

Escaping the Tyranny of Belief

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This study describes an action research case study through which the dynamics of identifying and changing strongly held assumptions illustrate the differences between experiences that serve to strengthen beliefs from those that lead to learning. Theoretical considerations are presented linking cognitive schema, action science, attribution theory, and learned helplessness in relation to interventions that may be effective in addressing error in informal learning.

Keywords: Learning, Attribution, Mental Models

Under pressure from legislative bodies and tax paying citizens to have increased accountability, many school districts are implementing a merit pay system in which monetary rewards are based, in part, upon performance evaluations of actual classroom teaching behavior. New dynamics of interactions among teachers and administrators result from these programs and may require some additional interpersonal skills. Described here is a case study illustrating some aspects of these dynamics and how they were resolved through more careful communication aided by the application of a model of informal experiential learning and belief.

The purpose of this research was to develop an understanding and offer an explanation of how certain dynamics of experience interact, specifically in reference to these questions:

1. From a conceptual perspective of experiential learning, how do beliefs develop and persist?
2. Why are beliefs so difficult to change, even when based on incorrect or incomplete information and interpretations?
3. How might learning error be reduced through various ways of testing experience?

Changing Role of Performance Evaluation

Without a direct and quantifiable tie to monetary rewards, performance evaluations have been used by teachers as a feedback mechanism to monitor and document their professional development and to improve their professional practice. With a change to tie these evaluations to direct monetary reward, the importance may shift from that of a feedback mechanism to a mechanism for supplementing an arguably less than adequate salary and demonstrating a credible professional status.

The role of the evaluator may also change, being under some constraints in performing the evaluation. Awarding each teacher the highest rating would inflate the overall ratings, as well as call into question the principal's ability and expertise to discriminate quality in teaching. So there is pressure to impose variance in the ratings, even if little exists. Also, the system results in teachers competing with each other, at least in terms of how they are perceived by the evaluator. In addition, the evaluator may develop a tendency to look for any signs of easily documentable weaknesses on the part of the teacher and perhaps overlook strengths that are not easily translatable into behavioral descriptors.

Action Research Case Study

A public school teacher was involved in a performance evaluation in a school district with performance-based merit pay. A direct cash bonus is paid at the end of the academic year if the total evaluation is above 3.0 on a 4 point scale. Since this was a newly instituted program, many issues had surfaced, at least in minds of teachers that had not previously been of great concern with respect to the evaluation process. These included questions about the qualifications of the evaluator in subject content and in teaching effectiveness as well as questions about the evaluation instrument and the teaching model it was based on. There was concern about the validity of the instrument as well as how objective the process would be in relation to subjective judgments of the evaluator. These underlying issues framed the specific experience for this particular teacher.

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This particular teacher was due for an unannounced class observation that focused a large part of the total evaluation. The principal was to be the observer for this component and was also responsible for the ratings on the rest of the evaluation. The evaluation is based on clearly observable behavioral data, and, as such, the content of the evaluation is not a valid grievance, and this is stipulated by state law. The final date was approaching when the principal was to have all evaluation completed for all the staff, and this teacher had not yet been evaluated by the unannounced class observation. In fact, it was the last week before evaluations were due, and she was getting somewhat nervous about it in anticipation.

One day, during that week, the teacher had a behavior problem with a disruptive student in the class just before lunch. The student became emotionally and behaviorally unable to function in the classroom and had to be removed physically and taken to the office. The parents had to be called to take the student from the school. The lunch period that followed this class was spent by the teacher filling out report forms, calling the parents, and consulting with the principal about this incident. While an incident such as this is not out of the realm of experiences for teachers, it was (in this case) not a typical or normal occurrence. As such, the teacher was, to a degree, distraught and emotionally drained from this experience. Also, because of all these activities, she did not have time to eat lunch. In fact, she just barely had time to get back to the next class, arriving just as the bell was ringing.

Then, who should walk in about thirty minutes later but the principal, ready to do the unannounced class observation/evaluation. As might be predicted, the teacher was not at her best during this class, but conducted it in a satisfactory, albeit not brilliant, manner. Her overall rating was 2.7 *out of 4.0*, which was not bad but was under the 3.0 cut off for the merit pay adjustment. The behavior observations that impacted most negatively on the evaluation included accompanying comments such as, “*was disorganized at the beginning of class, assignment was not written on board, students not in seats,*” etc.

The teacher received a copy of the evaluation the next day and was initially incensed. There was a three day time limit in which she could respond to any of the aspects of the evaluation that were in error, but she was not inclined to do so, *knowing that the descriptions of the class were behaviorally accurate, and she was attributing that the principal had “set her up,”* so to speak. That is, that the principal had deliberately chosen to observe her at her worst in order to give her a mediocre evaluation since she *did not feel she was one of those teachers in the “inner circle”* who received more tacit support from the principal. She used this occurrence to attribute negative motives to the principal and then *looked for other evidence* to support that. That additional evidence included her awareness that, of all the classes she taught, *that course had the least structured curriculum* in the sense that it was at a higher level than others and more difficult to describe in observable behavioral objectives. Thus, she felt that, additionally, the principal had chosen this class because it would be easier for the principal to observe that the objectives were not clear and question whether they were met.

Other evidence that came to her mind was that *other teachers* in her department had been *evaluated in their lowest level*, highest-structured classes, in which objectives and outcomes are more easily described. Also, they had been *observed several weeks earlier* so presumably had not had to remain apprehensive about the process as long. Moreover, the principal having been involved with her in the immediately previous student incident knew full well what the teacher had been going through and must have been aware that she was somewhat distraught due to extenuating circumstances. Therefore, the fact that the unannounced observation was done at that time was deliberate maneuver to catch her at her worst.

Part of the evaluation procedure allowed for the teacher to provide a written response to the evaluation within three days of receiving a copy. The teacher did this, explaining in writing that she felt that the incident prior to class negatively affected the class performance and the evaluation and that that should be taken into consideration or the observation should be done again. The principal responded back with a note stating that he was aware of the circumstances, had made allowances for them in the ratings, and the evaluation would stand as it was. This was particularly distressing for the teacher since several of the relevant categories had been rated zero, and she at this point felt helpless about changing the situation.

All of this was confirming evidence of the hypothesis that the principal had “set her up” for a negative evaluation. There was no evidence to the contrary to disconfirm the hypothesis. This, then, became her view of the state of nature of this incident. The principal had a malevolent character, at least the motives toward her were negative, and this interpretation led to specific plans for her future behavior.

She then proceeded to formulate the following plans:

1. to file a grievance through the personnel office claiming unfair treatment,
2. to write a letter to the superintendent complaining about the principal’s actions, and
3. to resign her position.

These actions made sense, given the validity of her hypothesis. If the principal was that sinister in conducting the evaluation and had generally negative motives in relation to her, then the employment future was not favorable in terms of professional and career development.

Action Research Intervention

At this point, the first author had an opportunity to work with the teacher in the capacity of consulting with her about her experience and her intended plans. The primary intervention, besides pointing out the ultimate futility of the intended plans, was to raise the possibility that the original hypothesis was not valid, that the interpretation was faulty. Raising this as a possibility, the teacher was encouraged to further test the hypothesis and the accompanying supporting evidence. This took the form of viewing some of the evidence as continuing hypotheses or questions, namely:

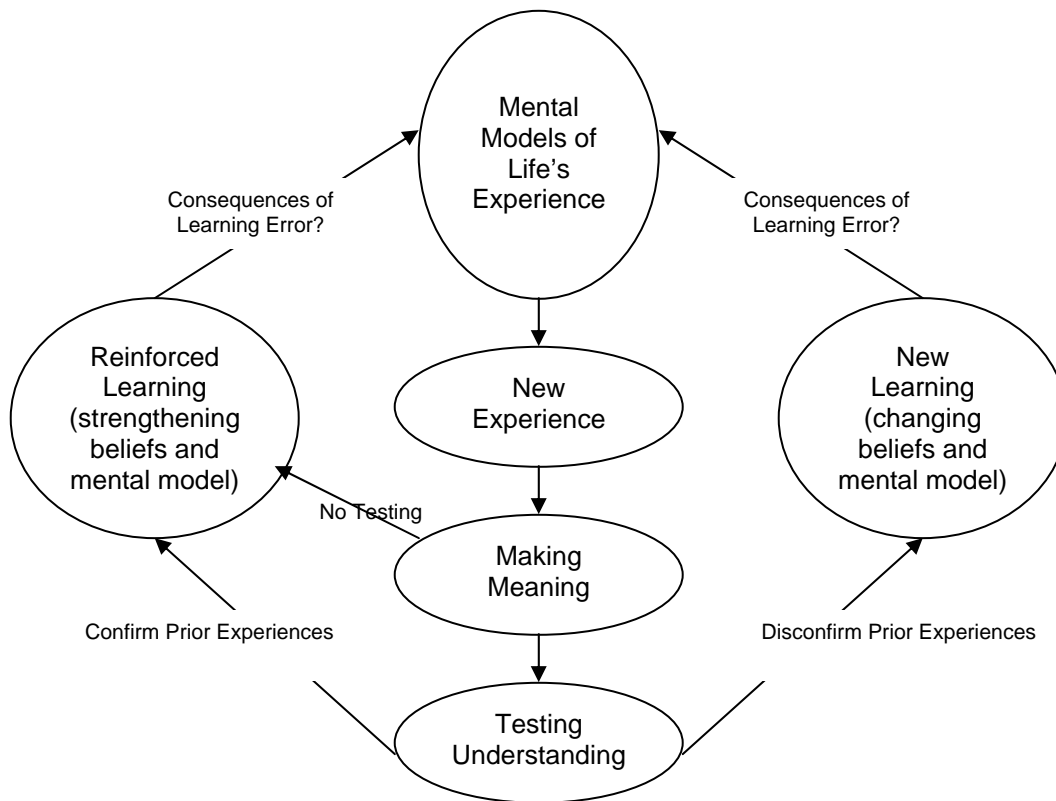
- Was the principal aware of the effect of the class description on the performance of the teacher during the following period?
- Was the principal aware that the observed class was the least structured of all the classes she taught?
- Did the principal have ulterior motives in conducting the evaluation in the manner in which it was done?

It should be noted that a direct testing of someone's motives is somewhat difficult unless there is a fairly solid personal relationship.

Experiential Model of Learning and Belief

A synthesis of multiple learning and belief theories, the model in Figure 1 captures the cognitive – perhaps emotional – processes as an individual assimilates a new experience into an existing mental model of life's experiences. The individual builds life experiences by making meaning of each new experience, perhaps testing understanding of the new experience, then augmenting or strengthening an internal belief system through new or reinforced learning. We'll first examine application of the model to the case study example, then conclude with highlights of the theoretical underpinnings of the model.

Figure 1. An Experiential Model of Learning and Belief



Application of Model to Case Study

Little is revealed regarding the teacher's existing mental models of life's experiences. However, we do know that she did not feel a part of the "inner circle" of teachers who received tacit support from the principal. Given the new experience of receiving the negative evaluation, she makes meaning (attribution) of this experience by formulating an hypothesis that the principal has sinister motives: essentially that he "set her up, choosing to observe her at her worst." She bases this hypothesis on the "evidence" that the principal chose to observe her in her least structured, highest level class, one for which learning outcomes are most ambiguous and, further, a deviation from the experience of other teachers who were observed in their most structured, lowest level classes.

Additional "evidence" includes that the principal waited until "the last minute" to complete the observation and chose to do so during a time when he was aware that she had just experienced an uncommon, problematic, stressful incidence.

Following this meaning making process, the model acknowledges a forced-choice event: either the individual tests understanding of the meaning making or proceeds without testing. The teacher, confident in her beliefs as bolstered by her "evidence," does not actively test understanding. Clearly for her, the "evidence" serves to strengthen her beliefs that the principal is sinister. Her learning about "how things work" is reinforced and this new experience is assimilated into her mental model of life's experiences. Indeed, her learning is so strongly assimilated that she commits to a series of actions, including filing a grievance through the personnel office, writing a letter to the superintendent to complain about the principal's actions, and resigning her teaching position.

But what if she is wrong? And by wrong we mean what if the teacher's attributions – her meaning making – is faulty and has led to incorrect experiential learning? How would she know if her hypothesis was right or wrong? One way to correct incorrect learning is to test understanding, an interactive process that may lead to disconfirming prior experience or to confirming prior experience.

Returning to the "evidence," the principal elected to complete the evaluation during the teacher's least structured, highest level class and immediately following an uncommon, problematic, stressful incidence experienced by the teacher. The teacher's attribution: He wanted to catch me at my worst. The following scenarios are the actual outcomes that occurred when the teacher tested her attributions and understanding of this experience.

Test 1: (Teacher) "Did you know that was my least structured class, with the most ambiguous learning outcomes?" (Principal) "No, I didn't know it mattered what class I observed."

Test 2: (Teacher) "Were you aware that I was stressed by the earlier discipline incident?" (Principal) "No, interacting with you during that incident reminded me that I hadn't completed your evaluation."

Without testing, the teacher's determined course of action as based on her meaning making would have been disastrous. Admittedly, the testing of understanding may either support or fail to support the preceding meaning making. Additionally, the model stipulates learning error regardless of the outcome of the testing process. It is an imperfect process.

Theoretical Underpinnings

As acknowledged earlier in this paper, the proposed model of experiential learning and belief is a convergence of established constructs, theories, and frameworks – specifically, cognitive schemas, attribution theory, learned helplessness and learned optimism, and action science. We will highlight each of these in turn and relayed in the model sequence.

Cognitive Schemas

Developing from "simple networks into more complex structures" (Scholl, 2002, ¶ 5) psychology's cognitive schemas are how we organize knowledge about ourselves, others, events, and social roles. These schemas are classically viewed as the "product of one's internal mental apparatus ... [as well as] an emergent property of the constant interaction with the environment" (Szokolszky, 1998). Representing the totality of experiences, as well as temperaments and personality, the *mental models* create the frame and filters for understanding and interpreting all new experiences. As such, these mental models are equivalent to frames of reference and cognitive schemas and possess a developmental aspect, relating to cognitive development and various adult learning concepts, such as transformational learning. Reflecting on the proposed model, individuals with more rigid schemas tend to make quicker, more assumed meaning of new experiences and bypass testing understanding. Alternately, individuals with flexible schemas more freely question the meaning of and openly test understanding of new experiences.

Attribution Theory

One way individuals make meaning of new experiences is through an attributional process. Attribution is a natural human response to behavior and events: an “answer” that assigns causality in an intrinsic need to know “why” – a fundamental need to understand in an effort to explain, even to anticipate, predict or control our world. It is a survivalist’s strategy for maneuvering and thriving in spite of adverse odds or events (Heider, 1958). In a given situation, an *observer*, who may or may not be directly involved in the *event*, observes an *actor’s* behavior, making interpretations and drawing conclusions. Attribution theory addresses this process of how the observer selects and combines information to make causal judgments (Fiske, 1991; Heider; Jones & Davis, 1965; Kelley, 1972). In essence, it is how an individual makes sense of behavior and events and constructs a reality of the world.

Typically, the observer considers and weighs *situational factors*, which are environmental and external to the actor, along with *dispositional factors* that are internal to the actor and often labeled as stable, unyielding, even permanent to the actor’s personality. Streamlining the complexities of the theory, the most common applications are those of the four attributional dimensions. In weighing the situational and dispositional factors, the observer considers the actor’s behavior in terms of locus of causality (internal, external), stability (fixed, variable), controllability (controllable-uncontrollable), intentionality (intentional, unintentional), and globality (global, specific). The observer’s internal or external locus of causality influences either a dispositional or situational perspective of the situation. When an observer weighs the actor’s behavior more dispositionally, attribution is made in terms of fixed, intentional, and global factors. In essence, the behavior “is what it is” and likely what it has and will continue to be. Conversely, when an observer more strongly weighs dispositional factors, the attribution signifies more credibility for variable, unintentional, and specific environmental influences.

Within the proposed learning and belief model, this attributional, meaning-making process leads the individual to pursue or abandon testing. The individual’s sense of internal or external locus frames the existing mental model. Assigning internal control of the new experience, the individual, less fearful of questioning existing learning and beliefs, is more likely to assume situational attributions that question and test the new experience against the existing mental model. Thus, while dispositional attributions limit qualities such as objectivity, curiosity, and inquiry that are essential for catalyzing testing understanding of the new experience, situational attributions position the individual to more freely accept and pursue testing.

Learned Helplessness and Learned Optimism

Rooted in behaviorism and avoidance learning, the learned helplessness phenomenon acknowledges an independence between action and reaction. – meaning the individual assumes an external locus of control and, therefore, does not take action to influence an event. It is a “giving up reaction” (Seligman, 1990) to life’s experiences. Such learning “interferes with subsequent formation of associations [and] undermines motivation” (Maier, Peterson, & Schwartz, 2000). As the theory of learned helplessness evolved, attributional qualities were incorporated to portray an individual’s tendency to explain causality of bad events (Peterson & Seligman, 1984). The emergence of explanatory or attributional style opened the door to presuppose individuals who act in logical, rational ways to interpret experiences and, as such, laid the groundwork for the theory of learned optimism (Schulman, 1999). In terms of the attributional dimensions, learned helplessness assumes pessimistic expectations and the individual assesses the situation as internal, stable, and global; learned optimism dictates positive expectations for an individual who views the situation as external, unstable, and specific. Here, interpretation of the internal/external dimension is in terms of locus of causality rather than locus of control.

Essentially, learned helplessness and learned optimism further clarify the attributional process demonstrated in the proposed learning and belief model. Following a learned helplessness course of action, the individual will make meaning for negative experiences as internal, stable, and global, abandoning testing understanding as a futile effort. Learned optimism leads the individual to interpret negative experiences as external, unstable, and specific, demonstrating a belief that negative experiences are more exceptions rather than the way the world works. Learned optimism positions the individual as less vulnerable, more resilient to negative experiences and less unafraid to test understanding of this event within existing mental models.

Action Science

Testing understanding is an active, interactive process that questions the validity of the attributions, inferences, and evaluations made during the meaning-making process. As imagined, this is not always an easy or welcomed process for individuals, as it demands that the observer share – perhaps even “lose” – control of the situation (Argyris, 1982). Under the premises of action science, the attributional observer morphs into participant with public testing of the attributions (Riordan, 1995), which may produce feelings of exposure and vulnerability.

What encourages or dissuades the observer to shed a self-protective cloak and risk the public testing process? Wedged between the meaning-making process and the decision to “test or not to test” you will likely discover the

individual’s theory-in-use, as learned and developed through lifelong socialization processes (Putnam, 1999). Theories-in-use, which are theories of practice, contrast with espoused theories, which are the theories of action that individuals claim to hold and that do not always translate into practice, especially in difficult, unexpected, or threatening situations (Argyris, 1982).

Argyris (1982, 1995; also Argyris, Putnam, & Smith, 1985) proposed two models, which serve as frameworks for the individual’s preferred and employed action strategies, which are under-girded by a set of governing values. Table 1 depicts the two models’ governing values and action strategies.

Table 1. *Argyris Theory-in-Use Models*

Model I Theory-in-Use		Model II Theory-in-Use	
Governing Values	Action Strategies	Governing Values	Action Strategies
Control and achieve your intended purpose of the encounter	Advocate your position in order to be in control and win	Valid (confirmable) information	Advocate your position and combine with inquiry and public testing
Maximize winning and minimize losing	Unilaterally save face – yours and others	Free and informed choice	Vigilant monitoring of implementation of choice
Suppress negative feelings	Evaluate thoughts and actions – yours and others		Minimize unilateral face-saving
Behave according to what you consider rational	Attribute causes for what you are trying to understand		Evaluate thoughts and actions – yours and others
			Attribute causes for what you are trying to understand

Adapted from *Action Science*, by C. Argyris, R. Putnam, and D. Smith, 1985; also “Action science and organizational learning,” by C. Argyris, 1995, *Journal of Managerial Psychology*, 10(6), pp. 21-22.

Interwoven in the public testing process are the same risks and control vulnerabilities also discussed in the attribution, learned helplessness, and learned optimism literature. Returning to the proposed learning and belief model, a Model I Theory-in-Use characterizes an individual who is likely to forego testing and experience a reinforcement of existing learning and strengthening of beliefs. In terms of action science, the individual experiences single-loop learning and self-fulfilling, self-sealing processes. Alternatively, the individual who engages in Model II Theory-in-Use practices embraces public testing and reaps the rewards of double-loop learning and reduced self-fulfilling, self-sealing processes.

Thus, an individual enters the model with an established cognitive schema, which serves as the mental model for processing the new experience. During the meaning-making process, the individual attributes causality to the new experience in terms of the locus of causality, stability, controllability, intentionality, and globality. Also active in the meaning-making phase are elements of learned helplessness and learned optimism. Individuals evidencing learned optimism are more likely to assign situational attributions to the new experience and are more likely to engage in testing. However, individuals evidencing learned helplessness typically assign dispositional attributions and move from meaning-making to reinforced learning, without testing understanding of the new experience against the existing mental model. The testing process itself is indicative of action science principles and is a demonstration of public testing of the attributions.

Conclusions

This action research case study describing the dynamics of identifying and changing strongly held assumptions illustrates the differences between experiences that serve to strengthen beliefs from those that lead to learning. Theoretical considerations linking cognitive schema, action science, attribution theory and learned helplessness / optimism can inform practice in relation to learning and intervention.

So what potential conclusions may we reach? First, hypotheses are easier to accept than reject. Acceptance is a cleaner fit with our current state of life experience, requiring less cognitive, emotional, and interpersonal commitment and risk. Second, the power of a test decreases the likelihood of error – the more powerful the test, the greater the likelihood of correctly rejecting the hypothesis. Third, hypotheses that are no longer subject to testing become entrenched beliefs. Finally, positive interpretations lead to greater effectiveness than negative ones.

This research informs particular processes and constructs that are highly relevant for the human resource development field. Coaching behavior, conflict resolution and mediation, performance appraisal, and decision making, as well as interpersonal skills training, are examples of processes that can benefit from additional theoretical integration. Constructs such as self-efficacy, job satisfaction, commitment, and trust are potentially elucidated through examination of the dynamics that affect them.

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