Learning How to Learn: Improving the Performance of Learning

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Abstract

The act of learning is usually thought of as preparatory to a performance; a student learns and then can perform on the basis of what has been learned. This article frames the act of learning as a performance in its own right, allowing the Theory of Performance to be used as schema for naming and exploring the various dimensions of the learning performances that can be improved. This paper’s explorations is conducted with the future improvement of the learning performance very much in mind — learning how to learn.

Introduction

Research on teaching focuses on how best to design, facilitate, and enhance the experts’ ability to share knowledge with learners — teaching educators how to teach effectively. And while there has been a lot of research focused on learning as the act of constructing knowledge, we don’t typically think of learning as comparable to teaching; while we talk about teaching educators to teach effectively, there’s no talk about teaching learners to learn effectively. But given the familiar model of learning, we cannot help but see that the act of learning can itself be the focus of learning. That is, just as one can learn to understand, use, and build working expertise with a complex mathematical formula, one can also learn how to learn better.

Individuals who consciously work to become better learners are striving to improve their performance as learners. The components of the Theory of Performance (Elger, 2007) can be used to identify what constitutes a performance of learning to learn. Just to keep things clear, meta-cognitively speaking, this is not a performance of learning focused on something like Spanish verbs, but a performance of learning focused on the act of learning. This parallel processing is what we call a Learning to Learn Mindset. The Theory of Performance states that learning to learn is affected, both positively and negatively, by five different components: The learner’s identity, his or her learning skills, the level of knowledge, the learning context, and any personal factors the learner may have to deal with. In addition, we have successfully identified multiple aspects of each of these components, arriving at a superset of the different aspects of learning to learn.

1. Identity (as a learner)
   Learner Efficacy: I believe I am an effective learner
   Learner ownership and responsibility: I accept ownership and responsibility for my own learning

2. Knowledge
   Levels of Learner Knowledge: Elevating the level of learning
   Learning Process Methodology (LPM): Building awareness of one’s own learning process
   Forms of Knowledge: Aligning best learning practices with each type of knowledge

3. Learning Skills
   Cognitive Domain: Thinking skills for processing information, constructing meaning, and applying knowledge
   Social Domain: Social skills for producing effective team learning
   Affective Domain: Emotional skills for taking risks, accepting failures, and persisting through to success

4. Context (for a performance of learning to learn)
   Learning-to-Learn Camp/Course
   Cooperative Learning: Team learning increases collective and individual learning performances
   Active Learning: Learners publicly performing the act of learning

5. Personal Factors
   Life Challenges: Transforming past problems into growth opportunities
   Making the Right Choices: Making a better future

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Learner Efficacy:
I believe I am an effective learner

Learners’ efficacy (self-belief in their own capacity to meet difficult learning challenges) must improve significantly as they proceed from high school into the more challenging collegiate environment. Their performances in constructing knowledge in different environments are impacted by their level of self-image as learners (Amel, 2008). The more successes and accomplishments learners have in more challenging learning environments, the stronger their self-efficacy. The number and diversity of people (educators, mentors, family, and friends) who affirm with evidence and the frequency of the learners’ successes are both factors that will strongly influence the level of efficacy. As the learners begin to measure their own accomplishments and assess their own abilities, they will strengthen their own efficacy and identity as learners.

Learner ownership and responsibility:
I accept ownership and responsibility for my own learning

The construction of knowledge has to be under the control of the learners (Barell, 1995). In the experience of most learners, educators try to present them with knowledge. But effectiveness in learning comes about when the learners want to learn, do the thinking, contextualize information and understanding, and generalize knowledge for their own use (Farrington et al., 2012). The extent to which this shift of the learner taking on additional responsibility for his or her learning occurs, the stronger his or her identity becomes as an independent life-long learner (Kolb & Kolb, 2010).

Knowledge

Levels of Learner Knowledge:
Elevating the level of learning

Bloom’s Taxonomy of the cognitive domain has six interdependent levels of knowledge (Krathwohl, 2002).

1 information
2 comprehension
3 application
4 analysis
5 evaluation
6 synthesis

Critical thinking is used to process important information (level 1) to produce meaning and understanding (level 2). Applying new knowledge (level 3) to solve simple problems in new situations requires this understanding, not just memorized information. The ability to solve complex problems (level 4) is based upon the unprompted selective transfer of knowledge. Well documented problem solutions and projects are evaluated and validated (level 5) to determine that the levels of quality meet standards. Creating new knowledge or original creative enterprises (level 6) requires high levels of learning as well as identity, well developed learning skills, and an array of contextual experiences. As students consciously progress through these levels of knowledge in each successive learning performance, their ability to measure and control their learning process improves.

Learning Process Methodology:
Building awareness of one’s own learning process

The Learning Process Methodology (LPM) is an explicit modeling of the steps of the learning process that teachers and learners use to explore, analyze, understand, and apply knowledge to improving learning performance. Over the last 20 years, the LPM has helped to improve learning performance through the engagement of teaching and learning (Beyerlein, Ford, & Apple, 1993). The LPM informs faculty in their design of activities, preparation of facilitation plans, facilitation of learning experiences and assessment of learning performance. Students use the LPM to construct knowledge, measure levels of learning, improve reading, incorporate critical thinking, control their own learning, and build metacognition of their own learning process. A performance of learning to learn aligns with the LPM and the levels of knowledge trajectory by activating prerequisite knowledge, producing knowledge that is understood, and by contextualizing, generalizing and integrating knowledge for use in solving problems.

Forms of Knowledge:
Aligning best learning practices with each type of knowledge

There are different learning tools, techniques, and strategies for each of the five forms of knowledge: Concepts, Processes, Tools, Contexts, and Ways of Being (Quarless, 2007). Learners who understand the forms of knowledge can vary how the LPM is used to learn more effectively. For example, in the LPM, the models (step 9) you would choose to use would vary: a learning object or concept model for conceptual
knowledge, a methodology or procedural example for process knowledge, a schematic, diagram, or quick reference card for a tool, a story for contextual knowledge, and a professional profile for a way of being. The measurement of the level of learning takes on different prompts based upon the form of knowledge (Atherton, 2013).

<table>
<thead>
<tr>
<th>Form of Knowledge</th>
<th>Model Type</th>
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<tbody>
<tr>
<td>Concept</td>
<td>Learning Object, Concept Model</td>
</tr>
<tr>
<td>Process</td>
<td>Methodology, Procedural Example</td>
</tr>
<tr>
<td>Tool</td>
<td>Schematic, Diagram, Reference Card</td>
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<tr>
<td>Context</td>
<td>Story</td>
</tr>
<tr>
<td>Way of Being</td>
<td>Professional Profile</td>
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</tbody>
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### Learning Skills

#### Cognitive Domain:
Thinking skills for processing information, constructing meaning, and applying knowledge

Learners who actively start integrating all five levels of thinking skills (information processing, constructing meaning, applying knowledge, and problem solving) into the learning process will improve their learning performance (Davis, Beyerlein, Leise, & Apple, 2007).

1. The first stage in applying thinking to the learning process is actively thinking about what you already know, and transferring prior knowledge and different life experiences to the current learning challenge.

2. The second stage is processing the available information through effective reading using a very thoughtful and purposeful methodology.

3. The next stage is to clarify the learning goals and expectations so a plan can be created for achieving these learning outcomes.

4. The crucial stage of the learning experience is thinking critically by using relevant information and prior knowledge to analyze and understand models and examples. This learning is continued by enhancing comprehension by conversing with others and writing to learn.

5. The final stage is applying the thinking skills needed to contextualize and generalize this knowledge so that it can be transferred to new problem solving situations.

#### Social Domain:
Social skills for producing effective team learning

Social learning skills are important in accessing the benefits of learning in teams and communities. Research shows that cooperative learning, collaborative learning, project based learning, and learning communities contribute measurably to improving student learning performance. This research has also shown that these pedagogical approaches, where learners engage with other learners, also improve learners’ social learning skills (Johnson & Johnson, 1990). These skill areas include communication, relating with others, cultural competence, and management/leadership. As the social skills increase so does learner success in more challenging learning environments like college (Brna, Baker, Stenning, & Tiberghien, 2002).

#### Affective Domain:
Emotional skills for taking risks, accepting failures, and persisting through to success

Learner growth happens more quickly and significantly when individuals are outside their comfort zone. Failures also occur more often when learners are outside their comfort zone. Strengthening affective skills such as risk-taking, coping, managing frustration, responding to failure, and self-challenging are all important in turning temporary failures into future successes. Additional affective skills such as managing time, persisting, self-confidence, and focusing are supportive of risk-taking and responding to failures (Vega & Terada, 2012).

#### Context

**Learning-to-Learn Camp/Course**

As a member of a learning community and learning team, the participants in a Learning to Learn Camp will individually and collaboratively read more than 350 pages and write approximately 150 pages. They are required to complete background reading, perform recording, journaling, and internet searches to construct understanding of information, produce reading logs, prepare for class reading quizzes, produce team reports, and engage in challenging classroom activities. They are required to think critically in order to compare and contrast different perspectives, accept and provide peer feedback, and ultimately contextualize new knowledge into their own lives in meaningful ways. Participants take on more and more of the traditional roles of faculty — reading, explaining book content, working through problems, and assessing the work of other students. The students engage in 30 increasingly challenging learning activities that pushing learners
outside their comfort zone. This leads to significant failures and successes. The experience is finalized with the participation in six challenge contests: math, writing, art, problem solving, speech, and a talent show.

**Cooperative Learning:**
Team learning increases collective and individual learning performances

Cooperative learning is a great tool for improving learners’ performances. The team structure (optimally consisting of a captain, recorder, spokesperson, reflector, critical thinker, technology specialist, optimist, and spy) allows each team member to practice different aspects of a self-directed learner (Smith, 2007).

<table>
<thead>
<tr>
<th>Role</th>
<th>Duties</th>
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<tbody>
<tr>
<td>Captain</td>
<td>Manages the learning</td>
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<tr>
<td>Recorder</td>
<td>Documents the learning</td>
</tr>
<tr>
<td>Spokesperson</td>
<td>Articulates the learning</td>
</tr>
<tr>
<td>Reflector</td>
<td>Assesses learning performance</td>
</tr>
<tr>
<td>Critical Thinker</td>
<td>Validates the learning</td>
</tr>
<tr>
<td>Technology Specialist</td>
<td>Uses technology to support the learning</td>
</tr>
<tr>
<td>Optimist</td>
<td>Keeps the process positive</td>
</tr>
<tr>
<td>Spy</td>
<td>Steals learning practices from other teams</td>
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The rotation of roles in each new learning experience propagates the sharing of learning practices among the team members. The learning challenges given to the team can exceed the abilities of any team member and the validation of learning of all members can be accomplished in less time than individuals can produce on their own (Goleman, 2014). These same cooperative practices can extend into learning communities and broaden the impact (Price, 2005).

**Active Learning:**
Learners publicly performing the act of learning

In an active learning context, students are involved in a set of activities in which there are multiple agencies watching and assessing performance — the team mentor, facilitators, spies from other teams, student mentors, and even the reflector within the team. Student teams must construct learning so that it can be shared publicly either by the team spokesperson or through entering into competition with other teams for problem solving challenges. During every activity, the thinking processes and skills of students are consistently challenged. For example, the team recorders are writing to learn with that work assessed for quality of articulation of understanding (Bonwell & Eison, 1991).

**Personal Factors**

**Life Challenges:**
Transforming past problems into growth opportunities

The pressures and demands of everyday life in an increasingly more complex world make learning more challenging. To be successful in life, as well as in college, learners must produce strong learning performances even while meeting the non-academic but top-priority challenges of (for example) being exhausted from hours of work, nursing a sick child, or while caring for an aging grandparent. On top of this, when tragedies occur (a divorce, a layoff, an accident, or the death of a family member or friend) the recovery must be quick and effective. Thus, improving emotional skills of persisting, coping, responding to failures, and adapting to change is critical to building the resilience that is needed to overcome the difficulties that arise from personal factors (Smith, 2014). As facility with the other learning to learn components grows (e.g., higher levels of learning, improved learning skills, and identity as a learner), so does the proactive problem solving capacity for addressing these personal factors.

**Making the Right Choices:**
Making a better future

Early in life, most of our personal factors are the result of decisions by parents, guardians, and extended family. As individuals take ownership for the decisions that shape their lives, a critical shift begins to take place. They stop thinking of themselves as victims or the recipients of the consequences of others’ choices and start assuming the responsibility and accountability for their decisions and their lives. When we allow others to make important decisions for us, we signal to the world that we are not capable; that they should make excuses for us, and think and expect less of us. Once we take ownership of our decisions and their consequences, others will cease treating us a victim and. As we learn to make better life decisions and reap the improved consequences that inevitably follow, the personal factors that interfere with a positive and healthy life become fewer. As these factors are reduced, life is improved, including learning performance (McDermott, 2014).
Synergy of the Components

These thirteen essential components of the five areas of a learning to learn performance are interrelated and interdependent. They are all based on the concept that learning is a process and a performance that can be improved. Moreover, improving one component of the learning performance will improve other components of the learning performance as well. Critical thinking can occur more effectively if there is a framework like a methodology to prompt questions. Effective critical thinking requires that students have a strong identity as a learners. Students who know the levels of learning and use the Learning Process Methodology are more effective in generalizing knowledge and solving problems. Knowing that there are different types of knowledge that require different learning approaches supports the development and use of different types of learning skills. Students who improve their learning skills will be able to learn different forms of knowledge and solve a variety of problems more effectively. Learners who are mindful of these thirteen essential components of the five areas of a learning to learn performance will prosper in any learning environment and in life.

References


