

Analysis of Behaviorism by Mandy (Amanda) Philbrick

5P Guidelines/Rubric © for Assessing Provision of Individual and Collaborative Learning Elements in a Learning or Design Theory Mapping Cognitive Science Against Learning Approaches

This rubric may be used to assess a learning or design theory for provision of individual or collaborative learning elements. If what the cognitive scientists are saying is valid, then we as teachers and designers and theorists should be informed by the findings of cognitive science and assess such theories accordingly. These guidelines and rubric are derived from the work of John Schumann and Klaus Scherer as well as the findings of cognitive neuroscience. The Schumann/Scherer Model of the Five Planes of Stimulus Appraisal maintains that to motivate learners intrinsically material must be **relevant, support a positive self and social image, be novel, be pleasant, and be within the learner's ability to cope with the task**. These assessments are emotionally based and relate to what the brain does to keep the individual alive and well (homeostats), to allow social interaction (sociostats) and are based on the summative experiences of a life (somatics).

This rubric is a mapping of aspects of instruction against elements of the Schumann/Scherer Planes of Stimulus Appraisal.

The goal is to increase the probability of achieving intrinsic motivation with respect to what is being delivered to and required of the learner.

Does the theory provide for the elements or is a combination of theoretical approaches necessary to increase the probability that learning will occur? The conclusion should be based on what the theorist(s) says versus the possibilities that a designer or teacher could apply.

Element of Motivation	Accounted For? Y = Yes N= No	Comments
-----------------------	---------------------------------------	----------

	NA = Not Applicable ? = Cannot Determine	
Presentation		
The theory addresses relevance of material to the needs and goals of the learner	N and Y	<p>Behaviorism approaches learning from the perspective that the teacher directly transmits information to the learner, as the teacher sees fit. The attitude towards the internal experience of that learner is dismissive.</p> <p>As a reaction against Freudian introspection, behaviorism can go so far as to even reject words like mind or consciousness (Harasim, 2017). Observable outcomes are given the highest regard.</p> <p>While learned behaviors may end up benefitting the learner's needs and goals, that is not the emphasis.</p> <p>Tenets of behaviorism, however, can certainly be applied to support the goals of a learner. If a learner self-selects into a class that addresses their goals using behaviorist tools (like programmed instruction, for example), then it might support learner aspirations.</p> <p>As Deubel (2003) states, behaviorists view success at achieving goals as motivating. I suppose, however, that I see the learner's personal goals as subjugated to the goals of the program. Ultimately, the teacher is viewed as controlling the outcome through manipulation of the learning environment. An adult student might willingly seek out and submit to this experience in pursuit of a goal, but the program's design is not concerned with that relevance necessarily.</p>
The theory advocates that the material and/or presentation/stimulus be novel, and should appear to be something	N	With a lack of concern for the internal experience of the learner, whether presented material is of interest/offers novel perspectives does not necessarily matter.

new and interesting to the learner		Knowledge of a learner's prior experience, which might support determining the degree of novelty for a learner, is not paramount. A behaviorist might hold that, if the learning environment is crafted optimally, it will not matter from what background a learner comes. Consistent, efficient, measurable outcomes are the aim from a behaviorist standpoint, regardless of a learner's history (Harasim, 2017).
Learning and design theories advocate for presentation approaches to be intrinsically pleasant/interesting/stimulating/ thought provoking	N/?	<p>The internal state of the learner is deemed unmeasurable, and therefore, irrelevant from the positivist perspective of behaviorism (Harasim, 2017). Self-reports do not meet the criteria of being observable and are therefore not considered.</p> <p>Thorndike's connectionism (a subdivision of behaviorism) approach submits that "learning can be explained without referring to unobservable internal states" (Harasim, 2017, p. 36). Novelty and intrinsic interest to the learner are irrelevant. A behaviorist's focus is on crafting the environment to result in learning. Whether the learner views the process of acquiring knowledge as pleasant or not does not necessarily enter the conversation.</p> <p>However, determining the degree to which a learner perceives an experience (stimulus) as pleasant or not does enter the domain of behaviorism, but only insofar as it results in a learner seeking out or withdrawing from a behavior. Skinner's operant conditioning recognizes that learners attach positive or negative associations to different stimuli (a piece of candy as a "carrot" vs. after-school detention as a "stick"). Desired voluntary behavior is elicited by attaching a stimulus to a result (Harasim, 2017).</p>
Learning and design theories should advocate that wording, visuals, audio, language be manageable and usable to the receiving group	Y	Behaviorism places the teacher in a position of supreme responsibility, tasked with optimal presentation of a stimulus that will result in a predictable response. Assessment of the learners to ensure materials are appropriate for their current state is a necessary part of this task (Deubel, 2003). While

or individual, creating the impression that the group or individual can master the material to the extent desired.		
Does the does the learning or design theory address elements of presentation?	Y	Behaviorism is wholly concerned with the presentation and environment of learning, though not necessarily with any concern for the learner's internal experience in relation to that presentation. The goals of presentation are efficient and predictable learner responses (Deubel, 2003).
Practice		
Does the theory advocate for opportunities to develop proficiency in application of the skill, knowledge, ability, or concept?	Y	Behaviorism is intimately connected with repetitious learning. It calls upon learners to engage with experiences (stimuli) until the desired outcomes (responses) are achieved (Deubel, 2003). Drill practices that result in automated performance are a classic component of a behavioral learning approach (Keramida, 2015).
Does the theory address the need for practice opportunities appropriate to the objective(s) provided?	Y	Behaviorism operates in a world of objectives that are explicitly delineated. As Deubel (2003) notes, this can limit a student's ability to extrapolate learned behaviors/responses outside of the original context. Nevertheless, practice opportunities are clearly linked to defined goals.
Does the theory address practice activities, to include repetition and spiraling, being designed to develop automaticity in responses and	Y	Behaviorism aims to produce automated behaviors. This theory is built upon objectivity and straightforward connection between a stimulus and a response (Harasim, 2017). As Harasim (2017) states, behaviorism is best applied "when learning objectives are unambiguous" (p. 39). Harasim (2017) notes that, "memorization, repetition, reinforcement of correct answers, examinations, and organization" (p. 40) are essential components of behaviorist pedagogy.

execution if appropriate?		
Does the theory advocate that practice be relevant to the needs and goals of learners?	N and Y	The internal state of the learner is deemed unmeasurable, and therefore, irrelevant from the positivist perspective of behaviorism (Harasim, 2017). Self-reports do not meet the criteria of being observable and are therefore not considered. As Deubel (2003) states, behaviorists do view success at achieving goals as motivating and relevant. I suppose, however, that I see the learner's personal goals as subjugated to the goals of the program. Ultimately, the teacher is viewed as controlling the outcome through manipulation of the learning environment. An adult student might willingly seek out and submit to this experience in pursuit of a goal, but the program's design is not concerned with that relevance necessarily.
Does the theory advocate that activities be such that learners see that skill/competency acquisition is taking place?	Y and N	Potentially, but not always. As Deubel (2003) notes, performance standards are made explicit in behaviorism. Depending on the learning environment, learners will be notified of their success or failure, and will act in accordance with that result to either repeat the behavior that resulted in success or avoid those that did not achieve the desired outcome. Classical conditioning, however – Pavlov's dog salivating in response to a bell they have come to associate with meat – does not require the learner to have any awareness of said association.
Does the theory advocate that practice requirements be within or slightly above the learner's competency level?	Y/?	Assessment of the learners to ensure materials are appropriate for their current state is a necessary part of designing a behaviorist learning environment (Deubel, 2003). I see behaviorist learning tenets, at least in modern application, as acknowledging the necessity of this learner competency assessment.
Does the theory advocate that learners can perform practice requirements?	Y	Behaviorism aims to facilitate learner achievement of correct performance. Its goal is prediction and control of behavior (Harasim, 2017). It is necessary for the learner to have the capacity to perform desired behaviors.
Does the theory advocate that practice	Y	Behaviorism is wholly concerned with leading learners to objectively defined outcomes. The teacher determines what those desired outcomes are and guides

be designed to lead to desired outcomes?		the learner to reach them. Precise prediction of desired outcomes is the goal of behaviorism (Harasim, 2017).
Does the theory address that practice activities, while not necessarily pleasant, be designed to generate a feeling of accomplishment?	Y and N	<p>Deubel (2003) asserts that, from a behaviorist perspective, success and extrinsic rewards are a source of motivation. While internal intrinsic motivators are deemed irrelevant (and no thought is given to complex neural pathways, dopamine reward centers, etc.), there is acknowledgement that learners are motivated by success (seemingly acknowledging that a feeling of accomplishment matters).</p> <p>Simple stimulus-response association creation, however, may not necessarily generate a feeling of accomplishment. In this application of behaviorism, a learner's experiential self-report is not viewed as part of the equation.</p>
Does the theory address practice specifically or generally?	Generally	Behaviorism, at least from an original Watson perspective, is meant to be applied generally. Watson is credited as stating that, given “a dozen healthy infants, well-formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist” (Simpson, 2000). Individual differences are of little importance in this stimulus-response model Watson presents. Every student is a blank slate that a teacher may write upon.
Production and Posting		
Does the theory advocate that what is produced is informed and scaffolded by practice—may even be concurrent with practice, i.e., repetitive practice may not be part of the learning task such as writing a paper, but the writing is both practice and	Y and N	In behaviorism, it is required that learners demonstrate with measurable and objective performance that desired outcomes have been achieved. There are singularly correct answers and responses (Keramida, 2015). It is possible that the desired “response” includes creation of a product, but not necessarily.

production at the same time?		
Does the theory advocate that opportunity be provided to apply the skill, knowledge/ability or concept being learned in a relevant or realistic situation?	N/?	Behaviorism is concerned with creating the ideal learning environment to achieve desired learning outcomes. Detractors of Skinner's operant conditioning argued that his "claims exceeded his evidence" by "creating highly controlled conditions" (Harasim, 2017, p. 38). Behaviorism, at its roots, is limited by its lack of application in realistic situations.
Does the theory address that production reinforces practice activities?	Y/?	Potentially. Production may not necessarily be included in a behaviorist learning experience. However, if a product is relevant, behaviorism demands consistency and precision. The product should be aligned with practice activities.
Does the theory recognize affordances of technology to advocate that whatever is produced by the learner be posted or provided to the group for peer view and learning?	N	Behaviorism is a learning theory that dominated the early 20 th century; at that time, technology did not afford for group sharing (Harasim, 2017). The theory, therefore, does not address this collaboration aspect.
Does the theory require production or evidence of skill, knowledge, ability or concept acquisition?	Y	Behavioral pedagogy includes an abundance of testing and proving. The stimulus needs to result in the response. That is the concern of behaviorism.
Participation/Collaboration		
Does the theory provide for opportunity for synchronous or	N	Behaviorism dominated the early 20 th century (Harasim, 2017). Technology at that time did not afford for either synchronous or asynchronous review of posted products.

asynchronous review of posted products?		
Does the theory promote a Community of Practice/Wisdom/Knowledge	N	Behaviorism is not classically connected to communities of practice. It is largely isolated to individual performance.
Does the theory advocate a design where the teacher and cohort can see who is contributing and how each member is contributing to knowledge sharing?	N	Behaviorism dominated the early 20 th century (Harasim, 2017). Technology at that time did not afford for these types of interactions.
Does the theory address variation in task readiness and ability to contribute by advocating providing group activities and effort to meet goals?	N	Behaviorism is largely limited to the individual. Group interactions are, for the most part, not considered.
Does the theory advocate for virtual opportunities to meet and collaborate if face to face meetings are not feasible and the instruction is online or blended?	N	Behaviorism dominated the early 20 th century (Harasim, 2017). Technology at that time did not afford for these types of interactions.
Does the theory advocate or provide for	N	Collaborative efforts are not addressed in behavioral learning tenets.

collaboration related to real issues?		

As Dr. Fischer (2016) notes, the Schumann/Scherer model is concerned with a learner's intrinsic motivation. Behaviorism rejects the importance of internal processes and instead focuses on extrinsic motivators (Deubel, 2003). It naturally follows that the learning theory of behaviorism will not meet much of the criteria in the 5P rubric.

References

Deubel, P. (March 2003). *An investigation of behaviorist and cognitive approaches to instructional multimedia design*. Computing Technology for Math Excellence. https://www.ct4me.net/multimedia_design.htm

Fischer, D. (2016, Oct 27). Motivation and Transformation. [Google Doc].

Harasim, L. (2017). *Learning theory and online technologies* (2nd Ed.). Routledge.

Keramida, M. (2015, May 28). *Behaviorism in instructional design for eLearning: When and how to use it*. eLearning Industry. <https://elearningindustry.com/behaviorism-in-instructional-design-for-elearning-when-and-how-to-use>

Simpson, J.C. (2000, April). It's all in the upbringing. Johns Hopkins Magazine. <https://pages.jh.edu/jhumag/0400web/35.html>