## Theoretical Underpinnings

The ICTP practice model is grounded in *social cognitive theory*, which holds that learning and performance occur within a social context in which people are active agents who can influence and be influenced by their environment [1, 2]. This offers a useful framework from which implementation support practitioners (ISPs) may be able to influence *implementation performance* (i.e., the level of quality at which essential implementation practices are carried out [3]) at both individual/team and organizational/system levels. The following five key concepts within social cognitive theory are particularly useful for ISPs as they consider how to support positive changes in practice settings: reciprocal determinism, human agency, observational learning, self-regulation and self-efficacy, and goal-directed behavior.

### Reciprocal Determinism

Reciprocal determinism is the belief that human behavior is determined by cognitive factors, behavioral factors, and environmental factors, all of which interact with and influence each other [1]. Cognitive factors include *attitudes*, such as readiness for behavior change; *knowledge*, such as understanding of factors that influence implementation and the individual and team behaviors that create the conditions for such factors; and *expectations*, such as the likelihood of social or professional reinforcers or punishments, and one’s belief that they can positively effect change.

Behavioral factors include *skills* and *abilities* and the extent to which they have been refined through *practice*. In implementation practice, these may include co-creative behaviors; leadership and management behaviors; behaviors that support workforce development or the use of data for individual or organizational improvement; or behaviors that help create the conditions to influence social change through communications, messaging, and interpersonal strategies.

Environmental factors include *existing social or organizational norms*, *incentives or disincentives*, *policies and standard operating procedures*, and the variety of other elements that make up the *context* in which implementation is occurring. When considering environmental factors, it is important to conduct an analysis of structural, institutional, and other environmental inequities that undergird all other factors determining human behavior. Without such an analysis, the roles of structural supports or barriers to success may be minimized in deference to the importance of individual factors and opportunities for improvement.

EQUITY IN ACTION

Download details on equity in implementation will be covered later in this brief in section [Equity in Implementation Practice](https://ictp.fpg.unc.edu/wp-content/uploads/equity.docx).

### Human Agency

Human agency—the ability of humans to intentionally influence their own functioning and life circumstances—is an essential concept in social cognitive theory for understanding human development, adaptation, and change [4]. Human agency helps us understand why we often maintain the status quo and also how we might influence change. Bandura wrote,

People are self-organizing, proactive, self-regulating, and self-reflecting. They are not simply onlookers of their behavior. They are contributors to their life circumstances, not just products of them. [4, p. 164]

In the context of implementation practice, the concept of human agency affords a lens through which to explore current implementation performance and a vehicle through which to improve implementation performance. To this latter point, recognizing and reinforcing human agency is necessary to create *change agency* (i.e., behavioral factors aimed at bringing about intended changes) in implementation practice. Change agency is widely recognized as an essential ingredient in the implementation of innovative programs and practices [5–8].

Bandura [9] extended the concept of human agency to *collective agency*—collective efforts and organizational contexts that influence outcomes. He noted that collective agencyis important in contexts in which interdependent factors influence performance, which is characteristic of implementation and scaling. He stated that collective agency can be exercised “through shared beliefs in the power to produce effects by collective action” [9, p. 75]. Thus, for the ISP, the intention is not only to promote individual agency, but to promote collective agency through implementation teaming structures, organizations, communities, and system partners. In fact, the use of individual agency, alone, is likely insufficient to generate the improvements needed for successful implementation.

### Observational Learning

Observational learning [10, 11] is one of the original concepts in social cognitive theory, first conceptualized within the theory’s close predecessor, *social learning theory*. Essentially, observational learning posits that humans learn through social models and vicarious reinforcement.

*Social models* are individuals or groups of people whom learners observe and whose behaviors they may reproduce. Social models are more effective than other methods of learning to the extent that the learner is able to identify with their behaviors, values, beliefs, and attitudes or otherwise perceives them to be similar to themself.

*Vicarious reinforcement* is the extent to which the learner observes the social model being reinforced or punished for their behavior. This might take the form of facilitation (seeing others reinforced for an action), inhibition (seeing others punished for an action), or disinhibition (seeing others not punished for an action that the individual thinks should be punished).

Observational learning may also occur through *mass modeling*, such as through mass media or communication, including the way that organizational and social norms may be communicated.

Importantly, social cognitive theory differentiates learning from performance, defining learning as a change in mental structures (e.g., ideas, perceptions, beliefs) that creates the *potential* to demonstrate different behaviors. In contrast, performance is the actual demonstration of a learned behavior.

ISPs can use these concepts to

* understand support participants’ prior learning that may have influenced their current behavior and
* plan experiential learning activities to shape the new behaviors needed to advance implementation performance goals.

Understanding the distinction between performance and learning can help ISPs to diagnose performance challenges. On the one hand, ineffective performance may be a condition of learning (or lack thereof). On the other hand, individuals or teams of individuals may have the learning they need, but not the organizational or system conditions that incentivize the demonstration of such learning (i.e., performance).

ISPs are usually working toward collective change at organizational and system levels, which often extends beyond those individuals participating most directly in the support process. Therefore, leadership and mass communication strategies can be important vehicles to model and reinforce effective implementation practices across broader organizational and system partners. A final and critical point about social models is that it is essential for ISPsto see themselves as social models for support participants, andto see support participants as social models for others in their organization, community, or system.

### Self-Regulation

Self-regulation [12], the ability to influence one’s own behavior and motivation, is a key concept in understanding behavior maintenance. A core element of this, *self-efficacy* [13], reflects an individual’s belief about their ability to perform a course of action in a particular situation. Self-efficacy may be particularly important to change agency, where individuals or teams are intending to create changes to their organizational or system environments. Self-efficacy can be learned through social modeling, built by one’s own performance accomplishments, and nurtured through supportive behavioral coaching, all of which are important strategies available to ISPs.

Other aspects of self-regulation, including personal agency, self-sufficiency, self-management, and problem solving [14], likewise can be fostered through intentional practices (e.g., behavioral coaching) available to ISPs. By broadening their self-regulation, ISPs are better able to increase support participants’ abilities to self-monitor, self-assess, and set future intentions for their own implementation-related behaviors.

Like other aspects of social cognitive theory, self-regulation and self-efficacy have been extended by Bandura and others to collective and organizational contexts [9, 12, 15–17], including to team-oriented implementation practice, described by Roppolo and colleagues [18]. Applying self-regulation and self-efficacy to these contexts is helpful in explaining why achieving organizational and system change can be complex. Wood and Bandura described how self-efficacy interacts with system constraints and opportunities, writing

. . . individuals who believe themselves to be inefficacious are likely to effect limited change, even in environments that provide many potential opportunities. Conversely, those who have a firm belief in their efficacy, through ingenuity and perseverance, figure out ways of exercising some measure of control in environments that contain limited opportunities and many constraints. [17, p. 374]

It is important to note that this description of the interaction between self-efficacy and system environments should not supplant an analysis of structural, institutional, and other environmental inequities that may contribute to racial or other disparities in system environments. There is a constant need to identify structural factors that may inhibit individual and team efficacy, as identified in the concept of reciprocal determinism. Placing blame on individuals for structural problems not of their making is an inappropriate and unacceptable use of the concepts of self-regulation and self-efficacy.

Bandura believed that when people perceive a sense of collective efficacy within their group, the group becomes more committed to its mission, able to overcome challenges, and successful in its accomplishments [9]. However, he also acknowledged that collective self-regulation is considerably more complex than individual self-regulation, for the following reasons [12]:

* Activities in organizational and social efforts typically occur under time constraints and cannot be fully stopped during the change process.
* Group endeavors have heightened social and evaluative consequences.
* Actions taken at one point may change the options and effects of those options at later points.
* Individual factors can exert substantial impact on organizational and social efforts.
* Many of the rules that organizations and systems use in decision making can be learned only through exploratory experiences rather than through existing social models.

ISPs benefit from being realistic about these challenges and authentic and transparent about the change process with support participants. At the same time, by fostering self-regulation skills such as agency, efficacy, management, problem solving, and sufficiency at the team and collective level, they can enable support participants to influence and maintain intended implementation improvements despite these challenges [18].

### Goal-Directed Behavior

Finally, goal settingand the use of goal-directed behavior, particularly in organizational contexts, receive considerable attention in social cognitive theory [17]. Wood and Bandura wrote,

Goals provide a sense of purpose and direction, and they raise and sustain the level of effort needed to reach them. When people are unclear about what they are trying to accomplish, their motivation is low and their efforts are poorly directed. [17, p. 367]

This is of particular importance to ISPs for (1) understanding support participants’ current implementation-related behaviors, and (2) creating the conditions through which support participants may improve their implementation behaviors and the performance of their organization or system. In this latter case, the development of new goals is best done through collaborative processes and using procedures, such as co-design, that reduce the likelihood of bias when making decisions about goals. This also reinforces a sense of collective agency that is essential to accomplishing organizational and system changes.

PRACTICE PRINCIPLE IN ACTION

Further details on co-creation will be covered later in this brief in section [Practice Principles in action: Co-creation.](https://ictp.fpg.unc.edu/wp-content/uploads/principles.docx)

When support participants experience implementation support as solely or primarily reactive rather than goal-directed, the following outcomes often occur:

* the purpose and intentions of support are unclear to support participants, the ISP, or both;
* they experience support activities as uncoordinated; and
* progress seems elusive.

Having clear, mutually identified goals directs the behavior of both support participants and the ISP and sustains their intentions even in times of disruption or distraction.

Implementation and scaling efforts are multiyear processes; it takes time to successfully advance both behavior change at the individual/team level and performance improvements at the organization/system level. In light of this, setting long-term goals with attainable short-term goals may best guide and sustain these efforts [17].

ISPs can work with support participants to define what long-term improvements will look like and set subgoals and short-term action plans that may afford smaller tests of change, create experiential learning opportunities, and increase the likelihood that longer-term goals will be achieved and sustained. To do so, ISPs may benefit from drawing from improvement science methods and frameworks, such as those in the [model for improvement](https://ictp.fpg.unc.edu/wp-content/uploads/Brief_7_Standalone.docx) [19].