CONNECT:
Making Learning Personal
Reports from the Field by the League of Innovators

# Personal Competencies as Propellants of All Learning

**Joe Layng and Sam Redding**

The **Center on Innovations in Learning** developed its "Conversations with Innovators" event as a forum for its **League of Innovators** to engage in intimate discussions with author/experts on selected topics. The 2016 event was held at Temple University on June 22nd and 23rd. In each of three sessions, pairs of experts—each of whom had written a chapter for the Center's recent publication, ***Handbook on Personalized Learning for States, Districts, and Schools***—made brief 5–7 minute presentations on the designated topic, after which the floor was then opened for participants' questions and discussion. The lively oral discussion was enhanced by participants' postings on Padlet, an online virtual bulletin board. In three sequential issues of ***Connect***, the conversation from each session continues, with author/experts responding to the overflow of questions and comments. This issue of *Connect*, presents two authors' responses to questions related to the topic of Session 1, **Personal Competencies as Propellants of All Learning**. The next two issues present, respectively, questions arising from Session 2, in which Melinda S. Sota and Karen Mahon addressed the topic of **Personalizing Instruction: Student Voice and Choice**, and from Session 3, in which Janet S. Twyman and Ryan Baker dealt with the topic of **Information Technologies to Advance Teaching and Learning**.

Sam Redding and T. V. "Joe" Layng were the presenters and respondents for Session 1. Dr. Redding, who wrote the chapter **"Competencies and Personalized Learning,"** is CIL's senior learning specialist. Since 1984, Dr. Redding has served as the executive director of the Academic Development Institute (ADI) and from 2005 to 2011 as director of the Center on Innovation & Improvement. He headed the development of **Indistar**, a web-based school improvement technology, and Indicators in Action, web-based tutorials for online professional development for educators.

Dr. Layng, who wrote the chapter **"Converging Qualities of Personal Competencies"** for the ***Handbook***, has expertise in behavioral psychology focused on education. He cofounded Headsprout and was the chief architect of Headsprout Early Reading and Headsprout Reading Comprehension online programs. Prior to his work at Headsprout, Layng served as director of academic support and dean of special training programs at Malcolm X College in Chicago, where he developed the award-winning Personalized Curriculum Institute. He is now a partner in Generategy, LLC, which provides educational software applications for mobile devices.

Below are the questions asked by attendees, followed by the authors' responses.

This field report is the seventh in a series produced by the Center on Innovations in Learning's League of Innovators. The series describes, discusses, and analyzes policies and practices that enable personalization in education. Issues of the series will present either issue briefs or, like this one, field reports on lessons learned by practitioners recounting the successes and obstacles to success encountered in implementing personalized learning.

Neither the issue briefs nor the field reports attempt to present in-depth reviews of the research; for those resources readers are encouraged to access the Center on Innovations in Learning's resource database. Topics should be of particular interest to state education agencies and district and school personnel.

**1. Are competencies by their definition behavioral, and so their measurement is simple and straightforward?**

**S.R.**: CIL would probably endorse the notion that competencies are largely behavioral (demonstrated knowledge and skill) but not necessarily simple and straightforward. Other groups would add such things as mindsets, thought patterns, values, and ethics that require more difficult measurement. A competency is an identified cluster of related capabilities, often associated with a role. Competency-based education adds to this definition variation in the time, place, and pace of learning; and criteria, including demonstrated application, to determine and acknowledge mastery.

**J.L.**: Competencies are clusters of related behaviors and are therefore measurable. One form of measurement has to do with the constants of the competency, the other has to do with the outcomes of the application of these constituents used together. See **my chapter** for examples.

**2. Standards vs. Competencies: What is the difference between a standard and a competency?**

**S.R.**: From **my chapter** in the ***Handbook*** comes a not completely satisfactory explanation. "In competency-based education, a competency is identified and its boundaries defined by specifying the specific skills and knowledge contained within it" (p. 6). Sounds much like a standards-based approach. Obviously, learning standards are useful in this exercise, and a standards-based system differs from a competency-based system primarily in its: (a) close alignment with in-school, curriculum objectives; (b) reliance on written assessments; and (c) conformity to a set temporal frame (grade levels and course sequences, for example).

In other words, a standards-based system does not necessarily "vary the time, place, and pace of learning or include a behavioral demonstration or application of the skills and knowledge to determine mastery."

**J.L.**: Standards specify outcomes and may require multiple competencies to meet. For example, this next generation science standard for second grade requires both cognitive and metacognitive competencies: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

**Dr. Redding discusses the difference between a skill and a competency.**

**3. What is the difference between a skill and a competency?**

**S.R.**: Probably grain size, which seems to be the answer to lots of things. A competency is a bundle or cluster of related skills and knowledge, often aimed at the performance of a role. So a competency would include a set of identified skills, the mastery of which would be demonstrated through application.

**J.L.**: As noted above, competencies are clusters of skills.

**4. Is it necessary to "measure" a student's personal competencies?**

**S.R.**: In some ways, the ultimate measure is the student's success as a learner, given that personal competencies are defined as propellants of learning. That is an indirect measurement, however, and finding ways to measure the competencies themselves

is a worthy endeavor that leading educators have encouraged (see the **chapter by Dr. Allison Crean Davis** and the reference to Linda Darling-Hammond in **my chapter**). In identifying the teacher actions (practices) that contribute to students' personal competency, CIL has provided a means for examining the behavioral results of the teacher actions in students. Some of the personal competencies are more easily measured than others. Cognitive competency lends itself to measurement in traditional ways, including standards-based assessments. Metacognitive competency can be defined in procedures that students employ in learning, and the knowledge of and facility with these procedures can be demonstrated and measured. The world of social/emotional learning abounds with measures, including those proffered by CASEL and PBIS in determining the effectiveness of programs. Motivational competency may be the most difficult to directly measure, although motivation researchers, including Carol Dweck, are trying ways to measure it, and teachers "know it when they see it." We may not have an exact science for all of this yet, but it is emerging.

**J.L.**: Yes, as noted in Question 1 above.

**5. How do the personal competencies interact in learning habits?**

**S.R.**: As Dr. Layng explains in **his chapter**, the four personal competencies converge in the behaviors associated with learning. We have called this the Learning Habits.

**J.L.**: A habit is a pattern of behavior that has become near automatic in its execution. One would hope that many of the behaviors that make up the clusters defining a competency would approach the level of habit.

**6. Is the role of one who exemplifies personal competency that of a learner?**

**S.R.**: Yes, as we have defined and oriented the personal competencies. We assert, however, that these same competencies have wider application, including learning outside school and in other forms of goal pursuit.

**J.L.**: Yes, and a teacher; see **my chapter**.

**7. They have these skills and this knowledge but how do we measure their willingness or the likelihood that they will use them?**

**S.R.**: Sounds like a question of motivation, and in this case motivation to learn – or, more precisely, motivation to engage in the given learning task and persist with it. The test is simply whether or not the student engages and persists. The trick is for the teacher to adapt the task to the sweet spot that maximizes the student's engagement and persistence and to, over time, build the student's "growth mindset," or attribution of results to effort, and confidence in applying learning strategies likely to produce results.

**J.L.**: One good measurement approach is to record subject matter approach tendencies. See Robert Mager's delightful little book *How to Turn Learners on Without Turning Them Off* [Atlanta, GA: Center for Effective Performance, Inc., 1997], for a guide on how to do this.

**8. Traits vs. Competencies: Is the reluctance in equating competency with trait that (1) traits are not malleable (and not teachable) AND/OR (2) a trait does not describe the role in which a**

**given behavior has value, as a competency does?**

**S.R.**: These are two very good distinctions. I think we discussed the fact that social/emotional competency is addressed from three directions: (1) behaviors to be modified/learned; (2) skills to be learned; or (3) traits that describe the general inclinations of the individual, such as "grit" and "resilience." Our preference is for 1 and 2, and we think they are really very similar. But when expressed as a "trait," a bundle of skills/behaviors takes on an unfortunate aura of immutability and is decontextualized, as the question suggests.

**J.L.**: Traits are hypothetical constructs often employed when other explanations are not typically immediately available. Research is pretty clear that most patterns described by behavioral traits can be taught.

**9. Are there good "tools" to measure the affective components of competencies and provide the empirical data we would like?**

**S.R.**: I would not include affective components in definitions of competencies; rather, I would identify the behavioral expressions of what may be called affect and see if there are skills related to them that could be included in the definition of a competency.

**J.L.**: This is a work in progress. The best approach I have seen is being developed at the **Queens Paidea School in New York**.

**Dr. Joe Layng discusses changing assessment instruments under a competency model.**

**10. In planning for personalized learning, how might one design instruction in consideration of culturally based deference to perceived elevated position of a professional/teacher?**

**S.R.**: I don't see anything wrong with deference to the elevated position of the professional teacher and would hope students would possess a degree of it.

**J.L.**: Sensitivity to the type of social/emotional relations discussed in **my chapter** is critical. One must look at all aspects of a learner's background, opportunities, available behaviors, and personal consequences.

**11. How do we vary pace without allowing students to languish indefinitely, unsuccessfully reaching the desired goals or meeting standards within a reasonable amount of time?**

**S.R.**: I think this is the biggest question in competency-based education. To begin with, students vary in the amount of learning they acquire outside of school anyway, as a consequence of differences in home environments and community resources. So we have to ask whether giving more credit for out-of-school learning only amplifies the difference or if, because it is more directed by the teacher/school, the out-of-school learning can increase the achievement of students in less learning-rich environments. At any rate, we don't want to hold any students back. But lets limit the focus of our concern to in-school time, and we still have a problem to address. In mastery learning, time is the variable, but, as this question asks, does removing benchmarks (expectations for achievement at points in time) reduce student (and teacher) motivation and effort and outcomes? The point of mastery learning is that learning (instruction) can be designed and sequenced so that the student must master

necessary antecedents to new objectives before moving forward. That itself raises the question of whether careful instructional design creates efficiencies in learning or unduly constricts the opportunity to learn. And think of the expansion of learning time in the turnaround world and how meager and variable the results seemed to be. Quality of instruction is a better lever than variation in time. The answer to all of this seems to be that we need benchmarks, perhaps readiness benchmarks, to ensure that all students arrive at a threshold before moving on, but that the traditional lockstep of grade levels and connecting expectations to student age will no longer hold sway. The personal competencies become even more critical to optimize each student's learning within the available time, in and out of school.

**J.L.**: Considerations of pace need to be part of the design, evaluation, and intervention efforts. A slow pace should be an indicator to investigate and determine what needs to be established/taught, the absence of which results in the very slow pace.

**12. Personalized learning scale-up: How do you envision personalized learning being scaled up beginning at the state level and filtering down to the local level?**

**S.R.**: We are suggesting that personalized learning can get scaled from the grassroots up, with framing and support from the state. See the draft paper, "**Advancing Personalized Learning Through Iterative Application of Innovation Science**," by me, Janet Twyman, and Marilyn Murphy.

Without worrying about the scientific method approach, giving districts/schools some initial training to understand the concepts, they can begin to "personalize" instruction in small increments and document what they do and how effective it was. This can be shared via the state on a website and in opportunities for the vanguard schools and teachers to present at conferences, and so on.

**J.L.**: Personalization is likely to be introduced in a variety of ways. There are things classroom teachers can do entirely on their own. Other activities will require district or state action. My guess is, that for the nearer term at least, we will see a mix of efforts.

**13. What do you think of Mike Schmoker's [June 4, 2013] article in** *Education Weekly Teacher* **Online entitled "The Lost Art of Teaching Soundly Structured Lessons"?**

**S.R.**: I like it.

**J.L.**: Many of the skills required for successful personalized learning may in fact best be directly taught via soundly structured lessons. Further, even where personalization is fully in place, a learner may opt for a module that involve a soundly structured teacher-provided lesson.

**14. Lesson Planning: Do you have the sense that lesson planning is rare and, when practiced, superficial?**

**S.R.**: Like everything in education, the range of practice assumes a continuum, and a bell curve. But I would expect a high correlation between the quality of lesson planning (instructional design) and the quality of classroom management/instructional delivery, which would strongly impact student outcomes.

**J.L.**: Lessons are planned; the question is the quality of the plans.

**15. How do you see professional learning opportunities morphing in light of a shift toward personalized learning for students?**

**S.R.**: Two things: (1) personalized learning will become a common topic for professional learning, and (2) the tenets of personalized learning will be applied in the design of professional learning.

**J.L.**: To fully realize the full potential of personalized learning will require not only more professional development but, hopefully, the professional learning opportunities themselves will reflect a personalized approach.

**16. It's not all about implementation?**

**S.R.**: The first question is: What are you implementing? It is possible to implement something with fidelity to a design, but the design itself is flawed. So the efficacy of the practice (or program or process) must first be established and carefully designed before considering the implementation plan and the actual implementation to determine the ultimate effectiveness in the specified context.

**J.L.**: Implementation is crucial for any successful program. The criteria for success must be clearly defined and a clear vision of what a personalized classroom or school would actually look like needs to be made explicit.

**17. Accountability: Do personal competencies belong in a state or local performance accountability system, school or educator?**

**S.R.**: Not yet. The methods of assessment for most of the personal competencies are not sufficiently sophisticated to ensure valid results. First, we need classroom-level formative assessments to inform instruction and curriculum.

**J.L.**: Eventually all of the above.

**18. How do you reconcile CIL's definition of personalization emphasizing students' self-direction with Mahon's claim that there is no evidence that supports student choice or control over learning?**

**S.R.**: I think the difference lies in definitions. The room erupted in debate over "agency." Agency is shorthand for a larger understanding of what constitutes motivation, akin to locus of control, growth mindset, and attribution of outcomes to effort. All of these factors, or variations in definition, point to something we might call self-direction. We are less sure that student choice contributes to self-direction and application of appropriate learning strategies. Within CIL there is skepticism about the "student preferences" component of most definitions of personalized learning. In fact, the closest we come in our definition is the phrase "enlists the student in the creation of learning pathways."

**J.L.**: Personalized learning not done well will not have a good outcome. In **her chapter**, Dr. Sota describes some of the requirements for personalizing instruction; and in my chapter, I describe how competencies work together and must be specifically taught. Many of the programs described by Dr. Mahon do not meet those criteria.

**19. Why is it so hard to transition a competency model into the realm of accountability to academic standards?**

**S.R.**: I will defer to Dr. Twyman for a better response. The first difficulty is in distinguishing a

competency model from a standards model and deciding if the change is really necessary given that we are still struggling, in many places, with standards-based learning.

**J.L.**: The key difficulty is moving away from time-based, in-seat requirements to ones based on mastery of competencies. Accordingly, the assessment instruments will have to change as well, which will require a reinvestment in new assessment instruments and tools.

**20. Please speak more on the order and way they should be taught.**

**J.L.**: I addressed this in **my chapter**.

**21. Enhanced Lesson Design: What is enhanced lesson design?**

**S.R.**: See our draft working paper, "**Advancing Personalized Learning Through Iterative Application of Innovation Science**," by me, Janet Twyman, and Marilyn Murphy.

**22. In light of your research on motivation and competing priorities, how do you react to Baker's information on EDM/LA in the affect realm assisting with motivation analysis?**

**S.R.**: Dr. Layng will surely offer a thorough and erudite response to this question while I go to the **Baker chapter** to remind myself what EDM/LA stands for.

**J.L.**: Motivation can at least be measured by assessing subject matter approach tendencies. See reference to the Mager book above. Other considerations are described in my chapter.

**23. A Teacher's Relationship With Students: How is it important?**

**S.R.**: From the CIL practice guide, ***Through the Student's Eyes***: "The teacher possesses the power of relational suasion that technology cannot match. Through the teacher's example and her instruction, the student learns to value mastery, to raise expectations, to manage learning, and to broaden interests. The teacher is singularly capable of teaching social and emotional skills and engaging families in their children's academic and personal development" (pp. 6–7).

**J.L.**: Teacher–student relationships take on additional importance in a personalized environment. Interestingly, the relationship can be multifaceted, with facilitation, encouragement, and positive correction being extremely important.

**24. Importance of Definition?**

**J.L.**: Good definitions provide the criteria against which we judge the adequacy of our efforts. Accordingly, spending time to get definitions right is an important early step in any educational process.

**25. Pre-service Educator Programs: As powerful as they are, personal competencies should be a part of every educator preparation program across the country!**

**S.R.**: Agreed.

**J.L.**: It would be good if educators themselves demonstrated the competencies.

**26. In the world of personalized learning, what is the parents' role and how do you engage parents in that "mind shift"?**

**S.R.**: See the CIL practice guide ***Personal Competencies in Personalized Learning*** for ideas about parent engagement in the school community.

**J.L.**: Teaching parents to be active listeners and teaching them how to praise and positively correct would be quite helpful.

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