Discourse: The Journal of the SCASD

Volume 4 Article 4

2018

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Discourse Vol. 4, 2017

RESEARCH ARTICLE

Applying the Instructional Beliefs Model to Training and Development Research and Practice

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In 2011, Weber, Martin, and Myers introduced an innovative instructional model to more fully understand student outcomes within the classroom: the Instructional Beliefs Model (IBM). Results from this seminal article provided support to suggest that the IBM was a better predictor of student outcomes than previous models. Since its inception, this model has guided and informed subsequent instructional research (e.g., Goodboy & Frisby, 2014; Johnson & LaBelle, 2015; LaBelle, Martin, & Weber, 2013). While clearly applicable in the university classroom, the theoretical relationships outlined by the IBM offer transferability to additional instructional contexts: namely, training and development. Notably, there is limited visibility of empirical training and development research in communication scholarship (e.g., Stephens & Mottet, 2009), and a majority of investigations rely on case studies or needs assessment (e.g., Lucier, 2008) to forward knowledge claims. However, if the discipline is truly committed to expanding knowledge of communication within training, applicable in both academic and organizational contexts, scholars should pursue more theoretically and empirically driven research. As such, the IBM has potential to serve as an instrumental resource in forwarding more generalizable findings in training communication research. Thus, the purpose of the present explication and extension of this model is to highlight the shortcomings and strengths of applying the IBM to training and development. First, several major preceding instructional models are outlined. Second, the assumptions and tenets of the IBM are discussed at length. Throughout this overview, the theoretical underpinnings of the relationships outlined in the model, along with conceptual and operational implications for applying the IBM to a training context, are explored.

Preceding Instructional Models

Weber et al. (2011) explained that "calls for the development of instructional communication theories indigenous to the field of instructional communication appear to be as old as the field itself" (p. 51). This assertion outlines two typical critiques of instructional research. First, much of the research within the discipline is atheoretical. Rather than using models or theories to predict and understand the instructor-student relationship or the learning

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process, instructional communication research is dominated by variable-analytic examination (Waldeck, Kearney, & Plax, 2001). Mottet, Frymier, and Beebe (2006) forwarded that this lack of models causes instructional research to be predominately "descriptive rather than prescriptive" (p. 259). Moreover, there is an evident lack of purely instructional theories developed within the field. This borrow-and-adapt mentality has caused internal and external criticism towards the legitimacy of the field as a whole (Waldeck et al., 2001). These critical appraisals are echoed within the field of training and development. Over the past 40 years, scholars have repeatedly called for greater theoretical basis in training and development research (Campbell, 1971; Smith & Clayton, 2012; Tharenou, Saks, & Moore, 2007). In fact, in a survey of training and development scholars, Smith and Clayton (2012) found major differences with how scholars use theories and the importance they hold in their research.

Notable attempts by instructional researchers to answer the call for more theoretically driven research informed Weber et al.'s (2011) conception of the IBM. Thus, to fully understand the IBM, the model's predecessors must be considered. These influential instructional models are outlined as follows: the Learning Model, the Motivation Model, and the Affective Learning Model. Weber et al. explained that these models warrant exploration because they represent three dominant perspectives which are embraced by instructional researchers; a copious amount of research highlights the use and reception of these frameworks (Allen, Witt, & Wheeless, 2006; McCroskey, Richmond, & Bennett, 2006; Mottet & Beebe, 2006; Mottet, Parker-Raley, Cunningham, Beebe, & Raffeld, 2006; Schrodt & Witt, 2006).

The Learning Model

An early, noteworthy model in instructional communication was the Learning Model. The Learning Model (LM) posits that "teacher immediacy caused learning rather than student learning causing teacher immediacy" (Frymier, 1994, p. 134). Research investigating the relationship between instructor immediacy and student learning led to the proposition of this directional relationship (Andersen, 1979; Gorham, 1988; Kelley & Gorham, 1988; Richmond, Gorham, & McCroskey, 1987). Likewise, in the training and development context, trainee learning outcomes are shaped by the trainers' immediacy behaviors. In their influential book, *Training and Development: Communicating for Success*, Beebe, Mottet, and Roach (2013) used the LM to emphasize the importance of being "perceived as immediate" in training (p. 233).

The Motivation Model

Another predominant model within instructional communication is the Motivation Model (Frymier, 1994). Building from the LM, the Motivation Model (MM) argues that motivation accounts for the variance between teacher immediacy and student learning. Research conducted by Christophel (1990) and Richmond (1990) investigating the relationships among teacher immediacy, student motivation, learning, and power led to the development of this perspective. In a study comparing the LM and the MM, Frymier's (1994) results suggested that the MM was a better predictor of student learning than the LM. In the context of training, rather than the trainers' immediate behavior causing trainees to learn, these behaviors first cause trainees to feel motivated, and this motivation is what, ultimately, leads to learning.

The Affective Learning Model

Finally, the Affective Learning Model incorporates aspects of both affective and cognitive learning (Rodriguez, Plax, & Kearney, 1996). The Affective Learning Model (ALM) argues that "teacher immediacy influences affective learning which, in turn, influences cognitive learning" (Weber et al., 2011, p. 57). The results from Rodriguez et al.'s study offered evidence to suggest that the ALM was a better conceptual and statistical fit for predicting student learning than the MM. Within training, this model suggests that the trainers' immediacy first leads to affective learning for trainees, followed by cognitive learning.

The Instructional Beliefs Model

In line with this previous research, Weber et al. (2011) sought to create a model that was more predictive of student learning. Building off the ideas and relationships outlined by previous theories, the basic premise of the IBM is that…

> …teacher behaviors (e.g., nonverbal immediacy, clarity, power base use, relevance), student characteristics (e.g., conscientiousness, motivation), and course-specific structural issues (e.g., classroom justice, assignment congruence) combine to influence students' instructional beliefs (e.g., academic self-efficacy, belief in the ability to succeed in a given course, interest in course). (p. 53)

The model argues that student instructional beliefs act as a mediator between the first-order variables (teacher behaviors, student characteristics, and course-specific structural issues) and the third-order construct of student learning outcomes. In other words, first-order variables cause students' instructional beliefs to change, and these changes subsequently affect classroom outcomes. It is important to note that Weber et al. (2011) suggested all first-order constructs are highly related with each other; likewise, the third-order learning outcomes have also proven to be highly correlated.

The IBM is unique in that it incorporates the relationships outlined by all three aforementioned models while integrating additional, commonly considered variables within instructional communication. The concepts included in this model represent some of the most replicated research within the past several decades of instructional scholarship. However, most of these variables have been correlated and connected ad nauseam. Because many of these relationships are generally accepted within the field, Weber et al. (2011) emphasized that "it is not so much whether or not certain instructional variables are related to each other that is of concern to the IBM, but the explanation of how and why these constructs are related" (p. 53). Notably, the model itself is not variable dependent like its predecessors. Rather than suggesting a relationship among variables (e.g., Immediacy predicts cognitive learning.), the IBM outlines relationships among constructs (e.g., Teacher behaviors predict instructional beliefs, allowing researchers to examine any variable that fits within larger categories (e.g., teacher behaviors) rather than being limited to measuring a predetermined variable (e.g., immediacy). Thus, the IBM serves as a template for relationships rather than a model of specific variables. This autonomy allows for the seamless transferability of the IBM to other non-classroom instructional contexts. Specifically, many instructional relationships forwarded in Weber et al.'s seminal article can be seamlessly applied to a training context.

The goal of the present theoretical explication is not to populate this variable-dependent model with organizational variables and instruments. Rather, the following elucidation attempts to extend instructional concepts and relationships to the context of training sessions, arguing that instructional beliefs could play a significant role in influencing learning when giving or receiving training. To better understand how this model fits within the larger realm of instructional research, and to explore the strengths and weaknesses of applying these constructs to the context of training and development, conceptual and operational definitions for each portion of the model are outlined and scrutinized.

Model Constructs

First-Order Constructs

Teacher behaviors. One of the IBM's first-order constructs is *teacher behaviors*. When applying this model to training, "teachers," or those providing instruction, can be understood as "trainers" (Beebe et al., 2013). As explored here, many existing instructional variables highlighted by Weber et al. (2011) could be easily transferred to the context of training. Mottet, Richmond, and McCroskey (2006) suggested two perspectives for understanding teacher behaviors in instruction: the rhetorical and relational perspectives. As a result, Weber et al. classified teacher behaviors in the IBM as falling under one of these two categories.

Rhetorical behaviors. First, the rhetorical perspective suggests that "teachers use verbal and nonverbal messages with the intention of influencing or persuading students" (Mottet, Richmond, & McCroskey, 2006, p. 23). From this perspective, trainers "come to the classroom with the goal of influencing [trainees] to learn and develop specific behaviors and skills" (Stephens & Mottet, 2008, p. 90). Teacher clarity and teacher relevance are two examples of rhetorical teacher behaviors. Weber et al. (2011) defined *teacher clarity* as "teachers' attempts to be clear and concise in their examples and explanations in order to help students better understand course material" (p. 53). This concept has commonly been operationalized using Chesebro and McCroskey's (1998) Teacher Clarity Short Inventory (TCSI). This 10-item, Likert-type instrument asks students to report perceptions of teacher behaviors associated with process clarity along with oral and written content. (e.g., "My teacher is straightforward in his or her lecture.") Chesebro and McCroskey (1998, 2001) found that teacher clarity was positively associated with cognitive and affective learning in the classroom. While few, if any, researchers have adapted this measure for the training context, the trainers' clarity likely plays an analogous role in influencing the trainees' learning outcomes. Given the potential temporal restrictions of a training session as compared to a semester-long course, the trainers' ability to deliver content in a comprehensible way is increasingly imperative.

Weber et al. (2011) defined teacher relevance as the "teachers' design of course activities that help to illustrate the relevance of the course material" (p. 53). This construct has been measured using Frymier and Shulman's (1995) Relevance Scale (RS). This 12-item, Likert-type instrument asks students to report the degree to which instructors made content relevant to or met the needs of students (e.g., "My teacher asks me to apply content to my own interests."). Teachers' use of relevant behaviors has been positively associated with cognitive learning, affective learning, and student motivation (Frymier & Shulman, 1995). This variable is indicative of the emphasis placed on needs assessment in training literature. When considering

trainees, "at the heart of an effective training program is meeting the needs [i.e., making content relevant] of the trainees" (Beebe et al., 2013, p. 77). Andragogical research (i.e., the study of adult learning) emphasizes the powerful role that the instructor plays in making content relevant to students, suggesting that adults learn best when given explicit direction and application (Pratt, 1988).

Relational behaviors. Next, the relational perspective suggests instruction is a "relational process in which both teachers and students mutually create and use verbal and nonverbal messages to develop a relationship with each other" (Mottet, Richmond, & McCroskey, 2006, p. 24). Two examples of relational teacher behaviors are nonverbal immediacy and affinity seeking. Witt, Wheeless, and Allen (2004) noted that "no other construct has received more attention, or sparked more controversy during recent years, than teacher immediacy" (p. 184). Likewise, immediacy holds prominence in training and development research (Berthlesen, 2002; Harris, Chung, Hutchins, & Chiaburu, 2014; Rangel et al., 2015). Nonverbal immediacy is conceptualized as nonverbal communication behaviors that contribute to reducing the perceived psychological and physical distance between teachers and students (Witt et al., 2004). While there are several instruments that can be used to measure the construct, adaptations of Richmond, McCroskey, and Johnson's (2003) Nonverbal Immediacy Scale (NIS) have been commonly used to operationalize nonverbal immediacy in both instructional and training research during the past decade. This 26-item, Likert-type instrument asks students to report how often their teacher uses certain behaviors that indicate immediacy (e.g., "My teacher gestures when he or she talks to people."). In their meta-analysis of the construct, Witt et al. (2004) reported that student perceptions of teacher nonverbal immediacy have been directly related to students' perceived affective and cognitive learning.

Finally, affinity seeking is defined as behaviors instructors employ to evoke positive feelings from students towards themselves (Frymier & Thompson, 1992). This construct has been measured using McCroskey and McCroskey's (1986) typology of teacher affinity-seeking strategies which was adapted from Bell and Daly's (1984) original work. After providing an explanation about how each affinity-seeking strategy could be employed, this 25-item instrument asks students or trainees to report if their teacher has ever used each behavior (e.g., "supportiveness") in the classroom (yes/no) and, if yes, to report how often that behavior was used (Likert type). Teacher affinity-seeking behavior has been associated with increased levels of student motivation, perceptions of teacher competence, and perceived affective and cognitive learning (Frymier & Thompson, 1992; Prisbell, 1993; Richmond, 1990). In the corporate or organization context, affinity-seeking behavior is related to higher levels of employee satisfaction and more positive perceptions of the relationship between supervisors and subordinates (Richmond, McCroskey, & Davis, 1986). While the IBM suggests that both rhetorical and relational teacher behaviors influence the second- and third-order constructs, classroom contextual issues also play a role in predicting learning outcomes.

Classroom contextual issues. A second first-order construct of the IBM is *classroom contextual issues.* Weber et al. (2011) described classroom contextual issues as "those things contained in a course syllabus . . . [that] can be seen as a contract between the teacher and student" (p. 54). These contextual individualities shape how students interact with the learning environment (Weber et al., 2011). Like classrooms, training sessions are also structured with unique environmental and contextual factors (Ouellet, 2012). However, current

conceptualizations of classroom contextual issues may not translate as seamlessly to the training and development context as other elements of the IBM. Within instructional literature, noteworthy examples of contextual issues include student perceptions of classroom justice, teacher availability, and course workload.

Classroom justice. Classroom justice refers to student perceptions about the fairness of processes and outcomes that happen within an instructional context (Chory, 2007; Chory-Assad & Paulsel, 2004) and includes three distinct types: distributive, procedural, and interactional. Distributive justice refers to student perceptions about the fairness of specific course outcomes (e.g., grading). This type of fairness has been operationalized using Chory-Assad and Paulsel's (2004) Distributive Justice Scale (DJS); this 14-item, Likert-type instrument asks student to evaluate the fairness of grades they received or expect to receive in a specific course (e.g., "the grade you deserved to receive on the exam"). Procedural justice refers to student perceptions about the fairness of the procedures which teachers use to arrive at outcomes (i.e., the grading process). This type of fairness has been operationalized using Chory-Assad and Paulsel's Procedural Justice Scale (PJS); this 17-item, Likert-type instrument asks students to evaluate the fairness of teachers' scheduling, policies, and grading processes (e.g., "the amount of work required to get a good grade in the course"). Finally, interactional justice is student perceptions about the fairness of the interpersonal treatment of students when course policies or procedures are employed (e.g., interpersonal treatment of students who break a course policy). This type of fairness has been operationalized using Chory's (2007) Revised Interactional Justice Scale (RIJS); this 8-item, Likert-type instrument asks students to evaluate the fairness of teachers' interactions with students during a specific course (e.g., "the way the instructor treats students"). Classroom justice has been associated with student reports of learning outcomes, state motivation, teacher credibility, and classroom emotion (Chory, 2007; Chory, Horan, Carton, & Houser, 2014; Chory-Assad & Paulsel, 2004).

When framed in the context of training, trainer justice likely differs from how it would be defined in a classroom because the processes and outcomes of instruction differ between contexts. While traditional classrooms are often oriented towards grades and exams, training sessions may be more concerned with obtaining certification, mastering an essential skill, or becoming more aware of organization policies and procedures, thus being void of formal grading or examination. As such, current conceptualizations and operationalization of classroom justice may be unsuitable for investigating fairness in a training context; instead, organization justice (Colquitt, Conlon, Wesson, Porter, & Ng, 2001) may represent a more pertinent contextual issue within training and development research. Further exploring justice in the context of training will deepen scholars' understanding of the social systems at play in training sessions that could influence learning (Chory, 2007; Chory-Assad & Paulsel, 2004).

Teacher availability. Another classroom contextual issue is teacher availability. P. Kearney, Plax, Hays, and Ivey (1991) defined teacher availability as students' perceptions of how accessible teachers are to students (i.e., during office hours, or before or after class). This construct has been measured using Mottet, Parker-Raley, Cunningham, and Beebe (2005) Student Tolerance for Instructor Unavailability Measure (STIUA). This 12-item, semantic differential instrument asks students to report perceptions of instructor accessibility using bipolar adjectives (e.g.., "OK with me/Not OK with me"). Training sessions are often limited to a one-time meeting; trainees may not interact with their trainer following the given session. If the

training session was delivered by a trainer who is part of the organization, his or her availability for continued assistance after the given session may serve an equivalent function. This contextual issue, which is significant in a semester-long course, may not be critical in some temporally constrained training contexts.

Course workload. Expectations about course workload represent a third type of classroom and training contextual issue. Course workload is conceptualized as the "pressure placed on students in terms of demands of the syllabus and assessment tasks" (Kember, 2004, p. 167). These expectations are often manifested as expectancy violations, whereas course requirements differ from students' expectations of volume or difficulty level. In instructional research, course-workload expectations have been manipulated as a predictor variable for student outcomes (Mottet, Richmond, & McCroskey, 2006,) and measured based on a student's reported propensity to drop the course and take it in an alternative setting (Mottet, Parker-Raley, Cunningham, & Beebe, 2005). Violations of students' expectations for course workload have been connected with teacher course evaluations, reports of teacher credibility, affective learning, and teacher availability (Marsh, 2001; Mottet et al., 2005). Training sessions are likely void of syllabi or formal assessment tasks, so instructional conceptualizations of course workload may not suitably describe this concept in a training context; future research should consider what shapes trainees' expectations for training workload.

Student characteristics. The third first-order construct of the IBM is *student characteristics*. Weber et al. (2011) referred to student characteristics as "different orientations or predispositions that influence [students'] approach to and performance in the instructional setting" (p. 54). These characteristics are what distinguish one student or trainee from another person in the classroom. Understanding the trainees' individual characteristics and capacities in order to best deliver information is a longstanding cornerstone of training and development research and practice (Latham, 1988). Two major student characteristics offer logical applicability to a training context: the need for cognition and state motivation.

Need for cognition. One characteristic that is unique to each student is his or her need for cognition. Cohen, Stotland, and Wolfe (1955) conceptualized need for cognition as "a need to understand and make reasonable the experiential world" (p. 291). In instruction or training, this construct represents a student's need to make sense of the content, relationships, and structure of the learning environment. The construct has been measured using the Need for Cognition Scale (NCS; Cacioppo & Petty, 1982; Cacioppo, Petty, & Kao, 1984). The updated 18-item, Likert-type scale, used in a variety of educational, health, and corporate contexts (Cacioppo, Petty, Feinstein, & Jarvis, 1996; Cacioppo et al., 1984), asks individuals to report the degree to which critical thinking and mental behaviors are representative of their general cognitive orientation (e.g., "I like to have the responsibility of handling a situation that requires a lot of thinking"). In terms of instruction, need for cognition has been strongly associated with a wide range of concepts, including communication apprehension, reasoning, academic curiosity, problem solving, and test anxiety (see Cacioppo et al., 1996). Likewise, organizational scholars have explored need for cognition's role in prompting effective teamwork (E. Kearney, Gebert, & Voelpel, 2009) and ethical decision making (Singer, Mitchell, & Turner, 1998), but have scantily applied the concept to understanding learning within training and development.

State motivation. Another commonly considered student characteristic is state motivation. Student motivation can be defined as the process by which students direct and sustain effort towards course goals, classroom activities, and educational outcomes (Christophel, 1990). Generally, student motivation is studied as either a state or a trait. State motivation refers to a student's efforts to acquire educational knowledge or skills from classroom activities (Brophy, 1987). In other words, state motivation describes a student's willingness to put forth effort to achieve a specific goal in a designated context (Katt & Condly, 2009). This construct has been operationalized using an adapted version of Christophel's (1990) State Motivation Scale (SMS). This 16-item, semantic, differential instrument asks students to report the degree to which they feel ready and willing to engage in classroom activities by using bipolar adjectives (e.g., "Motivated–Unmotivated"). State motivation has been correlated with a litany of instructional variables, including, but not limited to, affective learning, cognitive learning, teacher relevance, and learner empowerment (Houser & Frymier, 2009; Katt & Condly, 2009). When applying the concept of motivation to training, scholars have found a variety of individual characteristics, including locus of control, age, cognitive ability, self-efficacy, and job involvement, to be significant predictors of motivation for training (Colquitt, LePine, & Noe, 2000). Scholars use a variety of scales, including the Motivation to Learn Scale (MLS; Noe & Schmitt, 1986) to assess training motivation.

Second-Order Constructs

Weber et al. (2011) posited that the mediating variables in the model, represented as the second-order constructs, are *instructional beliefs*. Instructional beliefs represent students' perceptions and expectations of their performance within the classroom. The inclusion of this construct is largely credited to Witt et al. (2004) and Witt and Wheeless (2001) who studied instructor immediacy's influence on student learning. Weber et al. explained that "although a great deal of evidence supports the positive relationship between teacher immediacy and student learning, researchers are still at a loss for *how* this relationship works" (p. 54). Instructional beliefs, the Weber et al. reasoned, work as a mechanism to bridge the association between these two variables. Because instructional communication research has placed more emphasis on instructional beliefs over the past several years (e.g., Goodboy & Frisby, 2014; Johnson & LaBelle, 2015; LaBelle et al., 2013), the field of training and development should follow suit. Because these beliefs serve as catalysts or inhibitors for learning, furthering knowledge about how these beliefs are predicted and maintained within the context of training is paramount. Two instructional beliefs considered in this model which offer connections to training and development are academic self-efficacy and learner empowerment.

Academic self-efficacy. Academic self-efficacy has been conceptualized as a student's perception of his or her ability to accomplish a task (McKeachie, Pintrich, Lin, & Smith, 1986), and is considered both a social and personal construct (Schunk & Pajares, 2012). This concept has been widely operationalized using 8 items from McKeachie et al.'s (1986) Motivated Strategies for Learning Questionnaire (MSLQ). This instrument asks students to report the degree to wish they feel confident in their ability to understand concepts and to succeed within the classroom (e.g., "I expect to do well in this class"). A student's sense of academic self-efficacy has been connected with anxiety, academic achievement, use of learning strategies and mastery-approach goals, teacher relevance, teacher immediacy, instructional dissent, and

cognitive learning (Deemer, 2010; LaBelle et al., 2013; Rubin, Martin, Bruning, & Powers, 1993; Zimmerman & Martinez-Pons, 1990). Like students, trainees can feel efficacious about understanding training information or completing training-related tasks. However, limited research has considered trainees' efficacy in the knowledge acquisition or application process. While academic self-efficacy may be pertinent for training geared towards information attainment or cognitive learning outcomes, Schwarzer and Jerusalem's (2010) General Self-Efficacy scale (GSE), along with efficacy items created to operationalize particular training content (see Schwarzer & Fuchs, 1996), may be more appropriate when examining behavioral or attitudinal focused trainings.

Learner empowerment. Another student instructional belief is learner empowerment. The concept of learner empowerment was first introduced as a framework for understanding the motivation of employees in the workplace (Conger & Kanungo, 1988; Thomas & Velthouse, 1990). Since this initial conceptualization, learner empowerment has been studied within instructional communication research (Frymier et al., 1996; Houser & Frymier, 2009; Weber, 2003, 2004; Weber, Martin, & Cayanus, 2005). Within the context of the classroom, Houser and Frymier (2009) defined learner empowerment as "student's feeling of competence to perform a task that is meaningful and has an impact on the situation" (p. 35). Learner empowerment has been operationalized using Weber et al.'s (2005) shortened Learner Empowerment Scale (LES). This 18-item, Likert-type instrument asks students to report their perceptions of task meaningfulness and personal competence (e.g., "I have what it takes to do well in this class"). Learner empowerment has been strongly associated with teacher clarity, state motivation, teacher relevance, cognitive learning, affective learning, immediacy, and self-esteem (Frymier et al., 1996; Houser & Frymier, 2009; Weber et al., 2005, 2011). Thus, trainees can also vary in their perceptions about the empowerment they feel influencing a training session or workplace with their performance. Rather than relying predominantly on a single measure to operationalize how students feel empowered in the classroom, perhaps training and development scholars should create contextual measures for empowerment, as is often done in health research, which are "tailored for use in specific populations or contexts" (Herbert, Gagnon, Rennick, & O'Loughlin, 2009).

Third-Order Constructs

Learning outcomes, conceptualized as students' affective, cognitive, and behavioral learning, represent the third-order constructs in the IBM. Instructional researchers recognize the difficulty of measuring student learning, as evidenced by the variety of divergent approaches to conceptualize and operationalize this concept. For instructional research, the ability for students and trainees to obtain, apply, and think critically about information represents the foremost focus of research; thus, the goal of the IBM is to better understand how learning outcomes can be predicted.

Affective learning. A first type of student outcome is affective learning. Recently, communication scholars have defined affective learning as student's internalization of positive feelings towards course content and subject matter (Lane, Frey, & Tatum, 2017). Affective learning has been operationalized using McCroskey's (1994) Teacher Affect Assessment Instrument (TAAI). This 16-item, semantic differential instrument asks students to report their

perceptions about the class, content, instructor, and taking classes with the given instructor (e.g., "Good-Bad"). Just as students can feel affect towards teachers and classrooms, trainees can have affect towards trainers and training sessions. It is important to note that current conceptualizations and measures about this idea have departed from the original notion of affective learning (Lane, Frey, & Tatum, 2017); researchers are currently measuring affect towards course materials and teachers rather than the acquisition, reinforcement, and modification of "values, preferences, or attitudes associated with the affective learning domain" (Lane, 2015, p. 511). Instead, research on affective learning should focus on how students value, respond to, and buy in to the process of learning (Myers & Goodboy, 2015). While scholars agree that an overhaul of current operationalizations is warranted (Bolkan, 2015), evaluating students' affective experiences in the classroom remains a productive direction for future research, in both instructional and training contexts.

Cognitive learning. Notably, there is an evident focus placed on cognitive learning within instructional communication research. Mansson (2014) defined cognitive learning as "the attainment of new information and knowledge as well as an understanding of how to apply newly attained information and knowledge" (p. 275). Because of the complexity of operationalizing a student's knowledge attainment, researchers have utilized a variety of means to measure this type of learning. Test scores are commonly considered in instructional research to measure a student's attainment of information. Because trainings are often without formal grading schemes, using actual scores may be impossible for some training contexts. Researchers have also employed Richmond, McCroskey, Kearney, and Plax's (1987) Learning Loss Measure (LLM) to operationalize students' retention of information. While there are some obvious disadvantages related to measuring the *loss* of knowledge rather than the *retention* of information, the temporal restrictions of training also likely limit this measure's use. Recently, Frisby and Martin (2010) developed the Cognitive Learning Measure (CLM; e.g., "I can see clear changes in my understanding of this topic"). While there are concerns regarding the dimensionality and self-reporting nature of the scale, the measure has proven to be a reliable operationalization for the attainment of new knowledge and information (Frisby, Mansson, & Kaufmann, 2014). Of all measures currently used within instructional literature, this measure can, perhaps, be applied most seamlessly to training. While the amount and type of cognitive learning may differ between instructional and training contexts, the attainment, understanding, and application of knowledge remain fundamental to the goals of both settings.

Behavioral learning. Finally, behavioral learning represents a unique classroom outcome. While not presently a primary concern of most instructional research, behavioral learning holds clear prominence within training and development because training often exists to teach employees skills and behaviors necessary to effectually function within an organization (Noe & Schmidt, 1989). Behavioral learning has been conceptualized as learned behaviors or actions which are associated with instruction (Staton, 1989). Behavioral learning can manifest itself in a variety of ways, whether in applications of course content (e.g., public speaking) or the ability to apply course content to real-life situations in outside contexts. For the purposes of training, behavioral-learning outcomes could vary widely based on organizational goals (e.g., using new software, abiding by policies, and applying work-related skills). Like cognitive learning, behavioral learning is often measured by student performance but also through observation. Frymier and Houser (1999) refined a measure of communicative and mental

engagement behaviors that support increased levels of student learning which is sometimes considered a measure of behavioral learning. The Revised Learning Indicators Scale (RLIS) is a 7-item, Likert instrument that asks students to report perceptions about time devoted to a course and progress toward understanding content (e.g., "I think about the course content outside of class"). However, this item illuminates a concern for considering the RLIS as a measure for behavioral learning; simply "thinking about course content outside of class" does not imply students are able to enact course behaviors effectively. As such, it is imperative that instructional communication as well as training and development scholars work to better operationalize behavioral learning in order to more accurately measure students' learning of actual behaviors.

Conclusion

The present explication and extension of the IBM highlights several areas of emphasis for future training and development research. First, in addition to exploring the validity of utilizing the conceptualizations and operationalizations of these instructional variables, the IBM could serve as a guide for making sense of the relationship between current training and development concepts. As emphasized, the IBM is not variable dependent, meaning that the hypothesized relationships among student characteristics, teacher behaviors, classroom contextual issues, instructional beliefs, and learning outcomes could be paralleled in training and development research; predictive relationships among variables which fit into these hierarchical categories could be tested based on the model's theoretical underpinnings. Second, the entire model, employing both instructional and training variables, should be tested in the context of training and development. A full application of this model, using structural equation modeling techniques, could confirm its transferability to the field or could suggest modifications that would enrich the model's applicability.

Weber et al.'s (2011) IBM represents evident progress for instructional communication to understand student outcomes in the classroom. Accordingly, training and development scholars and practitioners should employ this model to inform future research and practice. In fields which are criticized for a lack of theoretical development and model testing, the IBM's potential applications are vast. Using the proposed directions for research, communication scholars may be able to better understand the instructional process in the training context.

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