Motivation Theory in Instructional Design

The ARCS Model as a Framework for Application and Analysis

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Introduction

> **"**Motivation: Activation to action. Level of motivation is reflected in choice of courses of action, and in the intensity and persistence of effort" (Bandura, 1994, p. 71).

The question of motivating learners is a perennial one: can **teachers** motivate learners? Can **instruction** motivate learners? How?

In Ertmer and Newby's article on behaviorism, cognitivism, and constructivism (1993) the authors analyze these learning theories in light of seven questions that lend insight into the similarities and differences of the theories. This paper takes a similar but unique approach to an examination of motivational theories.

John Keller's ARCS model of instructional design has been widely accepted and applied in the instructional design field. Theoretically speaking, Keller's model has often been used as a standalone method for addressing motivation in instructional design. But what if the theory were used to provide context – a framework – within which one could apply other theories of motivation?

This paper uses the ARCS framework to examine the motivational theories of Abraham Maslow, Albert Bandura, and Bernard Weiner as they apply in instructional design. First the ARCS model and the other theories are overviewed, then the theories are viewed in light of ARCS as applications to instructional design are explored.

The ARCS Model

In 1983 John Keller published a chapter on Motivational Design of Instruction (Keller, 1983), in which he identified four conditions of learning: **attention, relevance, confidence, and satisfaction**. He later organized these conditions under the acronym, ARCS.

Keller said that first instruction must gain the attention of the learner. One cannot learn if one does no offer some level of focus to the instructor and the content. By gaining learner attention, the instructor is in a position to further engage the learner.

Next the learner needs to become aware of the relevance (importance) of the topic. The classic acronym WIIFM (what's in it for me) applies here. Particularly in the case of adult learners, a reason for sustained attention is important.

Once the learner sees a reason for learning the content, it is important s/he feels capable of learning it. If the learner thinks that the content is beyond his/her ability, it is unlikely the learner will continue to pay attention. Building learner confidence is Keller's third step in the design process.

Finally, for the learner to be motivated to continue future learning, s/he must experience satisfaction. Satisfaction means that the learner feels rewarded for time spent in the learning process.

The ARCS model is designed as a series of steps for the instructional designer to ensure that learner motivation is properly addressed. While the steps are presented sequentially, in practice the instructional designer may find him- or herself addressing these needs at various times throughout the design.

The Three Theories

The ARCS model will be used to compare three distinct theories. The theories were selected based on their establishment in the motivational research, currency of use, and the different approaches they take to motivation. A primary consideration in their selection was their interest to the author.

Maslow's Hierarchy

In 1954 Abraham Maslow first published his book on Motivation and Personality in which he identified seven basic human needs. His later work revised the list to five needs, which have come to be known as Maslow's Hierarchy (Eckerman, 1968).

The needs, beginning with the most basic, are physiological (survival), safety, belongingness and love (social), self-esteem, and self-actualization. The needs occur in a specific sequence, with lower-order needs having to be met prior to higher-order needs becoming drivers. Maslow's theory is very much about drives: about physiological and psychological needs being met. **People are motivated to meet the five needs**.

Bandura's Self-Efficacy Theory

Albert Bandura formalized his social learning theory in 1977. As part of this theory, he introduced the concept of self-efficacy, which has taken on a life of its own.

Self-efficacy is "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). **People are motivated when they feel good about their ability to accomplish tasks (have high self-efficacy).**

Weiner's Attribution Theory

1980 saw Bernard Weiner introduce attribution theory. Attribution theory has ties to self-efficacy in that an individual's beliefs about their ability to perform affect motivation. However, Weiner's theory goes beyond the role of the individual, and does not address perceptions of ability to the degree Bandura does.

Attribution theory states that individuals attribute success or failure among four factors: skill, effort, task difficulty, and luck. These factors are a result of three

dimensions: internal/external, stable/unstable, and controllable/uncontrollable (Eccles and Wigfield, 2002).

Individual motivation is heavily influenced by these factors. **People are motivated when they believe success is due to their own efforts and they have control over their performance on a consistent basis (when they make healthy attributions).**

The Three Theories in Light of the ARCS Model

For the purposes of this application/comparison, suppose that an instructional designer is redesigning a communication skills workshop that meets once a week for eight weeks. Workshop topics include listening, public speaking, conflict management, and meeting facilitation. The designer wishes to use Keller's model to ensure that learner motivation is adequately addressed. The work of Maslow, Bandura, and Weiner informs the designer's decisions as the model is applied.

1. Gaining Attention

Keller (1987) describes six general ways of gaining learner attention: incongruity/conflict, concreteness, variability, humor, inquiry, and participation; the designer decides to try an approach that involves **concreteness**.

Looking at the situation through Maslow's eyes, it is important that the learners feel like some of their needs will be met through the workshop. Our designer knows that communication skills can help meet many of the needs Maslow identified – but how to get that across in a way that captures attention? She decides that a good attention getter might be a short video that has people from different backgrounds talking about how communication skills are essential to effective functioning in the modern workplace. Not

only do these skills enable people to do their jobs (survival and safety needs), they also help in developing healthy relationships and enhance one's confidence (social and self-esteem needs).

Taking Bandura's perspective, our designer knows that people who have high self-efficacy are more motivated and tend to perform better. While she cannot control the level of self-efficacy learners bring to class, she can develop activities that foster a belief in one's own abilities. One solution that might meet that goal and also get attention is to bring in a guest speaker. The speaker talks about how he initially felt the class was beyond his ability, but then he came to enjoy it and actually confront his fears and develop some useful skills. If this person – who is like the learner and doubted himself – could do it, then maybe the learner can too. This idea is congruent with Bandura's concept of social modeling, where the successes of others perceived as similar to the observer can have a motivational effect (Bandura, 1997).

When viewing the task in light of Weiner's theory, the importance of attributions about one's own efforts and control over circumstances come to light. For the learners to be motivated, they will need to feel that it is up to them whether or not they succeed. One way to make this point is to start off with a group discussion about why this training will or won't be effective. The facilitator's job will be to emphasize that success in the workshop is a function of effort. In making this point, the facilitator will stress that the learners have many resources available to help them succeed, and if they apply themselves, they will develop their skills.

2. Establishing Relevance

Keller says that relevance can be established through experience, present worth, future usefulness, need matching, modeling, and choice; the designer thinks that **experience** might be a useful approach.

When considering a hierarchy of needs as a motivator, the question becomes "how can the designer show the learner that the content will meet those needs?" A good place to start is with current learner interests. One can safely assume that if a learner is interested in something, than that thing is relevant to the learner. For this reason our designer decides to incorporate a discussion where the facilitator elicits learner life goals (each goal will fall into one of Maslow's need categories). The goals are then used to connect the learner to the content, e.g. "So you've all talked about things like being debt free, owning a home, retiring young. Did you know that except for a few highly-paid celebrities and sports figures, the most highly paid positions place a heavy emphasis on communication skills?"

To establish relevance in a way that also builds self-efficacy, our designer comes up with an activity called "I knew that". In this activity, the facilitator asks the learners to share experiences they have had where communication went wrong. The class is then asked to consider what went wrong. The answers they share will serve to review things they already know about communication, such as the importance of getting someone's attention before engaging them in conversation. In this manner the facilitator gets the learners to see that they already know a bit about the topic, thus reinforcing self-efficacy while establishing relevance.

As the designer thinks of Weiner's theory, she knows she wants to foster adaptive attributions of success. She comes up with an activity similar to the previous one, but in this case, the facilitator asks the class to share situations where communication went **well**. While the group shares, the facilitator connects the benefits of good communication (happiness, productivity, etc.) with the class members' contributions to those situations. As the facilitator reinforces the role of the learner in each situation, the learners begin to see that in the past they have been successful in situations that are similar to the ones being addressed in class.

3. Instilling Confidence

To help develop confidence, the designer might address learning requirements, difficulty, expectations, attributions, or self-confidence; she decides working on **expectations** would be fruitful.

In an earlier activity, the facilitator got participants to share some of their life goals (Maslow's needs). The designer decides to build on that activity later on in the workshop by developing an exercise where the learners do some planning. In this activity, learners review the goals mentioned earlier, and write them down. Then they are asked to think about (and record) how the class content can be used to achieve those goals. By creating a plan for how the content will help needs get met, the learners will begin to gain confidence in their ability to transfer classroom learning to the real world.

Developing self-efficacy and instilling confidence obviously have a lot in common. As our designer thinks about what Bandura has to say about motivation and self-efficacy, she comes up with an interesting idea. She decides that the learners will interview past workshop participants in order to learn of how content has helped them.

The interview will focus on what the graduates hoped to get out of training and what they actually got out of it. The key question: “What did you think about your communication skills before and after training?”

If the attributions one makes about success and failure play such an important role in motivation, how might our designer get her learners to build their confidence and make healthy attributions about success? Upon reflection, she comes up with several role-plays that will be used throughout the workshop. Her reasoning is that by getting the learners to practice and gain successful experience, she is engendering expectations for success by fostering the view that success is indeed internal, controllable, and perhaps even stable.

4. Engendering Satisfaction

To promote satisfaction the designer could focus on natural consequences, unexpected rewards, positive outcomes, negative influences, or scheduling; she thinks that the **natural consequences** approach would be most productive in this case.

One approach to using natural consequences is to experience the outcome of the behavior. In this case, our designer wants the learners to actually get some of their needs met. She decides that as a final project, she will have the students deliver speeches (speeches which they have been preparing during the workshop). Through delivering a speech, the designer hopes the learners will develop their self-esteem, and perhaps even meet some of their social needs by connecting with classmates and securing their approval.

High self-efficacy frequently comes from (positive) experience. In considering the goal of achieving satisfaction while developing this self-efficacy, a method comes to mind: give the learner the assignment of teaching one idea from the workshop to

someone outside the workshop. By explaining the idea or skill, the learner not only gets to reinforce learning, he or she also gains experience in using and describing what has been learned. To further reinforce this effect, the learner reports back to the class on the outcome of the interaction. Self-efficacy is developed through demonstration of understanding and reinforcing feedback which also provides insight for continued improvement.

Finally, as the designer reflects on satisfaction in terms of Weiner's work, she considers how to continue to foster healthy attributions. So much of the workshop has been focused on working as a group, our designer decides to take a different approach. Learners are asked to do a journal entry where they record the factors that have led to the successful completion of the workshop. After learners have had time to reflect individually, the facilitator leads a discussion about what those factors were. The facilitator seeks out opportunities to reinforce the role of individual effort.

Summary

As we have examined how the work of Maslow, Bandura, and Weiner apply within Keller's model, there has certainly been some overlap. Frequently the methods used to achieve the desired results of one theory can also be used to effect the desired results of another. While the theories have many differences, their goals of getting needs met, fostering self-efficacy, and making productive attributions tend to blend together somewhat as methods are applied.

To revisit the opening questions of this paper, regarding whether teachers and/or instruction can motivate learners, the answer is most certainly, "no". Motivation is in the hands of the learner. However, the teacher/instruction can create conditions that allow the

learner to motivate him- or herself. This paper describes a number of ways those conditions can be created by applying motivation theory within John Keller's insightful model of instructional design.

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