INSTRUCTOR COMPETENCIES

And Developmental Growth in Professional Practice

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The International Board of Standards for Training (IBSTPI) groups 19 instructor competencies into four domains: Foundations, Design, Facilitation, and Evaluation deemed critical for efficacy in the practice of instruction (see Figure 1).

IBSTPI Critical Domain Competencies

Foundations
- Communicate effectively
- Improve instructor practices
- Respond to situational factors that may impact learning and performance
- Comply with ethical and legal standards
- Establish and maintain professionalism
- Manage instructional resources

Facilitation
- Engage learners
- Adapt instruction to learners and learning environment
- Promote learning through feedback
- Promote retention of knowledge, skills, and attitudes
- Promote the transfer of learned knowledge, skills, and attitudes to other contexts
- Apply classroom management principles

Evaluation
- Plan and prepare for monitoring and evaluating instruction
- Evaluate instructional effectiveness

Design
- Specify expected learning
- Plan instructional and learning approach
- Plan instructional resources
- Prepare for instructional and learning activities
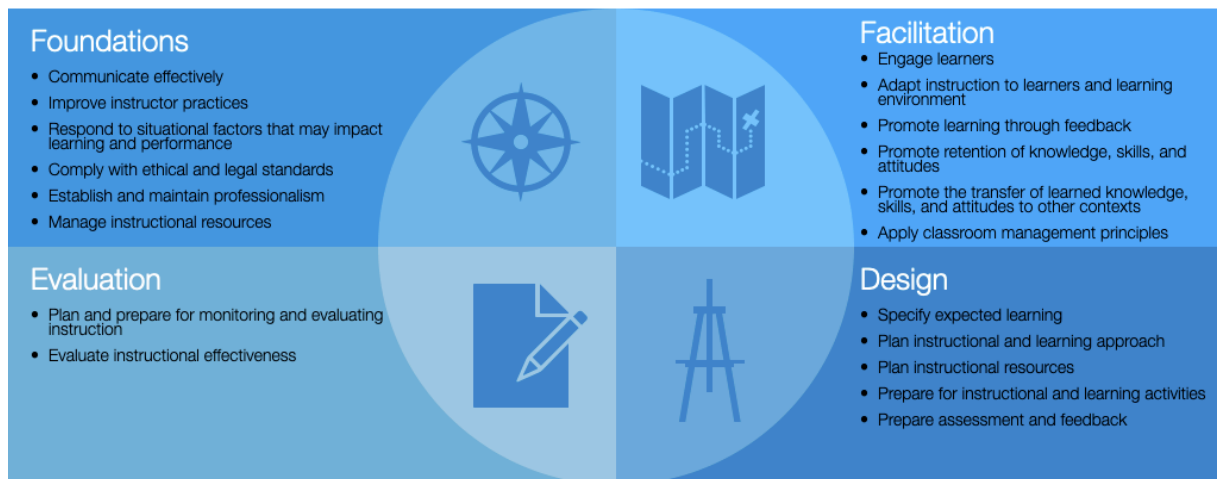- Prepare assessment and feedback

Figure 1. IBSTPI instructional competencies for each domain.

Developmental growth with instructor competencies can take place throughout professional practice through training, education, and mentored experiences. In 1959 Robert W. White wrote a classic article for Psychological Review titled, "Motivation Reconsidered: The Concept of Competence." In it, White proposed the concept of effectance. Effectance was described as a "tendency to explore and influence the environment." White suggested that the "master reinforcer" for humans is personal competence. He defined competence as "The ability to interact effectively with the environment. Competence is the ability of an individual to do a job properly. A competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in an individual."

Regardless of job roles and domains of practice instructors' perceived need for developmental growth is largely shaped by a professional identity that values high standards of performance and lifelong development. Overall, development with instructor competencies is largely driven by a growth identity shaping one's vision of higher levels of effectiveness in practice throughout the lifespan (Burke & Stets, 2009; Argyris & Schön, 1974). A vision of future growth drives intrinsic motivation for increasing effectance for

addressing complicated or complex challenges increasingly encountered over time in professional practice (Dweck, 2016).

"In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment," writes Dweck (2016). A mindset, according to Dweck (2016), is a self-perception or "self-theory" that people hold about themselves. Believing that you are either "intelligent" or "unintelligent" is a simple example of a mindset. People may also have a mindset related their personal or professional lives—"I'm a good teacher" or "I'm a bad parent," for example. People can be aware or unaware of their mindsets, according to Dweck (2016), but they can have profound effect on learning achievement, skill acquisition, personal relationships, professional success, and many other dimensions of life. People who embrace growth mindsets—the belief that they can learn more or become smarter if they work hard and persevere—may learn more, learn it more quickly, and view challenges and failures as opportunities to improve their learning and skills. Thus, with a growth mindset instructors can be self-motivated to stretch their limits with competencies for accomplishing difficult and worthwhile tasks across a variety of challenges encountered in practice.

Instructors can expect a variety of challenges over the span of professional practice in the use of competencies from across the domains of design, facilitation, and evaluation that are very likely to challenge existing levels of knowledge, prior experience, understanding, and procedural skill in the use of foundational competencies. In the face of such challenges instructors are very likely to discern gaps with existing levels of competence and means to address novel or complex instructional problems. For example, consider how key foundational competencies can come into play in the effort to make sense of novel or complex situational factors that not only require advanced levels of cognitive reasoning for insight supporting creative design but also may require deeper levels of ethical reasoning if solutions are likely to diverge from existing standards of practice. Creative thought involved with insight is associated with means to look at challenges from different angles and synthesize disparate perspectives into new revelations or approaches (Csikszentmihalyi, 1999). For example, creativity in the use of instructional competencies can take the form of looking at instructional design options from diverse perspective to better inform how instructional competencies can be applied in novel ways to better address new or complex challenges. Such creativity is also distinguished by openness (Simonton, 2010). The more one is exposed (and open) to different ideas, thoughts, and concepts the better they are at creative thought and divergent thinking simply because they can make novel connections arising from discerning the "art-of-the-possible" when connecting ideas at the intersection of domains (Klein, 2009; Sternberg & Lubart, 1999).

At higher levels of professional effectiveness with instructor competencies, while semi-independent, can be increasingly fused and applied in reflective practice calling for ideological commitments beyond self-interest. As cognitive and ethical reasoning increasingly mature in professional practice there is greater wisdom or discernment about why and how best to employ competencies to better address complex learning and instructional challenges benefiting from shared effort. The means to apply cognitive and ethical reasoning well in collaboration with others for problem solving in the profession is key to effectiveness with novel or complex challenges (Argyris & Schön, 1974). Jean Piaget also spoke of the importance for lifelong development to become increasingly co-operative and effectual in social relationships to help

evoke and strengthen reciprocity of the self with and between individuals who know how to differentiate their viewpoints for ultimate shared understanding and effort necessary for addressing many real-life problems that benefit from divergent viewpoints. Higher levels of reflective practice is highly correlated with co-operation out of which arises value for collaboration in work, exchange of ideas, constitution of logic involving complex states of awareness, intellectual feelings, and responses that are social in nature and carry an ethical "categorical" imperative indispensable for intellectual interaction and co-operation in society (Piaget, 1950, pp. 178-179). Piaget's viewpoint of lifelong development included not only so-called horizontal growth with knowledge, skills, and attitudes but also vertical growth involving improved effectiveness in cognitive and ethical reasoning necessary for interdependent and collaborative efforts he deemed necessary for addressing complex challenges encountered in life (see Figures 2; Petrie, 2014; Petrie, 2015).

Figure 2. Horizontal and vertical development of instructor competencies.

Vertical Development refers to advancement with skillful and adaptive usage of instructional competencies enabled by continued improvement in cognitive and ethical reasoning capabilities necessary for successful responses to complex instructional challenges. The outcome of vertical development is the ability to reason and perform in more complex, systemic, strategic, ethical, and interdependent/collaborative ways involving use of diverse perspectives spanning across disciplinary lens for making sense and effective-

ly responding to complex situations or challenges. As an instructor develops vertically the way to think about the relationship with horizontal growth is that while instructor competencies can be horizontally acquired that are deemed necessary for functional professional practice, acquisition of competencies do not readily equate to depth and range of skillful, adaptive, and creative usage in the face of complex situations or challenges that can be encountered in instructional practice.

That said, instructors can be mentored by those at higher levels of development to reflect upon and value continued growth with instructional competencies (both horizontal and vertical growth) throughout the lifespan of professional practice. Figure 3 depicts a framework for vertical development with instructor competencies across the lifespan of professional practice.
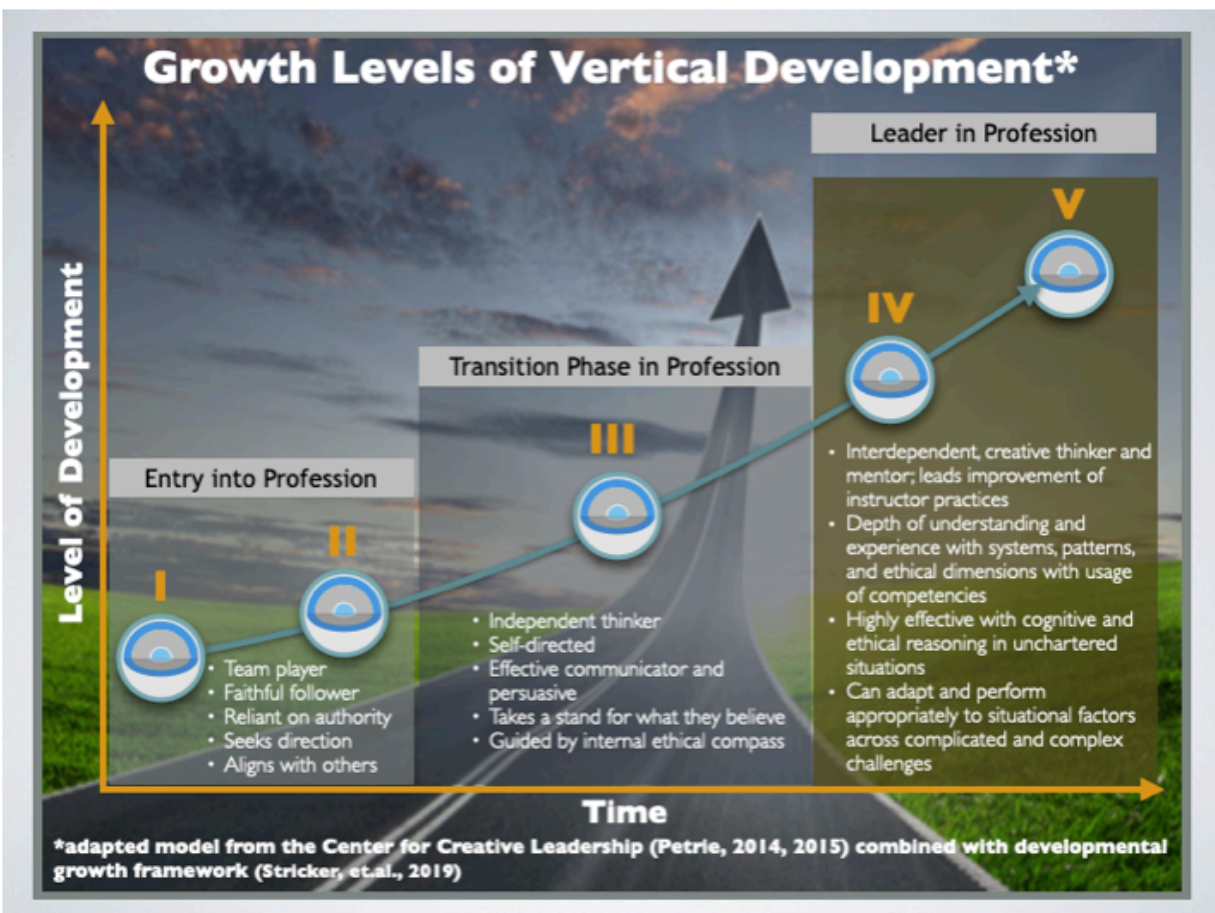

Figure 3. Vertical development growth levels with instructor competencies.

Each level is briefly described below along with recommendations for helping to prepare instructors for transitioning to higher levels of vertical development in professional practice.

Level I

Level I addresses an entry point for instructor competencies as a person's professional identity formation takes shape in the early years of practice. At this level a sense of effectance with instructor com-

petencies is largely driven from rejection or acceptance by authority figures. Regardless of the range of instructor roles at Level I there is greater reliance upon explicit standards of performance for determining expected behaviors with the use of instructor competencies. Successful transition to the next level is primarily driven by increased exposure and interaction with coaches, mentors, and accepted authority figures for developmental growth.

Level II

It is at Level II wherein an instructor is most likely to enter a formal developmental apprenticeship or program of study to meet expected development of knowledge and competencies associated with a profession employing instructional competencies. Developmental instruction in the profession plays an important role for introducing and preparing the professional for skillful performance with usage of competencies dependent upon higher levels of cognitive and ethical reasoning skills. Preparation for and entry into professions, particularly those relying upon scientific methodologies, helps the entering professional to be aware of personal bias and assumptions; be willing to reinterpret experiences on basis of input from 3rd-party observations from scientific disciplinary boundaries, collected data, and analysis. Successful transition to the next level is primarily driven by a combination of increased experience with challenges cutting across disciplinary boundaries facilitated by being presented with incongruities of ideas and ways of knowing, thinking, and doing. Incongruities often take the form associated with analytic reasoning within the discipline, that fall short of satisfactory explanations and expected outcomes or results when facing challenges or phenomenon cutting across disciplines. Development of professionals, in preparation for the next level, is to engage them with efforts to address challenges benefiting from collective areas of expertise spanning multiple disciplines.

Level III

At Level III a professional shows increased value for and willingness to consider knowledge and perspectives in the usage of instructional competencies arising from multidisciplinary viewpoints. It is also at this level that a professional can readily perceive there are multiple ways of knowing, accompanied with limits introduced by reductionist thinking and compartmentalization of knowledge when faced with different types of challenges. At this level the professional shows signs of valuing and being able to use multiple ways of knowing to reframe instructional design challenges or problems spanning complicated and complex qualities. Successful transition to the next level is more challenging to make for the professional than the previous levels since it involves deeper commitment to engage with incongruities presented with overall analytic thinking when facing complexity and working with incomplete information and unknowns (Slaughter, 2017). Skillful coaches and mentors from Levels IV and V are necessary to help guide the development of the professional for creative usage of competencies requiring highly integrative cognitive and ethical reasoning skills in reflective practice with instructional design wherein there are no text-book solutions for addressing complexity under high levels of uncertainty and risks (Slay & Smith, 2010; Schein, 1978). This includes tolerance for solution pathways are very likely to have emergent properties and require divergent ways of thinking and juxtaposition of opposing ideas and perspectives, associated with collaborative effort. Development of professionals, in preparation for the next level, involves increased mentorship in activities requiring collabora-

tive (and other interdisciplinary) effort spanning designs making use of live, virtual, and constructive (LVC) contexts for addressing complex challenges unlikely to be encountered in current practice or environments for level III (see Dörner, 1989, p. 192). LVC environments involve combinations of live and virtually-connected participants to include combinatorial forms of LVC involving experts across domains connected locally and virtually in teams within and across disciplinary boundaries and organization types. Instructional designs should present complex challenges where solutions are not known and will very likely require new approaches involving interdependent sources of knowledge, thinking, and doing in a highly fluid situations involving constant change, moderate levels of risk, shared sense making, commitment, and execution.

Level IV

Level IV of vertical development of instructor competencies represent professional effectiveness to perceive porous connections among divergent ideas for novel and effective instructional design, facilitation, or evaluation challenges. At this level a professional values network associations among disciplines; displays understanding of systems and design thinking. In the face of complexity, involving interdependencies among opposing ideas, perspectives and observations professionals at this level are highly skilled and capable of building coalition of effort requiring diverse areas of expertise and prolong effort where solutions are not known. Instructors practicing at this level place considerable value on multiple ways of knowing and sources of evidence and can collectively and distributively engage others for effective interdependent effort and results. A Level IV professional possesses capability to recombine new knowledge from across disciplines for new insights and interdisciplinary knowledge and insights in the usage of instructional competencies. Development of professionals, in preparation for Level V is similar to Level IV except for the in-depth inclusion of the professional into an existing transdisciplinary effort to observe and learn first-hand from interacting with highly skilled professionals making use of meta-skills, language, and symbols for communicating and working with complexity, via porous disciplinary and organizational boundaries, to synthesize and fuse instructional design ideas and competencies resulting in doing what has not been done before under high levels of risk. There is the element of pioneering and leading others into and through unknown design and application frontiers often involving highly interdependent usage of cognitive and ethical reasoning skills coupled with the means to wisely act with commitment.

Level V

Level V is the pinnacle level for professionals who can envision and creatively leap to new insights and innovative problem reframing yielded from transdisciplinarity fusion of creative insights for novel instructional design challenges (by sustained collaborative effort among people spanning porous disciplinary and organizational boundaries). Professionals at Level V are sympathetic and persuasive in communicating value of new insights and building trust-based relationships and dialogue among and across porous disciplinary boundaries to accomplish what has not been done before involving synthesis-based, self-reflective, transdisciplinary, and collaborative effort. Professionals at Level V serve as senior coaches and mentors, steward the overall culture of the profession, guide the purpose and evolution of the development in the profession, and lead the professions in its service to society. It is in-

cumbent of Level V professionals to also steward the next generation of professionals at this level to assume greater responsibilities for mentoring Level IV professionals for successful transition to Level V.

Overall, the levels of vertical development presented above depict professional growth in the form of an epigenesis process involving increased differentiation and elaboration of various usage of instructional competencies from simple forms to highly creative and novel designs for effectively dealing with complex instructional design challenges. The process revolves around social interactions and environmental influences interpreted by a person for assimilated or accommodative responses using evolving levels of maturing cognitive and ethical reasoning skills (see Erickson, 1956; Kohlberg, 1976; Piaget, 1950; Perry, 1999).

Understanding the nature of transitions between levels of vertical development is key for addressing how to help instructors improve effectiveness in the usage and creative application of instructor competencies across the professional span of service. Research by Perry and colleagues (1999) highlight the following elements associated with helping a person transition from one level to the next (pp. 234-242):

• develop meta-thinking about growth (insight about one's current situation to envision and value future growth and recognition that growth can take place along the dimensions of cognitive and ethical levels throughout life) is facilitated by exploration and reflection of present levels of competency development and what higher levels of development entails

• willingness to transition to one level to the next higher growth level is characterized by a felt need to address a perceived choice to either re-orient identity of a professional self towards moving to the higher level or to "escape" by detaching or alienating from committing to growth committing to growth is more likely when there is a sense of membership in a community wherein there is perception that growth choices and struggle are commonly experienced by peers, mentors and teachers and there is openness among members about their own growth journeys (see Argyris & Schön, 1974, p. 157)

• mentors, coaches, and teachers should engage with junior members in the community to help integrate their learning with active and regular interpretation of their lives, as generally relevant to the junior members' perceived level of effectance with the usage of competencies, to best challenge the member for performing at the leading edge of their growth level

• each transition to a higher growth level requires courage by a professional to assume risks for each forward movement (e.g., risks are associated with how the next growth level challenges an existing worldview, identity, and role in a community); consequently, although the professional needs to make the decision to go forward, they ought to be encouraged and invited to take up new responsibilities in alignment with the higher level and be confirmed by members in a community representing the higher growth level

There is considerable distance between the ideal practices described above and the reality of current developmental practices offered via contemporary informal and formal instructional competencies development programs. There are many reasons for this current state. For one, while there is general recognition of the value of professional growth for instructors, regardless of time in practice, it is rarely ad-

dressed using a vertical development approach with the means to provide a basis for expected growth to higher levels for increasing professional effectiveness with the use of instructional competencies. And, there is generally a lack of precision to introduce calculated incongruities required to instigate movement toward higher growth levels in professional practice. There is also the need to prepare instructors and mentors with the means to steward professionals, at transition points, to better reflect on present incongruities with the usage of instructional competencies to encourage continued growth.

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