Attribution Theory: How Is It Used?[1]

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Introduction

One of the most difficult tasks for any educator is learning how to motivate and engage the learners with whom we interact. It has been widely accepted that learners who are motivated are actively involved in the teaching and learning process, retain information more efficiently, relate new information to previous information, and ask questions while interacting with new information (Schunk, 2012). Because motivation and learning are so closely linked, it is critical for educators to have a well-founded understanding of how learners perceive the outcomes of different behaviors or tasks. This article provides a description of attribution theory and how educators in formal, informal, and non-formal settings can utilize this theory in the teaching and learning process to augment learners' knowledge and comprehension.

Attribution Theory

Learners are engaged in the learning environment due to a desire to develop causes of behaviors. Causes of behaviors are defined as an individual's attributions. According to Heider (1958), individuals are motivated to engage in learning due to a personal need to develop new attributions. Attribution theory is defined as the way that individuals envision the success or failure of their own behavior or the behavior of others (Weiner, 2004). Learners tend to explain their reasons for success or failure based upon three dimensions: 1) internal or external, 2) stable or unstable, and 3) controllable or uncontrollable.

Internal or External Locus of Control

When examining an individual's attributions, one must first examine the influence that the individual has over the examined outcome. Rotter (1966) defined the individual's influence on the attainment of an outcome as the individual's locus of control. According to Rotter, an individual's locus of control can be externally or internally influenced. An external locus of control occurs when an outcome is independent of the learner's behavior, while an internal locus of control occurs when an outcome is significantly related to the individual's behavior. Learners who believe that they control their own destiny have an internal locus of control. A learner who contributes success and failure to external factors possess an external locus of control.

Beyond an individual's internal or external locus of control, Weiner et al. (1971) posited that the most common causal factors that contribute to a learner's success and failure are ability, task difficulty, effort, and luck. Based upon the instructional environment, the causal factors of ability, task difficulty, effort, and luck can influence the outcome of an individual's behavior in different ways. Individuals who have an internal locus of control will more often attribute their success and failure to their ability and effort, while those with an external locus of control will more often attribute their success and failure to task difficulty and luck. Therefore, an individual's locus of control (external or internal) is an important factor of achievement within an instructional environment.

Stable and Unstable Causes for Outcomes

The second causal dimension examines the stability of the cause of an outcome (Heider, 1958; Rotter, 1966). Heider and Rotter described that each contributing factor has consistent stability over time. Stability is defined as the consistency of the relationship between the causal factor and the outcome of the behavior. Both ability and task difficulty are considered to be relative to a stable relationship between the causal factor and the behavior over time. The difference between the two causal factors is that ability is considered to be internally controlled, while task difficulty is considered to be externally controlled. Furthermore, effort and luck are considered to be more unstable in nature, meaning that the strength of the relationship between the causal factor and behavior changes based upon the actual behavior. Effort is considered to be internally controlled, while luck is considered to be externally controlled (see Table 1).

Table 1. Determinants of Achievement Behavior.

Locus of Control	Success or Failure Attributed to Stability Factors	
	Stable	Unstable
Internal	Ability	Effort
External	Task Difficulty	Luck

Controllable or Uncontrollable Behaviors

The third causal dimension is the ability of the individual to control the outcome of the behavior (Weiner, 1979). Weiner stated that a behavior can be controllable or uncontrollable by the individual. If a behavior is controllable, then the individual has the capability to influence the outcome of a task or behavior, whereas if a behavior is uncontrollable, the individual has limited or no capability to influence the outcome of the task or behavior. The effect that the controllability of the behavior has is based upon the individual's locus of control and the stability of the behavior (see Table 2).

Table 2. Weiner's model of causal attributes.

	Internal		External	
	Stable	Unstable	Stable	Unstable
Controllable	Typical effort	Immediate effort	Teacher bias	Help from others
Uncontrollable	Ability	Mood	Task difficulty	Luck
Adopted from Schunk (2012)				

Application of Attribution Theory

When applying attribution theory in a learning environment, it is essential for the instructor to assist learners to accept their effort as the main predictor of achievement. To do so, instructors must utilize the three causal dimensions together to influence the outcome of a behavior or task. The outcome of each behavior or task will be different and require different learner attributes.

When examining the instructor's influence on a learner's locus of control, instructors can assist learners in developing an internal locus of control by utilizing learner-centered instructional strategies when presenting new content. By utilizing learner-centered instructional strategies, learners are able to acquire new knowledge in a manner where they are required to apply and utilize their knowledge in a practical setting. When utilizing learner-centered instructional strategies, the instructor becomes a facilitator of knowledge. Therefore, learners develop knowledge based on their experiences and interaction with the content, rather than through verbal instruction. When learners are taught through learner-centered instructional strategies, their individual internal locus of control is strengthened. Examples of learner-centered instructional strategies are:

- individualized application,
- demonstration,
- inquiry-based instruction, and
- problem-based learning.

Example Scenario

Roger, a county extension agent, was conducting a program on designing and implementing community gardens. During the presentation he asked participants to design and layout a sample garden for the courtyard of the county municipal building. Luis, who has limited artistic abilities, immediately got Roger's attention and expressed his concern regarding the assigned activity. Roger responded to Luis's concerns and provided further instruction to alleviate Luis's hesitation and perceived inevitable failure. As Luis began the activity, he realized that his lack of artistic ability would have little impact on the completion of this activity. Quickly, Luis was able to apply the previously presented content to the activity and began to feel more confident in his ability to design a community garden.

As learners complete a behavior, they associate the outcome of that behavior to the four causal factors of ability, effort, task difficulty, and luck. Depending on the outcome of a behavior the learner's response to each of the causal factors

will differ (see Table 3). However, the instructor can influence the learner's perceived ability, effort, task difficulty, and luck. Throughout instructional time, instructors should provide learners with opportunities to practice and apply their knowledge. This can be through guided practice in the instructional environment or through assignments that should be completed outside of instructional time. Regardless of where a learner is able to practice, instructors should provide learners with support and assistance to ensure that every learner fully grasps the given behavior or task. By providing learners with instructional practice, the instructor can assist the learner in promoting the learner's internal causal factors of ability and effort.

Table 3. Learner Responses to Achievement Behavior.

| Locus of Control | Success or Failure Attributed to Stability Factors | |
	Stable	Unstable
Internal	I'm good (bad) at animal science.	I studied hard for the assessment (I didn't study enough for the assessment)
External	The assessment was easy (hard)	I guessed correctly (incorrectly)
Adapted from Schunk (2012)		

Example Scenario

Mr. Cedrillo, an agriculture educator at the local high school, is currently instructing his students about the history of the Future Farmers of America (FFA). Being a teacher of color and wanting to leverage the cultural wealth of his students Mr. Cedrillo has created a special lesson focusing on successful farmers of color within the agriculture industry and wants his students to develop PowerPoint presentations highlighting local farmers of color within their community. One of the challenges that students havefaced with this project was getting in contact with farmers within the community. To address this Mr. Cedrillo contacted his local extension agent and together they contacted local farmers to gather volunteers to participate in the project. They then invited the farmers to the school where the students could conduct interviews with them and gather information for their presentations. Prior to the farmers arrival Mr. Cedrillo taught the students how to develop effective questions and practiced conducting interviews as a whole class. After conducting the interviews students shared what they had learned from their experience. Students appeared more confident in their presentations and more aware of their local farming community after the project.

In this scenario Mr. Cedrillo has identified an external locus of control that was impeding student success within the classroom, i.e., students being unable to contact local farmers of color. By working with his local extension agent, he was able to move the identified factor to a more internal locus of control. Additionally, Mr. Cedrillo is providing more stability by creating a safe space for students to meet with the farmers and an environment that is structured and supporting the students. Finally, Mr. Cedrillo was able to increase the students' perception of control by allowing them to create and develop questions prior to the farmer's arrival.

Example Scenario

George, a docent, was hosting several families with children of various ages on a tour of a local botanical garden. During the tour, George pointed to a hydrangea and asked the group, "Can anyone tell me the type of flower this is?" Jerome, a young adult, immediately raised his hand and shouted out, "It is a rose!" George looked at Jerome and replied, "Good try, but let's look at the difference in the petals and the way that the individual flowers form a cluster. Does that help you identify the flower?" After a few moments of silence from the group, George stated, "This is a hydrangea." George then took a few more minutes to describe how to identify a hydrangea plant and flower. Later in the tour, when the group came across a rose plant, George took a few moments to describe the characteristics of the rose flower and plant. By waiting until they came across a rose plant, George was able to defer the group's attention away from Jerome's incorrect answer and back to the actual plant characteristics being observed.

Instructors must recognize the diversity of their learners. Depending on the learner's background, the learner may have different preconceptions or misconceptions regarding content, levels of success, and motivation. The learner may place a greater emphasis on one of the causal factors of behavior outcomes.

Conclusion

By taking time to get to know the learners that are engaged in an instructional environment, instructors can better meet the needs of all learners. To assist learners in increasing their ability and effort, instructors can utilize learner-centered instructional strategies that assist learners in applying the content, behavior, and tasks that are included in the current curriculum. These adjustments to instructional programs can help learners develop an internal locus of control that will promote academic success.

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