

A Pedagogy of Mentoring
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Abstract

Sizable numbers of secondary school students require sustained one to one guidance to overcome gaps between their level of acquired skills and the academic outcomes they are expected to master. This article articulates a pedagogy of academic mentoring for educators to support underachieving students with one to one intervention. Academic mentors go beyond traditional tutors, using modeling and metacognitive techniques that allow students to consciously manipulate the internal cognitive strategies necessary for mastery, particularly of textual interpretation. The mentor makes the construction of meaning explicit by expressing thinking strategies out loud, thereby making them transmissible. By adopting the role of partner in shared academic exploration, the mentor incubates a student's underlying potential through the medium of caring relationship.

“Some things will be suggested to you by your own instinct, and heaven will prompt you further.”

Athena, disguised as Mentor, to Telemachus
The Odyssey, Book III

While human beings are remarkably independent learners, at times we must rely on an expert’s guidance to mark the way. When acquiring complex and creative skills- riding a bicycle, performing a melody, or crafting an argument- the intimate transmission that happens in relationship between instructor and student can be especially powerful.

Many students learning higher order academic skills in our classrooms may thrive through group instruction, but others, even in small classes with attentive teachers, need one on one support to succeed. These students may have learning disabilities, but just as often they simply experience a gap between their level of cognitive development and the skills they are expected to master. At the academically demanding independent high schools where I work with students to develop college level academic literacy and study skills, I have observed that a sizable minority without identifiable learning difficulties do not bridge this gap without extensive one to one assistance.

While many schools have a staff learning specialist who supports students with documented learning difficulties, schools often must refer students with general academic difficulties to outside tutors. Tutors can be extremely helpful in bridging cognitive gaps, but while traditional tutors possess subject matter expertise, they often lack the training in learning and cognition that will allow them to assess how students can overcome broad skill deficits and which strategies will move students toward skill mastery.

This article explores the one on one instructional role of what I call academic mentoring. The term mentoring has been used widely in recent years to describe programs in which at risk-youth receive support and life guidance from older counterparts. The term can apply equally well in an exclusively academic context. An

academic mentor extends beyond the traditional tutor. A mentor crafts instruction informed by a rich understanding of cognitive process and attuned to a student's individual character. The aim is to nurture self-directed learning so that the mentee internalizes academic skills and, equipped with a customized mental tool kit, evolves into her own guide. Imagine the benefit if schools could provide this kind of close guidance to assist struggling students. While the resource cost of one on one instruction is high, consider that an academic mentor on faculty might meet for a session a week with 25 or more individual students. This work could greatly strengthen the overall performance of a school's academically challenged student population.

The pedagogical key of academic mentoring is its use of modeling to help a student explore the inner craft of the intellect. Mentors must be able to illustrate and transmit metacognitive strategies, techniques for critically examining one's own thinking and learning process.

We can highlight how mentoring differs from traditional tutoring by comparing instructional approaches to interpretive reading. When deciphering a primary source document, for example the preamble to the Declaration of Independence, tutoring might emphasize content comprehension. The tutor might help the student understand unfamiliar phrases, such as "impel to separation," contextualize the document by sketching the democratic tradition in colonial Virginia, and review key thinkers such as Jefferson and Locke. These are all important approaches and the mentor would use them. But what if a student struggles with not just the particular content of the Declaration, but also the underlying skill of reading rhetorical text written in outmoded language? To strengthen academic literacy a mentor might also use the document as a vehicle for teaching the interpretation of challenging historical writing. She might talk out loud about

the questions and thoughts that come into her mind as she moves through the document sentence by sentence, or explain the connections between certain phrases in the document and her existing store of concepts and historical facts. The student might in turn follow this practice, explaining or writing questions, thoughts and connections in the margins. In this way the mentor and mentee cooperatively uncover the mental process of reading. The mentee learns to observe and develop a strategic approach to reading history and applies the skills to future assignments.

Some researchers have adopted the term apprenticeship to describe this process by which a student follows in the academic path of an expert (Collins, Brown, & Holum, 1991; Collins, Brown, & Newman, 1989). The student watches the expert model a skill, tries out the skill with guided coaching, internalizes and adapts the model, and finally moves toward using the skill independently. Practitioners at San Francisco's Strategic Literacy Project use the term "reading apprenticeship" to describe their academic literacy program in Bay Area high schools, a title derived from the broader term cognitive apprenticeship (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999).

The word apprenticeship recalls the traditional practice by which students learn a craft through guided transmission. In the artist or artisan's studio, the apprentice grows to mastery in part by following the path of the accomplished teacher. Learning develops through relationship rather than book study. While this is an old idea, what may be new is the application to a modern educational context that generally favors textbook learning and large formalized group instruction over one to one modeling.

One reason the apprenticeship model works naturally in the artisan's studio is that a physical craft is directly observable. A novice furniture craftsman watches the teacher construct with his hands. But the act of reading could well be considered a craft as much

as furniture making or sculpture. The difference is that crafting meaning from text is performed invisibly, inside the mind. The academic classroom, unlike the studio, emphasizes cognitive skills. The great challenge of mentoring is to make cognitive process directly perceptible and thereby transmissible. A student reader or writer can “observe” meaning being constructed from text only if the mentor articulates an accessible mental map of the process. By explicitly sharing his own internal process, the mentor can open the closet of the mind and make way for a relationship-based cognitive apprenticeship to begin.

Mentorship’s focus on relationship is supported by the research of Russian psychologist Lev Vygotsky, whose concept of the zone of proximal development has widely influenced education theory over the last generation. Vygotsky emphasizes the social nature of learning. The student learns by participating in challenging activities with a “more competent other” who supports the elements of the work that the student cannot do individually. Gradually the student takes over direction and moves toward independence (Vygotsky, 1978). Figure 1 illustrates the role mentoring plays along a continuum of cognitive difficulty. Students at the independent level tackle academic tasks without guided instruction. Although the task may be unfamiliar, such as drawing rare geometric figures or evaluating a newspaper article on an unprecedented news event, if the student perceives how to apply prior knowledge and problem solving methods, the task can be completed independently.

On the opposite end of the continuum are academic demands that so exceed the cognitive development of the learner that direct intervention cannot bridge the gap. The student may be impressed from afar by how a teacher uncovers mythological symbols in a poem, but cannot grasp the connections even when shown explicitly. I find this gap

most commonly among middle school students asked to engage in abstract and suppositional thought who have not fully entered what Piaget termed formal operational thinking. Asked to explain an abstract idea such as justice, a student with undeveloped formal operational thinking gives a concrete example (when a person gets a fair trial) but cannot generalize the example into a principle. This student would struggle to write an essay or even a thesis statement arguing whether Sethe's murder of her baby daughter in Toni Morrison's *Beloved* is a just act.

Mentors have the most impact when working with students in the middle of the cognitive continuum, Vygotsky's zone of proximal development, where the instructor supports or scaffolds the portion of the activity that the learner cannot accomplish independently (see Figure 1). This mentoring level can be further divided into three sub-stages. A student at the outer edge of the zone of proximal development begins to construct internal awareness of a skill through observation, but may not actually be able to use the skill. Perhaps she watches the mentor read an account of the Civil War and identify key phrases out loud that signal historical bias. At a more advanced stage, the student works in tandem with the mentor reading related historical passages, developing a skill for detecting bias which would not emerge without direct assistance. At a still more advanced level she uses the skill flexibly on her own, needing only occasional and limited feedback to analyze historical bias in an independent research paper on the Cold War. The mentor's goal is to help the student move through these three stages toward independence. Eventually the mentee flies the nest altogether, and ultimately becomes a mentor to others. She teaches a peer to interpret biased language in a passage about the Vietnam anti-war protests.

When first modeling reading skills I may begin by verbalizing in front of a student the habitual pre-conscious conversation I hold in my own mind while deciphering text. Recently a student who struggles with figurative language asked me to help her explore a symbol in the first chapter of *The Great Gatsby*, a book whose details I had forgotten in the many years since college. I tried to make sense of the brief passage without the full context of the narrative. Gatsby walks outside at night, gazes at the stars and then looks out across the Long Island Sound as the narrator watches.

He stretched out his arms toward the dark water in a curious way, and far as I was from him I could have sworn he was trembling. Involuntarily I glanced seaward and distinguished nothing except a single green light, minute and far away, that might have been the end of the dock (Fitzgerald, 1925).

After reading the excerpt aloud, I vocalize my internal interpretive conversation while the student listens:

Well, I don't know what came right before this scene, but I get the feeling Gatsby is lost, like he is in his own shadowy world. The narrator cannot really see him for sure, so it's all a bit like a dream. I wonder whether the narrator knows Gatsby well. He says Gatsby stretches his arms out like he wants something, and it seems the narrator looks in the direction Gatsby stretches and sees the green light. I don't know what the light means, but it's far away so it seems like Gatsby wants it but can't get it. Plus in the paragraph before, Gatsby looks at the stars, so maybe the light is like a star too, sort of heavenly but you can't touch it because it's so far away. He is trembling and I know people tremble from strong feeling, fear or excitement. Maybe something earlier in the chapter would help me figure out what he feels if I went back and read it.

Some of the meaning making strategies I model in this example include posing reflective questions, making hypotheses, connecting the passage to prior knowledge, making inferences, and acknowledging the limits of what I know. The process is non-linear, multi-dimensional, more easily portrayed than described. It is an authentic exercise because I reveal myself inside the actual challenge of reading, puzzling coherence out of uncertainty, documenting that reading is not a seamless process even for so-called

experts. The student and I then take a second passage concerning the green light later in the novel and switch roles. She verbalizes her thinking and I listen. At other times we may read a passage together silently, then share our internal conversations.

During these types of exercises I often sit side by side with students to symbolically equalize our positions. We are both learners adventuring into unfamiliar text, though I may be more experientially equipped. I reveal myself in the process of struggle, selecting a text initially beyond my understanding. Students inevitably show interest when I model coping with genuine difficulty and frustration. I am even willing to model my less proficient skills, such as organization and time management, opening my weekly planner or professional binder to display my undistinguished office systems. I remain a model not because I have an impeccable solution, but because I am in charge of my process.

I encourage students to work as inquisitive scientists. Instead of insisting a student adopt a particular strategy, I will ask her to experiment for a week or two. Notice how well it works, I suggest, and take down some notes. We will examine the results next week. In this way, I invite the student into an investigative partnership. Mentoring becomes applied cognitive psychology field work with N of 2.

Although most of the metacognitive inquiry I do with students centers on text, I may help students explore their thinking in math, science, foreign language, or visual arts. Metacognitive practice can be applied to any of the multiple learning modalities learners use. I have even worked with cross-country runners to look at how they analyze their own body indicators while running. It has become common practice among learning specialists to assess which learning styles best serve a student. In the mentoring process, the student, with direction, evaluates herself by testing out different learning style study

techniques with real assignments. She might reconstruct notes using symbols and graphic organizers for one science quiz and then for the next quiz study from a standard outline form to find out when she benefits from visual versus more linear verbal processing.

Whatever the academic focus of the exploration may be, the mentor fully realizes the craft by additionally taking a step back to remember this intellectual work flows through the medium of relationship. A mentor working with high school kids focuses on the cognitive coaching, but remains conscious that the intellectual work is disciplined by habits of the heart. A genuine guide underwrites the mental work with faith, caring, patience and empathy, sensitive to the whole student and all the elements of a one to one human connection. Thinking, feeling and relating are all intertwined and will surface in multiple ways during the mentoring experience. Self-esteem, family background, culture and physical health all affect a student's learning process. While affective concerns may best be left for a counselor or therapist to explore directly, the mentor incorporates awareness of these issues into the relationship. This is especially true when a mentor and mentee build a relationship over an extensive period of time, sometimes even a whole high school career.

In Homer's *Odyssey*, Mentor is the advisor Odysseus charges with educating his son Telemachus. Telemachus must learn more than practical skills. To become the true heir of his father, he ultimately must become a man and all this momentous role entails. No one guide can oversee the great task, of course, but a successful mentor, through sustained and attentive guidance, can assist a young person to mature beyond measurable academic accomplishments. This is the intangible gift of their relationship. Sitting alongside a mentor, approaching the next unexplored question, the student obtains more than just useful techniques of the mind. The student realizes an ethic of discovery.

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