in the brain can drive progress, help us make decisions, and improve educational programs. Our innate cognitive architecture remains the same no matter what subject we try to master. Learning about that structure can improve the way we learn. The implications are staggering for learning technologies based on how the brain deals with ideas. The study began in when psychologists, linguists, and computer scientists met at the Massachusetts Institute of Technology for a symposium on information science. Both are devices that process symbols. Our schemes consistently evolve with use. In time, certain actions require little or no

thought. The actions become automatic. Cognitivists view learning as a developmental process. We test our notions about the world against new information before we make it our own. Our prior experience, knowledge, and expectations are key to learning. We build bridges between new information and what we already know. Educational programs help us do this by offering meaningful organization and contexts to store and retrieve new information. As a result, we effectively build on what we know. Children follow this model intuitively when they learn to walk. First they roll over. Then they sit up; next pull up. They try to balance, using their arms, feet, and trunk. Once they master balance, they let go, then take one step, and fall. Not liking the feeling of falling, they try to step again and put the other foot out to balance. After two steps, they try three. Soon they can run. In the cognitive model, learning is the process for novices to become experts. Novices hold naive theories about how things work. For example, computer novices may fear they will break the machine. Highly educated adults used to think the moon was made of cheese. For instance, programs are often designed with input from subject matter experts SME who offer how they currently perform tasks or solve problems. Wanting to share their wisdom, experts can leave out the vital chunks and situations that led them to that expert level. They identify the behaviors that learners should possess and envision reinforcing activities for the novices. A better way to develop curricula based on cognitive research would be to build from, address, and then correct these naive theories so that learners can overcome their naive beliefs. Novices see individual parts. Cognitive psychology suggests that if education helps novices structure their new information, they will be able to use the structures throughout the life of that knowledge. We recognize the information we need and process it to build more accurate or up-to-date rules. Some learners modify their structures automatically while others need some help. This suggests that there is more to expert performance than topic-specific knowledge and skills. Metacognition defines the ability to think about thinking, to be consciously aware of ourselves as problem solvers, and to monitor and control our mental processing. There are several keys to metacognition. They include 1 our awareness of the difference between understanding and memorizing material and which mental strategies to use at different times; 2 our ability to recognize difficult subjects, where to start, and how much time to spend on them; and 3 our aptness to take problems and examples from the materials, order them, and then try to solve them. Metacognitive skills all involve problem solving awareness and control. We can learn metacognitive skills by working through one topic, but can then apply them when trying to learn a second topic. Incorporating these skills into educational programs and our day-to-day work habits is vital to our growth. While topic-specific knowledge and skills are essential to expertise, programs must also be metacognitively aware, informed, and explicit. We need to create and maintain educational environments where learners smoothly journey from novice to expert and learn to become intelligent novices. To do that, we must rethink or at least re-evaluate education policy, classroom practices, standards, and teacher training. Constructivist approaches work well when we operate with constantly changing information. Constructivism is presented here to offer ideas about what to do when facing uncertainty and how to use different approaches in different times. The constructivist model comes from several contemporary cognitive theorists who began questioning the benefit of cognitive instruction for unknown information and knowledge. They adopted a different way to look at learning and understanding knowledge. Constructivists assert that knowledge is what we make of it. Because of the Thriving on Chaos mentality of the late s and early s, constructivism received increasing attention in the field of training and instructional design. To be successful, meaningful, and lasting, learning must involve actions, understanding concepts, and working knowledge of culture. By recreating their reality, they learn. Cognitive learning environments can effectively transfer basic skills and help learners attain advanced knowledge if the information is well defined and available. Much of what needs to be learned today involves advanced knowledge in ill-structured domains.

Chapter 6 : Priming (psychology) - Wikipedia

Here's a short primer on Cognitive and Behavioral Learning Theories. Behavioral learning theories suggest that learning results from pleasant or unpleasant experiences in life while cognitive theories of learning suggest that learning is based upon mental processes.

Thales Advertisements Thales of Miletus was a prominent and popular Greek philosopher of pre- Socratic times. Furthermore, Aristotle considered him as the very first philosopher in the tradition of Greek. With his works, Thales tried to describe and explain the natural phenomena, without taking help of mythology and was extremely influential in this regard. Most of the other pre-Socratic philosophers also followed the foot-steps of Thales and got engaged in explaining an ultimate substance, change, and the existence of the world without referring to mythology. Subsequently, the denial of mythological explanation by Thales brought a necessary idea for the revolution of science. Thales also became the first person to describe general principles and put forward hypotheses. Thales is also recognized with the first usage of deductive reasoning application to geometry. He is greatly addressed as the first true mathematician. Thales was also the first person to study electricity. Thales Childhood and Early Life Thales was born in around the mid c. The place was an ancient Greek Ionian city, located on the western coast of Asia Minor. The exact dates of his birth and death are unknown. The time of his lifespan is guessed by some events given in the sources. Believing Herodotus, Thales once forecasted a solar eclipse which according to modern methods most probably have had happened on May 28, BC. Diogenes Laertius suggests that his parents were Examyes and Cleobuline. His family belonged to the royal Phoenicia family. Diogenes also came out with two contrasting stories. First that Thales got married and had a son named Cybisthus or Cybisthon or else adopted his nephew holding the same name. Second story says that Thales never married; telling his mother that it was too early to marry in his young age and later that it was too late when he grew old. Another early source, Plutarch, recites another story that when Solon met Thales he asked him the reason behind not marrying anyone. On this, Thales said that he disliked the idea of having to worry about children but after many years, he was quite eager to have a family and thus, adopted his nephew. Some suggests that no writings of his have survived. Business According to numerous stories, Thales was not just a mere thinker, but was also engaged in business and politics. A story suggests that he purchased all the olive presses in Miletus, when he forecasted the weather and an excellent harvest for that specific year. Another story recites that he purchased options to use the presses not to gain money but to solely show his peer Milesians that he could very easily elevate his status using his intelligence. This particular incident is also cited as the first ever example of options trading. Politics The political life of Thales was chiefly connected with the involvement of the Ionians in the defense of Anatolia, opposing the increasing power of the Persians. At that time Persians were new in the town. A king of the neighboring Lydia, Croesus had obtained many states of coastal Anatolia, which included the cities of Ionians too. This marked the beginning of the war between Lydians and Medes which continued for five years but when the war was in its sixth year, a sun eclipse immediately interrupted the battle going on. Most likely Thales had forecasted this solar eclipse. It seems that the Seven Sages existed then, as Croesus was immensely impressed by Solon of Athens who was another sage. The actual presence of Thales in the war is uncertain but on the basis of the same, both Lydians and Medes instantly declared peace, taking a blood oath. Croesus was now on the side of the Medes and marched towards Iran when he was halted by the river Halys. Thales was also with him. Whatever being his status, the King presented the problem to him, and he took the army across by boring a diversion upstream in order to lower down the flow. With this it became easier to cross the river. The camp channels were running from both the sides. Two armies were involved at Pteria in Cappadocia. But as the battle was irresolute and lame from both the sides, Croesus chose to march back home. Eventually, the Ionians became independent. Herodotus stated that Thales gave suggestion to build an Ionian state, which would be located at Teos in the center of lonia. Thales became the first sage. However, the same story also declares that Thales immigrated to Miletus. Also according to some sources, Thales had instructions from Egyptian priests. Furthermore, he participated is numerous games and most probably Panhellenic, at which he even won a bowl

two times. Thales dedicated the same to Apollo at Delphi. Theories Thales attempted to describe natural phenomenon through a rational explanation. He tried to explain earthquakes with the help of hypothesizing that our home planet floats on water, and that earthquakes take birth when the earth is agitated by waves. Aristotle stated that Thales asked that what the nature of a particular object was so that it would start showcasing specific characteristics. He actually meant to say is that the first philosophers were trying to define the substances of which all material objects are composed of. Even today, this is what modern scientists are attempting to accomplish in nuclear physics, which again is a reason why Thales was described as the first western scientist. Thales believed that water was the first principle and that the world started from water. Thales is believed to have died inaroundc. The cause of death is unknown.

Chapter 7 : Calvin S. Hall - Wikipedia

In cognitive computing, the system provides information to help the doctor decide." Combine these two definitions together, you see that cognitive automation is a subset of artificial intelligenceâ€"using specific AI techniques that mimic that way the human brain worksâ€"to assist humans in making decisions, completing tasks, or meeting goals.

Schemas Imagine what it would be like if you did not have a mental model of your world. It would mean that you would not be able to make so much use of information from your past experience or to plan future actions. Schemas are the basic building blocks of such cognitive models, and enable us to form a mental representation of the world. Piaget emphasized the importance of schemas in cognitive development and described how they were developed or acquired. A schema can be defined as a set of linked mental representations of the world, which we use both to understand and to respond to situations. The assumption is that we store these mental representations and apply them when needed. For example, a person might have a schema about buying a meal in a restaurant. The schema is a stored form of the pattern of behavior which includes looking at a menu, ordering food, eating it and paying the bill. The schemas Piaget described tend to be simpler than this - especially those used by infants. He described how - as a child gets older - his or her schemas become more numerous and elaborate. Piaget believed that newborn babies have a small number of innate schemas - even before they have had many opportunities to experience the world. These neonatal schemas are the cognitive structures underlying innate reflexes. These reflexes are genetically programmed into us. Shaking a rattle would be the combination of two schemas, grasping and shaking. Assimilation and Accommodation Jean Piaget ; see also Wadsworth, viewed intellectual growth as a process of adaptation adjustment to the world. Piaget believed that cognitive development did not progress at a steady rate, but rather in leaps and bounds. However, an unpleasant state of disequilibrium occurs when new information cannot be fitted into existing schemas assimilation. Equilibration is the force which drives the learning process as we do not like to be frustrated and will seek to restore balance by mastering the new challenge accommodation. Once the new information is acquired the process of assimilation with the new schema will continue until the next time we need to make an adjustment to it. Example of Assimilation A 2-year-old child sees a man who is bald on top of his head and has long frizzy hair on the sides. Sensorimotor stage birth to age 2 2. Pre-operational stage from age 2 to age 7 3. Concrete operational stage from age 7 to age 11 4. Each child goes through the stages in the same order, and child development is determined by biological maturation and interaction with the environment. Although no stage can be missed out, there are individual differences in the rate at which children progress through stages, and some individuals may never attain the later stages. Piaget did not claim that a particular stage was reached at a certain age - although descriptions of the stages often include an indication of the age at which the average child would reach each stage. Sensorimotor Stage Birth-2 yrs The main achievement during this stage is object permanence - knowing that an object still exists, even if it is hidden. It requires the ability to form a mental representation i. Preoperational Stage years During this stage, young children can think about things symbolically. This is the ability to make one thing - a word or an object - stand for something other than itself. Thinking is still egocentric , and the infant has difficulty taking the viewpoint of others. This means the child can work things out internally in their head rather than physically try things out in the real world. Children can conserve number age 6 , mass age 7 , and weight age 9. Conservation is the understanding that something stays the same in quantity even though its appearance changes. Formal Operational Stage 11 years and over The formal operational stage begins at approximately age eleven and lasts into adulthood. During this time, people develop the ability to think about abstract concepts, and logically test hypotheses. Piaget has been extremely influential in developing educational policy and teaching practice. The result of this review led to the publication of the Plowden report Discovery learning â€" the idea that children learn best through doing and actively exploring - was seen as central to the transformation of the primary school curriculum. Readiness concerns when certain information or concepts should be taught. According to Piaget , assimilation and accommodation require an active learner, not a passive one, because problem-solving skills cannot be taught, they must be discovered. Within the classroom

learning should be student-centered and accomplished through active discovery learning. The role of the teacher is to facilitate learning, rather than direct tuition. Therefore, teachers should encourage the following within the classroom: He was an inspiration to many who came after and took up his ideas. His ideas have been of practical use in understanding and communicating with children, particularly in the field of education re: Criticisms Are the stages real? Vygotsky and Bruner would rather not talk about stages at all, preferring to see development as a continuous process. Others have queried the age ranges of the stages. Some studies have shown that progress to the formal operational stage is not guaranteed. Because Piaget concentrated on the universal stages of cognitive development and biological maturation, he failed to consider the effect that the social setting and culture may have on cognitive development. Dasen cites studies he conducted in remote parts of the central Australian desert with year old Aborigines. He gave them conservation of liquid tasks and spatial awareness tasks. However, he found that spatial awareness abilities developed earlier amongst the Aboriginal children than the Swiss children. Such a study demonstrates cognitive development is not purely dependent on maturation but on cultural factors too â€" spatial awareness is crucial for nomadic groups of people. Vygotsky , a contemporary of Piaget, argued that social interaction is crucial for cognitive development. This social interaction provides language opportunities and language is the foundation of thought. Piaget made careful, detailed naturalistic observations of children, and from these he wrote diary descriptions charting their development. He also used clinical interviews and observations of older children who were able to understand questions and hold conversations. Because Piaget conducted the observations alone the data collected are based on his own subjective interpretation of events. It would have been more reliable if Piaget conducted the observations with another researcher and compared the results afterward to check if they are similar i. Although clinical interviews allow the researcher to explore data in more depth, the interpretation of the interviewer may be biased. Such methods meant that Piaget may have formed inaccurate conclusions. As several studies have shown Piaget underestimated the abilities of children because his tests were sometimes confusing or difficult to understand e. Piaget failed to distinguish between competence what a child is capable of doing and performance what a child can show when given a particular task. When tasks were altered, performance and therefore competence was affected. For example, a child might have object permanence competence but still not be able to search for objects performance. However, Piaget relied on manual search methods â€" whether the child was looking for the object or not. The concept of schema is incompatible with the theories of Bruner and Vygotsky Therefore, they would claim it cannot be objectively measured. Piaget studied his own children and the children of his colleagues in Geneva in order to deduce general principles about the intellectual development of all children. Not only was his sample very small, but it was composed solely of European children from families of high socio-economic status. Researchers have therefore questioned the generalisability of his data. For Piaget, language is seen as secondary to action, i. The Russian psychologist Lev Vygotsky argues that the development of language and thought go together and that the origin of reasoning is more to do with our ability to communicate with others than with our interaction with the material world. Object permanence in young infants: Toward a theory of instruction. Central Advisory Council for Education Culture and cognitive development from a Piagetian perspective. Egocentrism in preschool children. The moral judgment of the child. Origins of intelligence in the child. Play, dreams and imitation in childhood. Construction of reality in the child. The growth of logical thinking from childhood to adolescence. The origins of intelligence in children. The development of higher psychological processes. How to reference this article: How Do Children Think? Download this article as a PDF.

Chapter 8 : Cognitive Science and the Social: A Primer, 1st Edition (Paperback) - Routledge

The rise of cognitive neuroscience is the most important scientific and intellectual development of the last thirty years. Findings pour forth, and major initiatives for brain research continue. The social sciences have responded to this development slowly--for good reasons. The implications of.

College[edit] Hall was born in Seattle, Washington. He first studied psychology at the University of Washington as an undergraduate, working with a well-known behaviorist , Edwin Guthrie. At Berkeley he studied with a purposive behaviorist, Edward Tolman , and received his BA in , continuing on there as a graduate student with Tolman and Robert Tryon , earning his PhD in Because of his growing research reputation, he was appointed departmental chair and professor in psychology in at Western Reserve University. He held these positions for the next 20 years. During this time he began the process of switching his research emphasis to dream content, the area for which he is best known. Other universities he taught at were Syracuse University â€”59 , the University of Miami â€”60 , and Catholic University in Nigmegen, Netherlands as a Fulbright scholar in From to , Hall studied at his Institute of Dream Research in Miami and established the similarity in dream content throughout the night by studying dreams collected in the dream laboratory. He and Robert Van de Castle , during this time, developed a comprehensive coding system that revolutionized the objective study of dream content. His chapter in the " Handbook of Experimental Psychology " is considered "one of the founding statements of modern behavior genetics". However, Hall soon was collecting reports from a plethora of types of children, older adults, people in other parts of the world, and those who kept dream diaries. He had over 50, dream reports when he died. He began his work with thematic analyses of 15 to 25 dreams from each person, looking for obvious patterns, but soon developed a quantitative coding system that divided dream content into categories such as settings, objects, characters, interactions, emotions, misfortunes, and several others. He developed this theory through metaphoric expressions appearing in slang and poetry, with an emphasis on metaphors by George Lakoff and other cognitive linguists. Hall developed the following: Concept of Self[edit] Concept of self refers to the way the dreamer sees himself and the role he plays in his life. For example, money signifies power. The more money there is, the more powerful the dreamer is. The less money there is, the weaker the dreamer is. In a dream, the dreamer may be rich. However, in that same dream, the money could be taken away, or stolen. This signifies that although the dreamer is powerful, he has weaknesses that are hindering his power. He goes from having a lot of money, so a lot of power, to having little money, or less power. Likewise, if the dreamer perceives a friend to be selfish, then in the dream that friend will behave in a selfish manner. It varies depending on his mood. If the dreamer believes the world is filled with nothing but stress, problems, and agitation, then the dream will portray hostile environments. These hostile environments can include thunderstorms and traffic jams. Within the dream, he will have impulses, or urges, to do something. The manner in which the dreamer overcomes that obstacle in order to fulfill his urge reveals what the dreamer believes is allowed and what is prohibited. If he believes something is okay to do, then the dreamer will do whatever that is in order to fix the problem and fulfill his urge. However, if the dreamer wants to do something that will overcome the obstacle, but believes it to be prohibited, then the dreamer will not do that action. These dreams may give hints to the dreamer, telling him how to solve the struggle he is undergoing.

Chapter 9 : Piaget's Theory For Parents

> A Primer on Educational Psychology Educational psychology is the branch of psychology focused on the development of effective teaching techniques and the assessment of learners' aptitudes and progress.

Dembo, University of Southern California. Taken with permission and copyright reserved. The primary responsibility of teachers is to ensure student learning. Even a surface examination of the Model readily depicts the impact of teachers on the learning process. Just by stepping into the classroom the teacher is empowered with direct responsibility for all but two of the nine components of learning. Although many factors contribute to the final outcome -- Student Learning -- it is the Principles of Learning 4. By watching teachers behave in the classroom, we can usually infer their basic assumptions about the teaching-learning process even though some of those teachers may be unable to articulate their beliefs or unaware which set of beliefs they may hold. For example, a teacher who directs and controls all student activity operates under a set of beliefs different from one who defines the conditions under which students will make some of their own decisions about how they will learn. One of the most important objectives of teacher education is to help them realize the relationships that exist between beliefs and practices. Educational Psychology, as one of the principle foundations for teacher preparation, provides an insight into these relationships by defining for the teacher How a Student Learns -- be that student a child in pre-school, primary, or secondary grades; a college scholar; or, an adult learner. Check whether you agree or disagree with the following statements: Agree Disagree I Believe that Learners need grades, gold stars, and other incentives as motivation to learn and to accomplish school requirements. Learners can be trusted to find their own goals and should have some options or choices in what they learn at school. Teachers need to determine what students are thinking about while solving math problems. Students should be graded according to uniform standards of achievement which the teacher sets for the class. Students should set their own individual standards and should evaluate their own work. Curriculum should be organized along subject matter lines that are carefully sequenced. The teacher should help students to monitor and control their own learning behavior. The school experience should help students to develop positive relations with their peers. For the most part Statement 1, 4, and 6 would be supported most strongly by Behavioral psychologists. Statements 3 and 7 would have be sustained by Cognitive psychologists. And, Statements 2, 5, and 8 would be on the ledger of the Humanistic psychologists. Did your responses fall into any particular pattern? Remember which School of Psychology you chose. After exploring more deeply into the theories and theorists of these three important schools of educational psychology, you will be asked to re-evaluate your position. Will it change or will it remain the same? Behaviorism was First Years ago, teachers believed that the best way to learn was through repetition, a principle from Behavioral learning theory that dominated educational thinking since the time of Ivan Pavlov and his experiment with animals. Teachers who accept the Behavioral perspective of pioneers like B. For example, classroom troublemakers "learn" to be disruptive because they seek attention reinforcement from their teachers and peers. Withdrawn students learn that their particular environment does not reinforce social interaction; they become reserved and silent. As a result, any behavior can and should be analyzed in terms of its reinforcement history. The next logical step for the teacher is to learn the Behavioral processes to change or modify undesirable behavior in their students. The ultimate teacher responsibility, according to the Behaviorist, is to construct an environment in which the probability of reinforcing "correct" or proper student behavior is maximized. Cognitivism came Next In contrast to the behavioral perspective, Cognitive psychologists focus more on the learner as an active participant in the teaching-learning process. Effective instruction for these teachers includes teaching students how to learn, remember, think, and motivate themselves. There are primarily two persuasions in Cognitive Psychology: They stress that teachers must understand the nature of thought processes in planning and instruction. Cognitive-constructivist psychologists, on the other hand, view human cognition as knowledge constructed by the individual through various encounters with new ideas and thinking. Constructivist principles include the concepts of SCHEMATA, a process of organizing concepts and information into a cognitive structure that sustains in its subsequent use

and retrieval. They describe behavior not from the viewpoint of the teacher as do behaviorists but rather from the vantage point of the student who is performing the activity. Alright, you have read a few statements regarding each of the three major schools of Educational Psychology. There is only one common belief system for each of the three schools. Individuals within the Behavioral, Cognitive, and Humanistic systems agree of nearly every defining characteristic with their colleagues.