



# CONNECT: Making Learning Personal

Reports from the Field by the League of Innovators

## Student Autonomy and ESSA: A Voice for Choice?

Mark Williams and Karen Mahon

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. In addition, this year, we added a session where we heard from practitioners implementing innovative approaches to personalized learning. The 2017 event was held at Temple University on June 14th and 15th. In a series of sessions, pairs of experts made brief 5–7 minute presentations on the designated topic, after which the floor was opened for participants’ questions and discussion. The lively oral discussion was enhanced by participants’ postings on Padlet, an online virtual bulletin board. In two issues of *Connect*, the conversation continues, with author/experts responding to the overflow of questions and comments. In Session 2, Gregg Dionne and Jeuné B. Provost discussed **On the Ground: SEA Examples of Innovation in Action** (click [here](#) to read that issue of *Connect*).

In this issue of *Connect*, Mark Williams and Karen Mahon respond to questions raised in Session 1, devoted to the topic **Student Autonomy and ESSA: A Voice for Choice?** Mark Williams brings 26 years of experience in teaching from high school to graduate levels, and served as the Illinois state director of Career and Technical Education. He studied under the noted behaviorist Israel Goldiamond at the **University of Chicago** and has advanced degrees in theology from the Angelicum University in Rome. He currently serves as the Vice President of the **Academic Development Institute** in Lincoln, IL, which works with families, schools, and communities so that all children may become self-directed learners, avid readers, and responsible citizens, respecting themselves and those around them. He is CIL’s scientific advisor, and contributes to CIL’s focus on the science of innovation, personalized learning, and personal competency.

Karen Mahon is a learning scientist and instructional designer at **Simmons College** in Boston, MA. She is an educational psychologist with more than 15 years’ experience in education technology for both K–12 and higher education. Prior to joining Simmons College, Karen was the president and founder of Balefire Labs, an online educational app review service that focused on evaluating the instructional quality and usability of mobile apps for grades preK–12. She is also on the advisory board for the **Cambridge Center for Behavioral Studies**, and the scientific advisory board for CIL.

This field report is the eleventh 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.



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

**1. How do we provide an environment that ensures students feel “safe” in making choices?**

**K.M.:** Feeling safe is much like anything else...we learn it. The best recommendation I can make for building this feeling is to start out by allowing students to “choose” from among alternative tasks that they can do. Immediately, right out of the gate, you want them to encounter success, so don't give them anything challenging right away. This isn't about skill-building yet, this is just about encouraging them to take risks by choosing, so the tasks themselves shouldn't add pressure by being difficult. Also, start with just a few choices. As students become more comfortable making choices, vary the choices, making tasks more challenging and dropping out tasks that are too easy or no longer represent the learning goals. We want the students to build confidence and feel safe in making choices that are challenging, so make small changes over time to engender that.

**M.W.:** I agree with Karen. Adults typically provide the options among which the students choose, and depending upon the age and readiness of the student, the options can include ones likely to have a positive outcome or a wider set of choices as the student gains in decision-making ability and confidence. The feedback from the adult in response to various student choices can likely shape student behavior; as choices are made, adults can assist students in evaluating the consequences of their choices and reflect on strategies for making productive choices.

**2. Is there a significant difference in this conversation between self-efficacy and self-worth?**

**K.M.:** I think in order to compare the terms we would first need to operationalize them. How would we know an individual has self-efficacy? How would we know an individual has self-worth? When we say that someone “has self-efficacy” it is often because we see them continuing to try when encountered with challenging tasks. Perhaps they tell us that they believe they can be effective, that they believe they can be successful when encountering



Mark Williams discusses the four propellants of learning: cognitive competency (“what I know”), metacognitive competency (“how I learn”), motivational competency (“why I learn”), and social/emotional competency (“how I relate”).

difficult tasks or changing their environments. Usually the “effectiveness” is targeted at problem solving of some sort. With self-worth, when we ask “How does a student demonstrate self-worth?” it seems likely that we could come up with examples of behaviors that are not necessarily related to solving problems (though they might be). Perhaps self-efficacy, then, is a subset of self-worth according to the way I've defined them? You might arrive at a different conclusion based on how you define the terms. Like so many of the terms we use, the devil is in the details of how we operationalize them.

**M.W.:** Self-efficacy, or belief in one's ability to achieve a goal, has been described as one of three ‘filters’ that relate to a student's choice to engage in a learning task set forth



by a teacher (the other filters are “value” and “growth mindset”). Therefore, self-efficacy is limited to a specific area of competence or type of challenge. Self-worth is likely a more general concept that could include generalized self-efficacy (if such a thing exists) but does include other types of self-awareness, including awareness of worth, which would not extinguish if one were unable to achieve a particular goal.

### 3. Are we okay with having as an end in mind the idea of students working to shape the world around themselves?

**K.M.:** In short, yes! Experts in all domains are pretty readily able to define what mastery performances look like in their respective fields. In school, one of the primary goals is to prepare students to go out into the world and have jobs and be contributing members of society. In order to prepare them, educators must define the mastery performances that are most critical for students to achieve by the time they move to the next grade. Usually, we do this through standards. Now, it may be that the paths that students take to achieve mastery are different, customized and personalized based on their own unique aptitudes and skillsets. But if we, as educators, haven’t defined what the ultimate performance goals are, we’ll run into difficulty arranging the learning experiences that will help students get there. I’d suggest, in fact, that we are negligent in turning students loose without knowing where we want them to end up. If we, and they, don’t know where they’re going, how will any of us know when they’ve arrived?

**M.W.:** This is an important question. If the “end in mind” of enhancing agency or self-efficacy is student confidence in shaping the world around them, then it is a worthwhile end. In some respects, the opportunity to effectively shape our environment expresses the continuous interaction of thought, intention, action, and consequence, and provides the context from which various schools of philosophy and psychology develop their understanding of human nature and dignity.

Sam Redding<sup>1</sup> touches on the import of this worthwhile end as he writes: Agency is the individual’s execution of choice of situations, challenges, and tasks among competing opportunities. A person’s sense of agency is explained in two concepts, each with its own body of research in psychological literature: locus of control<sup>2</sup> and attribution.<sup>3,4</sup> The two concepts inform an understanding of the urge to act, and in terms of agency, they bear especially on the individual’s propensity to initiate goal-directed behavior. When the student both assumes control over actions that lead to outcomes (internal rather than external locus of control) and takes responsibility for the efforts that produce the outcomes (attribution), he is inclined to engage and persist with goal pursuit (p. 14).



Karen Mahon discusses student agency, and the belief that personal efficacy can lead to achievement. She says a growth mindset does not equal achievement – “Just because I *think* I can do it does not mean that I can do it.”

<sup>1</sup>Redding, S. (2014). *Personal competency: A framework for building students’ capacity to learn*. Philadelphia, PA: Center on Innovations In Learning.

<sup>2</sup>Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*, 45(4), 489–493.

<sup>3</sup>Weiner, B. (1974). *Achievement motivation and attribution theory*. New York, NY: General Learning Press.

<sup>4</sup>Weiner, B. (1980). *Human motivation*. New York, NY: Holt, Rinehart, & Winston.



Also see Albert Bandura (1986)<sup>5</sup> on reciprocal determinism whereby the person is influenced by his/her environment but also influences and shapes his/her environment.

**4. How do we take this to the teacher level when they have curriculum pacing guides that don't permit them to allow for a lot of student control and there's constant pressure to move kids on an impersonal timeline?**

**M.W.:** Helping teachers see the influence they have in enhancing student agency is itself a noble goal; after all, if the teacher is unaware of their own self-efficacy in leading individual students to learning, the same teacher is an unlikely model of self-efficacy for students in their care. The question seems to assume that teachers are victims of their environment. The teacher's job is also to model and teach the actions by which a person intentionally learns, so keeping pace with a guide should include enhancing students' capacity to learn.

**5. Can counselors become coaches of teachers who need to provide more career guidance and meaningful student choices?**

**K.M.:** I don't see why not. The challenge is in creating the architecture that maps the student choices to the ultimate career goals. It's essentially the same task as mapping an academic curriculum to performance outcome standards. But I think it's worth doing.

**M.W.:** Yes, if the counselors possess expertise in career development as well as coaching skills. In my experience, many counselors are given little formation in this area, and their responsibilities seldom provide the time and incentive to express such expertise.

**6. Does belief in personal efficacy influence the next set of strategies that should be tried to lead toward the next achievement?**

**K.M.:** Aha. Is this a trick question? I don't think that belief in personal efficacy influences the next set of strategies that should be tried, but I believe it is related, albeit indirectly, to which next set of strategies will be tried. Here's how: Remember we talked in Philadelphia about how achievement impacts self-efficacy and achievement also impacts persistence... that self-efficacy isn't causal. But you know what is causal in that equation? Achievement. So, the degree of achievement that is experienced with different strategy sets will impact which strategies will be chosen in the future (i.e., the strategies that have produced success are more likely to be chosen than those that have not) and, probably, in what order they are selected. Self-efficacy is almost certainly correlated with the achievement, but it is the achievement history with the strategies that will have the impact, not the self-efficacy itself.

**M.W.:** Karen has put her finger on the heart of this important question. I can only add another question to her response (for which I know she has an insightful and elegant answer): If there is such a thing as self-efficacy (belief in one's ability to achieve the goal), what is the mechanism, if any, for which goal is chosen among many? Does self-efficacy perception influence choice of goals as well as strategies?





**K.M.:** Mark, you're setting the bar high for me! I'm assuming here that you're thinking of a situation in which a student has free choice from amongst an array of possible goals. I think the mechanism for choosing the goal is essentially the same as the choosing of a strategy...past achievement, success and experience.

Let's take a simple, non-academic example: I'm doing some goal setting for fitness. I have a whole array of possible goals from which I can choose: Swimming a mile, running a marathon, or cycling in a century ride (i.e., a 100-mile ride). How I progress may be impacted in multiple ways, based on my learning history. Possible factors include whether or not I've been more successful in one sport than another and whether or not I have friends who do these sports who can cheer me on. But which sport I choose is not the only aspect that is likely to be influenced by my past experience. Where I choose to start with the goal is also impacted. Let's say I choose to train for a marathon. How far I choose to run the first time out will be impacted by my past experience and success with running, and what distances I've run in the past. How quickly I increase my distance or pace is also likely to be impacted by whatever my past experience is...even if it's none. A person with no past experience running is likely to approach it differently than someone with more learning history.

So again, just as with the strategy discussion, in the case of choosing goals, the success and past achievement influences the current choices *and* likely influences students' reports of self-efficacy in achieving the goals. But the self-efficacy does not cause the choosing of the goals. The learning history is the causal factor.

I think this begs a different question though, and that is the question of how we can encourage students to choose goals that are riskier for them; how we can encourage them to choose goals for tasks in which they have not experienced success in the past or even tasks for which they've experienced failure. How can we get students to choose alternatives that they don't really want to choose, but we know that they need to work on and improve? What do we do with a kid who never chooses math when given the option? The answer is that we need to work with the child to build a positive learning history. We can still do this in a free choice situation, but we need to stack the deck a bit in order to get the child to choose the option we want by making the other options even less desirable. Let's say that we need the child to work on addition facts. Perhaps we offer an array of options that include the following: 2 minutes of math facts, 20 minutes of writing, or 30 minutes of science vocabulary. In this way, we are trying to get the student to choose math by making it the shortest task. There are other ways that we could manipulate the choices...by offering to let the student work with a preferred friend on a non-preferred task, to allow the student to sit in a bean bag chair to work on a non-preferred task, or to allow the student to work for a preferred reward for a non-preferred task.

The point of all of this is that choice and preference aren't factors that are fixed and live inside of the student. We can influence their choices and preferences by manipulating the environment. Kids who currently hate math and don't feel confident in their own math abilities don't need to avoid math forever. We know how to change it, and it's by establishing



a positive learning history with math for those kids, making it more likely that they will choose math goals in the future. And as we arrange opportunities for success and achievement, self-efficacy comes along for the ride.

**7. If we create the perfect teaching sequences and learning events for students, what happens when they come across something new and difficult? How do we prepare them for possible failure? What strategies do we teach them? How do we teach students that sometimes they may have to figure out their own, new strategy? The teacher won't always be there to provide a menu of strategies.**

**K.M.:** What you're really describing here is teaching students to apply problem-solving strategies. Yes, they will definitely encounter novel situations for which they may not have a readily available "template" for precisely how to solve it. So they need to have a method of approaching new problems, thinking through the task requirements, and figuring out what solutions to try. That's problem solving. Talk Aloud Problem Solving (TAPS) is a program for teaching kids exactly these kinds of methods. You can read more about it here: <http://files.eric.ed.gov/fulltext/EJ958875.pdf>. But at its root, the idea is that we need to teach kids a generic set of skills that they can apply to any novel problem that they need to solve. Cookie-cutter skills for specific problem types only take us so far. Teaching broader problem-solving skills allows generalization to new situations. It is true that, as students employ problem solving, that they may not achieve success on the first try, or "fail." But responding to that setback, and how to react to it, is baked into the problem-solving strategy itself. Dead ends and U-turns are just part of the problem to be solved.

**M.W.:** Karen has addressed this well; I have nothing to add.

**8. Critical Skills and Strategies – What are the essential skills and strategies? The identification and monitoring become a priority in planning and implementing.**

**K.M.:** A whole paper could be written just on this topic, but if I had to prioritize one thing, it would be problem-solving skills, because they can be applied to any content. The great thing about the TAPS program that I referenced earlier is that it can be utilized even with young children because they only need to be able to talk, not read or write, in order to follow the steps.

**M.W.:** Skills in observation, description, seeking underlying causes, consulting authoritative sources, developing hypotheses, and application of the principles of logic. A grounding in the rules of formal logic will go a long way in helping a student solve problems and evaluate situations.

**9. Will allowing mistakes in learning strategies without having the consequence of achievement so readily connected to strategy use make them more willing to put in the effort for learning?**

**K.M.:** If I understand this question correctly, it seems to be asking if we should "build in" opportunities for students to make mistakes because it will make them try harder to be successful. The short answer is 'No'. You don't need to arrange opportunities for students to make mistakes; they will inevitably make some. Now, the answer to how making mistakes impacts future efforts is more complicated and has a lot to do with the proportion of mistakes versus correct responses. Too many mistakes and kids are likely to stop trying,



so it's important not to let it get that far. A pattern of frequent mistakes usually indicates the learner doesn't have the requisite skills for the task, and the level of difficulty needs to be lowered and/or the student needs explicit instruction in the task requirements. Occasional mistakes are unlikely to show this same decrement effect on "trying," but I haven't seen any empirical evidence to suggest that they will build persistence, either. Persistence, according to the literature, is built based on positively reinforcing consequences. It doesn't mean that every correct response has to be followed with a reward. Yes, during the time when a student is acquiring a new skill they will need frequent teacher feedback to let them know they're doing well and getting the answers correct (unless the student is working in a digital environment in which that is arranged by the program). But once the student has reached the point where they can identify their own successes and failures, the experience of achievement is what builds persistence.

**M.W.:** Exactly – there are other consequences to student behavior in addition to goal success, and teacher feedback is a powerful one. Frequently teacher feedback may be the higher leverage feedback relating to student behavior, and so can be employed to support student effort when a chosen strategy is not apparently successful toward the immediate learning goal. Knowing that a strategy is not effective is itself the attainment of a goal.

#### **10. Should we equip students with several ways (strategies) on how to approach learning? (As opposed to just using different strategies in teaching?)**

**K.M.:** Yes. A single strategy isn't going to work in every situation, so students should have multiple tools in their toolbelts. And then...this is going to get very meta...they need to learn the *strategy* of applying different strategies until they find one that works. I think it's important to remember that a strategy, put simply, is merely a way of going about solving a problem. Sometimes the strategy is very concrete, with explicitly fixed steps: "How are you going to go about solving this addition problem?" But oftentimes the strategy is less explicit and depends on the task at hand. These are the more generic strategies, such as problem solving. A student needs a combination of specific and generic strategies so that, no matter the situation, they have something they can employ.

**M.W.:** Students benefit from a continuous introduction to a variety of strategies to achieve goals and solve problems, including strategies to determine which goals should be pursued and how to accurately define problems. I suspect that students often relish the addition of additional strategies when awareness of the malleability of self-efficacy is awakened. Interest in the mastery of strategies and appropriate application of particular strategies is reinforced by both an awareness of malleability and success in application of strategies.

#### **11. How does a student's choices, beliefs, etc., turn around and influence what strategies should be selected for teaching and learning?**

**K.M.:** Interesting question that I'd like to answer in two parts. Initially, I don't think individual student choices and beliefs need to (or should) influence the strategy selection for either teaching or learning. I think of the strategies as the overall architecture of the learning environment. Designing a different architecture for, potentially, every student, based on individual preferences, would be unwieldy and, in my opinion, unnecessary. I think the place to build in student choices



(based on preferences, beliefs, family background, etc.) is within the architecture. So, for example, all students would be taught to apply the same problem-solving routines, but the tasks to which those routines are applied could vary, based on their choices. Same with something like reading strategies...some learners might be working on decoding and apply the appropriate strategy for that; others might be working on building fluency and apply the appropriate strategy for that. The

strategy would be consistent across all learners working on the same learning goal, but they could apply that strategy to different content, perhaps book selections that are determined by their personal interests and hobbies. What is important in teachers selecting strategies is that those strategies are effective. If a given strategy isn't effective, teachers should help students try alternate strategies. Now, here's part two of this already long answer: As students try different strategies, and experience varying levels of success, preferences will emerge because kids will prefer the strategies that help them achieve success. This is the point at which kids' choices and preferences, for the strategies themselves, should be taken into account: Once they've had enough experience with the strategies to make meaningful judgments.

**M.W.:** Typically, the more strategies that students become skilled in using, the better, and success in using strategies will influence choice and perception of efficacy. Teachers should grow in expertise in a number of strategies that can apply to each learning goal, and model to students' ways of selecting strategies. Studies show that students are inclined to use familiar learning strategies without regard to their effectiveness. In part, this is because of their limited repertoire of available strategies, but also because of constricted self-regulatory abilities.



Mark Williams and Karen Mahon field questions from the session's participants.





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The **League of Innovators**, a network of state education agency and Regional Comprehensive Center personnel with an interest in learning innovations, is organized and administered by the **Center on Innovations in Learning**.

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