

Master Teachers as Master Learners:
A New Perspective on the Role of a Teacher
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Abstract

The traditional role of a teacher has been one of instruction, facilitation, and the transference of information. Teachers who are expert in this role are known as Master Teachers. Master implies expertise so this paper examines the concept of expertise and applies it to teaching and learning models. A new role for teachers is proposed. This role is based on the principle of apprenticeship and situational cognition. Teachers move away from being the locus of instruction and move toward the role of a learner—a Master Learner. The paper addresses the nature of learning and expertise and formulates a new model where the teacher is the expert learner in the class.

Introduction

This paper attempts to develop a view of the role of the teacher from the perspective of the learner. The traditional role has been one of transference of knowledge. A Master Teacher is a teacher who is an expert in transferring knowledge to their students. The emphasis is on instruction with the instructional locus being the teacher. A new vision will move the teacher from a position of power, and authority to one of colleague in a larger learning community. This change in perspective will move the experienced and effective teacher from Master Teacher to Master Learner.

Setting the Scene

Near the end of every summer, teachers return to their classrooms in anticipation of and preparation for a new year of teaching. Meetings welcoming new faculty to the fold are scheduled and new students attend orientations. The first day of school arrives and you can feel the excitement in the air. Students are reconnecting with old friends, teachers are making final preparations and new students are wondering at their new learning environment. The bell rings signaling the start of a new year of teaching and

learning. Unfortunately, for many of these classrooms, this signifies the beginning of another round of last year's lectures and tests.

The teaching profession continues to employ methods developed in the past century (Cuban, 2001; Papert, 1993). For many teachers, they teach as they were taught (Papert, 1993). Considering how technology has changed the world around us, education as an institution has remained relatively unchanged (Albirini, 2007; Papert, 1993).

The Old World Model

Teaching is the noblest of professions. As a teacher, you have the ability to shape the future by shaping the minds of your students. The word "teach" means "to show, to point out or to give instruction ("Online Etymology Dictionary"). This has been the primary role of teachers for more than the past century. They were the ones with the knowledge and it needed to be transferred to the students. During the early 1900's, the process of transference was perfected as education as an industry entered the era of the assembly line (Gardner, 2000; Papert, 1993). This model is alive and well today. For over a century, teaching has been about the transmission of knowledge. This model has a stronghold in the American educational system (Cuban, 2001). We have equated teaching with telling and learning with listening (Riel & Fulton). "Schools would refine raw elements by graduating their spirits through states of enlightenment, 'teach everybody everything' and eventually enable everyone to become a functional member of society" (Albirini, 2007)

Teaching evolved into a private practice with teachers working in isolation from other teachers (Lieberman, Saxl, & Miles, 2007). Doors were closed and so was collaboration with other teachers. Measures of success as educators boiled down to numbers displayed on a graph. Examples of this are alive today in the form of state high stakes testing and the annual issues of the 100 top high schools as published in U.S News and World Report (Graves, Ramirez, Morse, & Rotherham, 2007).

During this period in educational history, the rank of Master Teacher emerged. From the Latin root *magister*, master means chief, head, director and teacher ("Online Etymology Dictionary"). Master teachers are recognized by their peers or by some authority as teacher leaders (Lieberman, Saxl, & Miles, 2007). Today, there are master teacher programs in most schools and colleges. The requirements and characteristics of a master teacher are as diverse as there are numbers of schools. Master teachers are expected to display a 'high degree of professionalism, mentor new teachers attend meetings, present workshops, observe other master teachers and be observed by master teachers ("Master Teacher", 2005; , "Master teacher program: the national board for professional teaching standards master teacher program update", 2002; , "Proposed requirements for the title of master teacher graduate", 2007). By taking on the role of master teacher, some receive a sizable stipend ("Proposed requirements for the title of master teacher graduate", 2007). The stipend implies compensation for levels of performance beyond the expectation of all teachers. Master teachers are the exception rather than the rule. Master teaching is about developing other teachers. Teachers should

study with Master Teachers. The question is, who should students see if they want become experts at learning?

In this old world model, the path to knowledge was through the transference of knowledge from the teacher to the student. Knowledge came to mean the amount of schooling one received-more time in school meant greater learning.

Another Old Model

Where would you go if you wanted to learn how to shoe a horse, build fine handcrafted furniture or become a master artisan? This is the world of the apprentice. You would find the best in that field and study under them, working side by side. You would start with simple tasks and progress to more difficult ones. Each task was situated in context in which it was used. Today, we refer to this type of learning as situated learning (Lave & Wenger, 2003). Assessment was authentic-measurements of your progress were not artificial assessments of what you knew but of your application of knowledge to real-world problems. Assessment was situated in the context of actual application.

To learn new skills, you would work just beyond your current capabilities. The master would scaffold you making sure you developed the skill to your fullest. Vygotsky referred to this as working in your zone of proximal development (Wink & Putney, 2002). The hope of both the master and the apprentice was that someday, you would become a master.

Learning

In order to develop the concept of master learner, we must establish an understanding of what it means to learn. Learning is differentiated from understanding. It is possible to learn something without developing understanding. This is demonstrated by memorizing facts without the context to make necessary connections for understanding. Learning is the process of placing new content into long-term memory. Learning is an important and necessary step to understanding. What use are facts if you are not able to use them to solve unique problems? This requires understanding, which is the ability to apply what you know in flexible ways (Bereiter & Scardamalia, 1993; Wiske, Rennebohm, & Breit, 2005). Since we are considering the concept of master learning, we will assume a level of expertise that extends beyond memorization of facts.

Levels of success in learning can be measured by testing for the number of facts that are correctly recalled when prompted. Understanding however, is more difficult to measure. How do you measure the ability to make relevant connections between parcels of knowledge so that new knowledge is generated? Constructivist's theories support the process of knowledge construction as a way of developing understanding (Langer, 1997; Wiske, Rennebohm, & Breit, 2005). The ability of an individual to construct new knowledge and use that knowledge to generate mental models that accurately represent their world, is a characteristic of developing understanding. The necessary connections require that the learner be able to inventory their existing knowledge and determine how to best use it in unfamiliar situations (Bereiter & Scardamalia, 1993).

Learning is also a social construct. People learn when they interact with other people. Both Dewey and Vygotsky saw interaction as “one of the most important components of any learning experience” (Cited by Leh et al., 2005). Seminal work in this area is found in the writings of Lave and Wenger. Using the concept of legitimate peripheral participation in communities of learning as a way to understand learning, they found that intentional instruction was not, in itself, a source or cause of learning. Learning involved a community of interactions or what has become known as communities of learning.

Learning...implies becoming a different person with respect to the possibilities enabled by these systems of relations...Learning involves the construction of identities...Learning is not merely a condition for membership, but is itself an evolving form of membership (Lave & Wenger, 2003, p. 53).

They go on to link learning with apprenticeship by viewing this community of practice within a specific domain as encompassing “apprentices, young masters with apprentices and masters some of who’s apprentices have themselves become masters” (p. 56).

Learners enter a community as newcomers and through interactions with community members that develop their skills, move toward full participation (Lave & Wenger, 2003).

This leads to the presentation of two views of learning as presented by Frank Smith (1998): (1) classic view, and (2) the official theory (see Table 1). The classic view represents any learning that is situated and facilitated socially. This is an example of apprentices and masters working together. While the actual work in an apprenticeship is

not effortless, the actual learning is in the sense that you do not consciously go about the learning of facts. Rather, the learning is situated so that expertise is developed through participation in an activity. This deeply ingrains the learning in the memory so that it becomes second nature. This learning process is continuous, engaging and relevant.

Table 1. Two views of learning

Classic View	Official Theory
Continual Effortless Inconspicuous Boundless Unpremeditated Independent of rewards and punishment Based on self image Vicarious Never forgotten Inhibited by testing A social activity Growth	Occasional Hard work Obvious Limited Intentional Dependent on rewards and punishment Based on effort Individualistic Easily forgotten Assured by testing An intellectual activity Memorization

From Frank Smith's *The Book of Learning and Forgetting* (Smith, 1998)

Contrast this with the official theory that is practiced in most of our schools. Here, learning is equated with a conscience effort to memorize disconnected material through hard cognitive effort. The learning is intentional. The learner is well aware of the facts they are trying to place in long-term memory. This is a solo activity where the learners are limited to specific knowledge. Any additional knowledge gained along the way is not rewarded and therefore is often not pursued.

These two models of learning are very different in all aspects. One leads to the development of expertise while the other leads to isolation of disconnected pillars of knowledge. Schools have adopted the official theory while apprenticeships situate learning in the classic view. Schools have become *non-expert societies*. “We find [educational systems] designed as if [their] purpose were to produce nonexperts” (Bereiter & Scardamalia, 1993).

Expertise

What does it take to be a master? This is a question of expertise. Expertise is a topic that has been explored through the study of savants, prodigies, and chess masters. What is the difference between experts and “less accomplished performers”?

There are five states that one passes through as they progress toward expertise: (1) novice stage, (2) flexible and situationally sensitive rule use, (3) competence, (4) realize what needs to be done, and (5) a level of expertise where knowing is innate (Bereiter & Scardamalia, 1993). When a chess master looks at a chessboard, they see patterns that are meaningful in the context of the game. When the board is set randomly, their ability to recall piece placements is not much better than novices. “A random board has few familiar configurations, hence the master is reduced to trying to remember it piece by piece” (p. 1336)(Larkin, McDermott, Simon, & Simon, 1980). When the board is set in a way that represents an actual game, the piece positions have context. A chess master is capable of storing large amounts of information by chunking arrangements of

eight pieces. However, these pieces must have strategic significance (Bereiter & Scardamalia, 1993) They must be contextually situated.

Besides the ability to use strategies to store vast amounts of information in memory, experts work differently than novices when it comes to problem solving. Experts tend to work forward while novices work backward (Bereiter & Scardamalia, 1993; Larkin, McDermott, Simon, & Simon, 1980). In a study of physics students solving problems compared to experts in physics solving the same problems, the researchers noted that “The novice solved most of the problems by working backward from the unknown problem solution to the given quantities, while the expert usually worked forward from the givens to the desired quantities” (p1338)(Larkin, McDermott, Simon, & Simon, 1980).

Being an expert means that you have extensive knowledge in a particular field. There are no experts who lack knowledge in their field (Bereiter & Scardamalia, 1993). There are different type of knowledge and ways of acquiring knowledge. There is (1) tacit knowledge, (2) declarative knowledge, (3) procedural knowledge, (4) informal knowledge, and (5) impressionistic knowledge. It is possible to be an expert and lack formal knowledge. Formal knowledge is easily forgotten when not situated and relevant.

It may be very difficult for most people to accumulate vast stores of formal knowledge unless it is accompanied by strong impressionistic knowledge....It is a matter of providing connections, without which formal knowledge tends to be rapidly forgotten (Bereiter & Scardamalia, 1993, p. 56).

Formal knowledge is inert when it has no functional connection to informal knowledge.

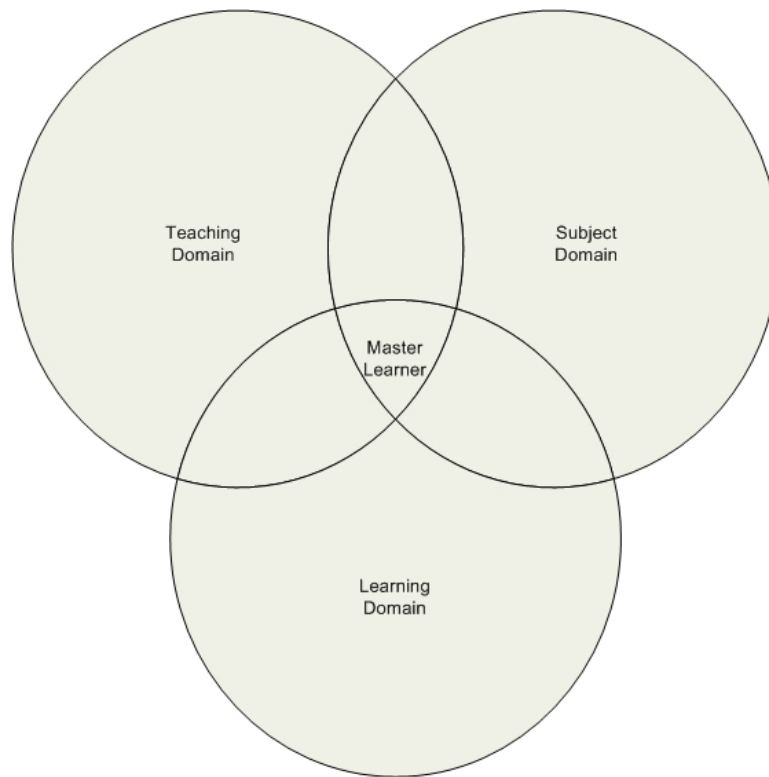
How does intelligence relate to expertise? Natural talent and IQ are not reliable measures for determining level of expertise in adults (Ericsson & Charness, 1994). Regardless of natural ability, the skill in a specific domain will only develop toward expertise if it is exercised (Ericsson & Charness, 1994). Therefore, you are not born with expertise. Suzuki, who developed the Suzuki method for music wrote “every child can be highly educated if he is given the proper training” (p. 728) (cited in Ericsson & Charness, 1994). His belief was that training methods had to induce enthusiasm and motivation if they were to succeed. Expertise takes time to develop. This development occurs when the learner works with a more accomplished person in a particular domain. “It is important for organizations to nurture the development of expertise....Apprenticeship is an age-old method of expertise transfer” (Prietula & Simon, 1989, p. 123).

When we think of experts, we often think of expert performers or people who are top in their field. So what if the field is learning? What is the nature of expertise in learning? It turns out that individuals who are experts on one domain often possess skills and attitudes that transfer to other domains. While this does not immediately make them an expert, it does prepare the individual for developing expertise in other domains (Bereiter & Scardamalia, 1993). Studies of how experts, near experts and novices learn or solve problems in a specific domain indicate that novices apply a *best-fit* strategy. While this deals with the immediate problem, it minimizes the opportunity for new learning (Bereiter & Scardamalia, 1993). Bereiter and Scardamalia (1993) state that

the differences between expert and inexpert learners show up when information comes along that does not fit [current mental models]. Here the inexpert approach is to find the best fit and go with it, even if the fit is not very good” (p. 169).

Enter the Master Learner

Putting together what we know about teaching, learning, and expertise, we can start to develop a new perspective on teaching. Drawing on examples where aspects of the classical view of learning are employed with situated cognition, relevance and communities of learning, the teacher as master learner model incorporates three aspects of knowing related to teaching: (1) teaching domain, (2) subject domain, and (3) learning domain. Master learner as related to teachers exists at the intersection of these three domains (see figure 1).

Figure 1. Master Learner Concept

The three circles represent levels of expertise within each of the three domains. The circles for each domain increase in diameter as knowledge and expertise are developed. The more these expertise are situated so that connections are created between domains, the larger the commonality of the three domains become. The objective is to maximize the size of each domain while simultaneously maximizing the overlap of the three domains. By developing overlapping knowledge in these three domains, the master learner can freely move from one domain to another without leaving the role of any other domain. A master learner would not have to leave the learning domain to put on a “teacher hat”. All three domains would coexist.

The master learner becomes the expert learner in the community and models learning with the community. Rather than being the locus of instruction and information, they are searching for answers along with the rest of the community. Large, overarching questions drive the learning experience for the community. These questions are developed in concert with the community, the master learner guiding their formation.

The master learner model is an apprenticeship model that employs the classical view of learning. All learning is cognitively situated and relevant to the community. Like any healthy community, there is diversity. Each individual brings to the community unique experiences and expertise that become part of the *cognitive currency* of the group. The master learner assesses and manages the cognitive currency helping others in the community to find answers to individual questions by matching them with community members with the necessary expertise. Should no one in the group possess the necessary knowledge or the individual skills to attain the knowledge, the master learner steers the group toward additional resources and models the process of acquiring new information within the domain from outside the group. It is important to realize that everyone in the community will learn different things which means that assessments must be authentic. Memorization is minimized and attained as a byproduct of experiential learning.

While this is a conceptual framework, there are examples of formalized master learner programs in practice. These programs do not reflect this model as a role of the teacher but as an example of a student as master learner. The Baltimore County

Community College (CCBC) system has a program where faculty members train in a learning-to-learn model. They then serve in the capacity of master learners.

“Master Learners are faculty or counselors-not experts in the discipline of the general education class-who act as ‘learning’ models by attending class regularly, taking notes, completing assignments and tests and writing papers” (McPhail, McKusick, & Starr, 2006, p. 146).

CCBC has reported success of the Master Learner program with students who have traditionally been at risk. They report that over three years, the program has shown that:

Developmental learners in these communities have performed at rates comparable-or sometimes even above- levels of nondevelopmental learners in terms of grades and retention. Of great importance has been the strong performance of African American students in these communities (p. 146).

William Paterson University has a similar Master Learner program where they report that participation in the program in any capacity (student, teacher, Master Learner) “dramatically improves [participants] abilities to teach and learn”(“Master learner”). In both examples, the teachers volunteer for the Master Learner program and are paid stipends for their participation.

Finally, let us examine less formal structures that are not specifically Master Learner programs but have many elements of communities that could lead to a culture of learning communities and Master Learning as a way of life. The first is a small school in Harlem-Central Park East Elementary (CPEE) and Central Park East Secondary School

(CPESS). These schools have had the opportunity to develop a new school culture from the ground up. The entire school program is built around five intellectual habits: (1) concern for evidence (how do you know that?), (2) viewpoint (Who said it and why?), (3) cause and effect (What led to it and what happened, (4) hypothesizing (supposing that...), and (5) who cares? (Meier, 2002). Using this as their framework, they developed schedules, programs and a culture that support these five intellectual habits. Students must see teachers as learners as well. “There is no sharp dividing line between ‘staff development’ activities and student educational activities” (Meier, 2002, p. 58). They made their schools educationally inspiring and intellectually challenging for teachers providing opportunities to “speak and write publicly about their work” (p. 143).

Another example is the Myles Horton and Highlander Center—a folk school in Tennessee. Here Myles Horton created a school that educated a community in social justice and citizenship. Curriculum was decided through community interactions. Learning was experiential rather than purely academic. Horton writes,

People have a position on something and you try to argue them into changing it, you’re going to strengthen that position...get them into a situation where they’ll have to act on ideas, not argue about them” (Horton, 1998, p. 16).

This is clearly a trait of a Master Learner—do something authentic and meaningful with knowledge. He goes on to say, “You don’t just tell people something, you find a way to use situations to educate them so they can learn to figure things out themselves” (p 122). The Highlander Center developed their practices over time as they explored how people best learn. When faced with the difficulties of reaching people who had specific issues

that interfered with their ability to learn, they focused on how these people learn. They took the perspective of the teacher going to school with the students-learning from them. “When we finally understood that as long as we kept on learning, we could share that learning. When we stopped learning [from the people] ourselves, then we could no longer help anyone” (Horton, 1998, p. 69).

While these are not formal programs of Master Learning, they are conceptually examples of Master Learners in practice. This concept of a culture of teachers as Master Learners represents a radical shift in perspective which is only possible with radical shifts in the structure and purpose of our educational system. The Master Learner paradigm is potentially a shift from current models. Like any new paradigm, it must be further explored, developed and refined from multiple perspectives. It must be explored socially and in context with existing cultures and models.

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