The Dawn of a New Era for Learners 3

Jim Rickabaugh

We stand at the dawn of a new day in learning. Like the beginning of any new day, at first it can be difficult to see, only a few rays penetrate the darkness of the night. But soon the rays begin to stretch longer and connect with each other. Then quickly, the full glory of a new day is upon us.

For the past century, schools have been designed and operated much like early industrial assembly lines. Students have been grouped by age and processed through the system with little regard to the ways in which they learn best and the variations in time they may need to learn. They are asked to learn on demand, driven by a preset schedule and pre-planned lessons, delivered at a pre-defined pace. When students fail to comply with the expectations of the system, either in their behavior or learning, they are treated as problems and are identified as needing remediation. There is rarely consideration given to whether other factors may be at play - the instructional approach used, the readiness of the learner for the content presented, or a mismatch between what the learner needs and the system expects.

This education system rests on the premise that the work of educators and schools is to transfer information, knowledge and skills from the heads of adults to the heads of students; often referred to as the "empty vessel" theory of teaching and learning. This approach had some merit at a time when information was difficult to access and engaging people with the knowledge and skills needed to support learning on demand was nearly impossible. Today, information is ubiquitous and technology offers the potential to learn almost anything at any time, any place and in any way. We can no longer afford to have schools be driven by instruction, assuming learning will occur on demand. Schools of today and tomorrow must be driven by learning, with instruction as a crucial, but flexible, resource to support learners throughout their educational journey.

During the last quarter of the 20th century there was growing realization that the industrial era design of schools was not producing the results needed for the

knowledge era. The National Commission on Educational Excellence was formed in the United States during the early 1980's to study this problem. While the information reviewed at the time made it clear that the current design of schools was not producing adequate results, the commission concluded that the problem was lack of effort by and accountability of those within the system. (NCEE, 1983) Sadly, as a result of the report, most education reform efforts over the past three decades in the United States have focused on improving the legacy system by demanding more accountability for educators and students, offering a wider array of programs for students who do not fit well into the system, and blaming and shaming when expected results do not materialize.

However, recently there is growing understanding that the problem is not primarily the people within the educational system. The problem is the system itself and the way in which it was designed and operates. As the pace of change accelerates and the need for highly skilled learners and workers is at a crucial point, the design and capacity of the current system is beginning to receive the scrutiny and study it deserves. It is becoming increasingly clear that we need to redesign the system, not continue to blame those within it.

1. Today's Challenge

Students in school today face a different future than their great grandparents, grandparents and even their parents faced. Most people in previous generations could learn a skill or occupation and expect to enjoy a lifelong career. Change was measured and largely predictable. The emergence of new industries and work opportunities was at a pace where needs could be predicted and preparations could be made. Further, there typically were more appropriately skilled people available to engage in the work than jobs available.

But the situation is changing. Projections are that today's students will have multiple careers. In fact, the life cycle of careers will be more in line with today's product life cycles than historical careers. (Turnipseed, 2016) Young people must be prepared to engage in new careers repeatedly throughout their work lives. Meanwhile, as "baby boomers" leave the work force, there are barely enough workers to replace them. We face a crisis as we work to grow our economies since a significant portion of those entering the work force do not possess the skills necessary to do the jobs available now, and are not prepared to learn and adjust as the work continues to change and new skills are required.

The challenge facing the education system is to prepare today's students for jobs that do not yet exist, requiring skills that have yet to be defined, in a context of rapid and often unpredictable change. It is impossible to give students the technical knowledge necessary to perform these roles with what we know today. The very best we can do is prepare them with the skills and dispositions to learn in a variety of ways, under a variety of circumstances, in a wide range of contexts.

2. A New Design for Learning

A fundamental principle to guide the design of such a system is an obvious and long understood fact: *all learning is personal*. (Sinatra, 2000) Even though the industrial era system treated learning as though it is uniform - think the early moving assembly line - this is not how rich, purposeful learning occurs. Nor does this approach adequately prepare students to be successful learners in a variety of circumstances and situations.

Today's students need an education system designed to meet the expectations of an era of learning and innovation. We must invest in the capacity of students to learn independently. This challenge argues for a different approach to nurturing learning.

3. Personalized Learning defined

A number of definitions of personalized learning are in popular use. *The Institute for Personalized Learning* defines this approach as:

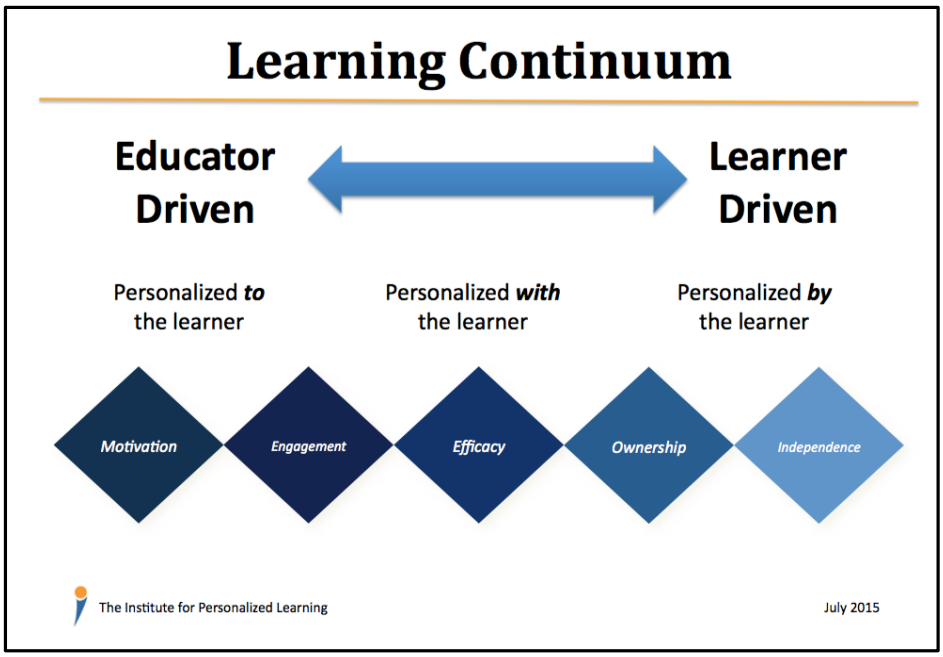
> Personalized learning is an approach to *learning* and instruction that is designed around *individual learner readiness, strengths, needs and interests*.
> *Learners are active participants* in setting goals, planning learning paths, tracking progress and determining how learning will be demonstrated.
> At any point in time, learning objectives, content, method and pacing are likely to *vary from learner to learner* as they pursue proficiency relative to established standards.
> A fully personalized environment moves beyond both differentiation and individualization. (Rickabaugh, 2016)

The power of this approach resides in its ability to reposition learners to be co-designers, co-investors and take co-responsibility for their learning. Learners still have standards and competencies to guide the direction of their learning, but they are active partners in building and following a unique learning path. This approach focuses on building the skills necessary to become powerful learners, not just good students.

Personalized learning engages learners early in the process of learning and skill development and builds their capacity to be strong, flexible, independent learners over time. The following section presents this continuum toward learning independence and describes how each stage builds on those that come before it.

4. Learning Independence Continuum

Educators often think about motivation, engagement, self-efficacy, ownership and independence in learning as separate efforts. What may not be clear are the relationships among these learner characteristics and the power they hold to create highly proficient, lifetime learners. Consequently, we can find ourselves focusing on each characteristic in isolation, hoping that somehow they will lead to learners who are persistent, independent problem-solvers. (Rickabaugh, 2012)



Much has been written about how to engage learners and while engagement is important, efforts should go beyond engagement to nurturing learners who can learn independently. The desired outcome is learners who want to learn and can drive their own learning. There is a continuum that builds from motivation to independence and includes strategies to support each of these elements. Parallel to building these characteristics is another continuum regarding who drives learning and activities – the educator or the learner. Early stages of learning, particularly involving inexperienced and immature learners, generally need to be more educator-driven, and designed to motivate, engage and support learners. On the other end of the spectrum, activities that nurture independence in more experienced and mature learners will generally be driven more by learners themselves. In personalized learning environments, learning activities will fall all

along this continuum – at times it's more important for the educator to drive the work, at others, the learner will take the driver's seat. However, in order for this to happen, all of the characteristics along the continuum must be developed and nurtured in each learner.

Motivation

The first element in the learning continuum is motivation. Motivation can be described as an emotional or psychological state that is indicated by interest, curiosity, and/or the desire to understand. (Bomia, et al. in Brewster and Fager, 2000, p.4) Learners demonstrate motivation by a desire to participate and be successful in the learning process.

Motivation can occur intrinsically (from within) or extrinsically (from external sources). Intrinsic sources have been shown to be more successful in the long term to motivate students. They also aid in retention and understanding of content. (Lumsden, 1994; Voke 2002)

The best way to stimulate intrinsic motivation is to design learning activities that are interesting, valuable and purposeful to students. (Ames, 1992) Providing feedback to students on short-term goals and providing autonomy and learner choice are also strategies that have been shown to be successful in motivating students intrinsically.

Engagement

Engagement is motivation in action. Engaged learners are curious, committed and learn with purpose. Learners who are engaged better retain what they learn, exhibit fewer behavior problems, and are more willing to participate in learning activities. (Ames, 1992)

Educators can engage learners by designing tasks that are challenging – at the leading edge of the learner's current skills. Learners who constantly face debilitating frustration and failure find it difficult to believe that they can be successful. Conversely, when learners are able to undertake these challenging tasks and accomplish them (because it is personalized and calibrated to their specific needs and readiness for learning), they will begin to believe they can succeed with effort, good strategies and the correct resources. (Wigfield and Wagner, 2005)

Yet, engagement is not the end point. It is a worthy effort, and one that requires time and attention. But it is one marker on the road to independence. As students experience meaningful and extended engagement, they are likely to become aware of the relationship between their actions and the results they see. This connection leads students toward the next element in the continuum: self-efficacy.

Self-efficacy

Efficacy is the belief that one is capable of producing a result, meeting a challenge or accomplishing a task. For students, efficacy or self-efficacy is the belief that they can succeed and learn. The challenge it is to engage students in ways that help

them to examine and change their thinking and build the confidence and strategies necessary to increase the probability of success. (Bandura, 1986)

Students who are efficacious persist in the face of challenge, learn from failure rather than becoming trapped in it, try different approaches and strategies, and do what it takes to succeed. Rich learning often occurs from significant struggle; the presence of a strong sense of self-efficacy is important for learners to continue to stretch and grow and to move beyond present levels of skill and knowledge.

Strategies include setting attainable, close-at-hand goals that will give the learner a sense of accomplishment to build upon. Additionally, some learners will benefit from assistance in identifying and using learning strategies instead of being left to their own devices. Explicit feedback on the effort, strategy, and resources the learner uses also can be helpful. (Schunk, 1991; Dweck, 2006)

Helping learners to see that effort, persistence, strategy, and good use of resources can increase their learning and control can make a key difference in the level of effort learners will give. This approach can also build learner willingness to persist, identify and try alternative approaches.

Learners with strong self-efficacy understand the connection between their efforts and actions and the learning results they experience. This understanding can build ownership for learning – they are more likely to understand that the success they achieve is theirs to keep.

Ownership

Ownership implies that learners have a sense of control over their learning and leads them to view learning as something of value that cannot be taken from them. Ownership of learning transfers responsibility for success from educators and other adults to the learner. As a result, learners tend to place greater value on and take greater pride in their learning. (Kohn, 1993)

A growing sense of ownership often leads learners to shift from a compliance orientation to commitment. The question in their minds moves from “How much am I asked I do?” to “What do I need to do to learn this concept or skill?” While the traditional model of schooling depends heavily on compliance, unleashing a sense of ownership for learning can dramatically improve learner performance, even within the legacy education system. (Pink, 2009)

Unsurprisingly, one of the key methods to build ownership for learning is a strategy also employed to build motivation, engagement, and efficacy. This method offers learners choice and control related to their learning in areas valued by the learner. Additionally, when educators work with learners to develop learning goals and approaches they can effectively build ownership.

Ownership for learning positions the learner to make decisions, allocate energy, and develop meaning and insight unique to the learner. By devolving key portions of the responsibility for learning to learners and allowing them to participate as co-workers in the learning process, educators position learners to become more independent.

Independence

Independent learners take responsibility for their motivation and growth, and are led by curiosity and the drive to build their knowledge and skills. Independent learners treat their learning as a prized possession that they must take care of, maintain, and cultivate. Independent learners understand when they need to learn more and seek out the best methods and resources to accomplish this goal.

It makes sense that the end goal for education is a person who is proactive and able to anticipate their learning needs relative to a challenge or task. We need citizens and workers who problem-solve, take initiative, are flexible and continue to learn. As long as learners are dependent on others to tell them when, what, and how to learn, they will never completely take charge of their learning fate and future.

To change this situation and build learner independence, the previously discussed strategies must be leveraged to contribute and build towards independence. We should also give learners increasing opportunities to work with their peers; gradually shifting the attention, focus and source of knowledge away from adults and educators. We can also create space and opportunity for learners to participate in goal setting, reflect on and evaluate their learning, and participate in planning what they will learn.

Regardless of the specific strategy, we need to give learners opportunities to learn independently, first with our coaching and guidance and later without our immediate support. When learners understand how to channel their interest and curiosity, they gain the ability to motivate themselves. When learners act on their interests and motivation, they come to understand the power they possess and how they can use resources to meet learning challenges — they gain the power to control what they learn.

5. In Practice

Students can take many paths to develop the skills and experiences necessary to become confident, independent learners. The Learning Independence Continuum provides a framework for constructing such paths. However, specific examples of how these concepts can be implemented in practice can be helpful.

Many educators are finding that a useful, low risk place to tap motivation is through providing students with a wider array of choices in their learning. Early on the choices might be narrow and provided by the educator. Later, as experience grows, the choices can broaden to include choice options suggested by the student. Gradually and under some circumstances, students might be allowed a full range of choices in what they will learn and how they will learn it, with or without specific approval from educators.

Closely related, and also a relatively low risk way to tap motivation, is providing students with more frequent and important opportunities to have a voice in their

learning. Here, students need to be able to speak without fear of rejection or ridicule. Their perspectives must be taken seriously and respected. Further, their thoughts and suggestions must be considered without deference to the status and academic performance of the student. Providing opportunities for voice also can build a sense of belonging and significance.

Offering opportunities for students to experience greater choice and more significance to their voice typically leads to greater commitment, the entry gate for engagement. As students begin to make greater commitment to learning, a next step is to move from what they are offered, to what they want to accomplish. Here, supporting students to set goals for their learning transfers learning from what students do for adults to what they are doing for themselves. (Hattie, 2012) Goal setting and accomplishment also build confidence, help students learn to persist and utilize good learning strategies and resources — key components of academic self-efficacy. (Wigfield and Wagner, 2005) This transition to learner efficacy and ownership can be enhanced by engaging learners as co-constructors of the learning path that will lead to successful goal completion. While educators can provide expert guidance in this process, it is also important for learners to contribute and commit to the plan. Doing so typically leads learners to invest and persist to make the plan successful.

Once students have set goals and developed plans to attain them, educators can begin to coach and support learners to collect and analyze information to monitor their progress. At this stage it is important to give students opportunities to build the skills necessary to self-assess and make decisions about the next steps in their learning. Obviously, educators remain engaged in tracking progress, modifying strategies and selecting appropriate support and resources with learners, but the goal is to build these competencies in learners. Students gradually become good consumers and skilled users of formative assessment data, an important competency for independent learners. It also supports them to become skilled in assessing their learning and performance rather than depending exclusively on others to perform this task for them.

Goal setting, action planning and progress monitoring are key skills learners and workers in the future will need to become and remain successful. It is important for educators and schools to provide experiences, support and recognition for this aspect of learning now so that today's students are ready for their futures.

6. Synergy with Validating Prior Learning

The potential connections between personalized learning (PL) and Validating Prior Learning (VPL) are important and in some cases obvious. Nevertheless, pointing them out appears important at this crucial time in the transition from legacy systems of education to flexible, future-focused redesigns for learning.

First, PL and VPL share a common value. Both approaches share the perspective that learning itself is more important than how it was gained and where or how the learning occurred. Learning gained anywhere needs to be valued and respected. Looking to the future, it is likely that most adult learning will occur in informal settings, away from formal classrooms and instruction. We must prepare today's students to learn regardless of context and instill in them the drive to do so.

Second, in PL and VPL the focus is on building competency through learning, not the completion of a course or satisfaction of a teacher. The shared focus is on recognizing and valuing experience, knowledge and skills regardless of the path leading to their acquisition. In a rapidly changing workplace and world, we cannot afford to confine our recognition of learning to traditional contexts, methods and measures.

Third, PL and VPL share an interest in measurement of learning, regardless of whether the content or skill was taught to the learner. Again, the source and path of learning are less important than whether and what learning occurs. Experience can be, but is not always, a good teacher. Instruction often is a good source for learning, but it is not the only source. Reflection almost always is a good source for learning, but it is not dependent on the source or context of the experience.

Fourth, PL and VPL share the perspective that the capacity to learn is crucial for future success in most work and life contexts. Instruction will remain an important dimension of formal learning environments. However, the focus of instruction and support for learning must increasingly be on the development of the capacity of students to learn regardless of context, not just on whether they have learned what they have been taught. In short, students need to become their own best teachers.

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