

Why Tutoring Matters: The interaction of a peer tutor and a tutee during scaffolding
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We know that tutoring “works”. Students have long reported that tutorial assistance is beneficial as they acquire new skills and knowledge. In fact, tutoring has become such an established activity on college campuses that it is often assumed that it will be effective, resulting in improved student performance. Although once associated primarily with poor academic skills or a need for remediation, tutoring is currently more recognized as a service that can benefit any student at some point in his academic career (Dvorak, J., 2001; Dzubak, C., 2008; Maxwell, M., 1994; Rabow, J., Chin, T., and Fahmian, N., 1999). An interesting question is why this activity with a peer tutor is so effective in supplementing the learning that occurs in the typical classroom. That is, what occurs during a tutoring relationship that is so helpful to the students that they choose to continue it for an entire semester?

Dzubak (2008) discussed many of the interpersonal variables that are exhibited during effective peer tutoring. Some of these variables can be demonstrated in the classroom with the instructor but others generally cannot, given the nature of a typical college classroom. For example, one of the benefits of a one-to-one tutoring session is that it provides an opportunity for scaffolding to take place. The position of this writer is that it is the effective use of scaffolding during a tutoring session that has three distinct advantages over a classroom. First, it is conducted during a personalized, face to face, “social” interaction; second, it provides immediacy of feedback that is seldom possible in a college classroom; and, third, it actively engages the tutee in the process of learning. These three variables are the key components of scaffolding.

Tutoring and Scaffolding

It was Lev Vygotsky (1978), a Russian psychologist, who introduced the term zone of actual development (ZAD) to refer to the skills and tasks that a student is able to perform independently. He described the area just beyond what a student can perform alone as the zone of proximal development (ZPD) which includes the tasks that are to be learned. Once acquired, these tasks then become a part of the zone of actual development. Vygotsky (1978) explained: “The zone of proximal development is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (pg. 86). In other words, during tutoring the tutee acquires the skills or knowledge to progress from the ZPD to the ZAD. It is this type of assistance that cannot generally be easily provided in a college classroom.

Scaffolding is the process of providing assistance to help students move from the point where they need support to the point where they are able to perform a skill independently (Slavin, 2009). The support is immediate and temporary. That is, once the skill is internalized and can be performed independently, the support is withdrawn. Scaffolding is both effective and efficient in that it allows the tutor to quickly recognize when a tutee needs help, what help is

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needed, and to assist the tutee until the skills can be performed independently. This process is difficult to perform in a college classroom with the result being that a student might misunderstand a new skill or concept. Without immediate clarification, confusion results, creating a gap that widens between what the student is able to understand and or do independently and what he/she is expected to be able to do.

Effective scaffolding is based on the process of setting and resetting individual learning goals. Specifically, the tutor recognizes where the student needs temporary assistance and where he is able to again resume independence. This can be done fairly quickly during face to face tutoring, as contrasted with the classroom where there might or might not be an opportunity to ask a question during lecture. Significant time is saved via tutoring compared with the amount of time it might take a student to problem solve or attempt to independently enhance self learning or comprehension. Scaffolding is provided not just by tutor demonstration or explanation, but is supplemented by the use of questions, cues, or hints. It takes advantage of many of the recommended learning centered variables that include modeling, frequent feedback, active engagement of the student, and reinforcement. It is via this process that the tutee acquires the ability to work without assistance towards a specific and individualized learning goal. Scaffolding is particularly effective because of its interactive and “social” nature, variables known to enhance learning.

Scaffolding within the Zone

In an elementary school classroom, scaffolding occurs when teachers intervene and provide the cueing and questioning needed by students as they learn to perform a task independently. The same principle applies to tutoring: it is the “cueing and questioning” that serve as the temporary supports that help the tutees to bridge the gap between what they know and what they need to know. This temporary assistance is naturally provided during tutoring but is often lacking in a college classroom. Another advantage that tutoring provides is that both the tutor and the tutee may spontaneously interject or query, not being bound by the typical parameters of classroom protocol during which a student does not ask a question until the instructor provides that opportunity. One problem with that strategy in the classroom is that by the time questions are accepted, the student might be too confused to even ask a question in front of the rest of the class! Unfortunately, the gap between what the student actually knows and what he or she needs to know again widens. Tutoring helps to narrow or eliminate that gap.

The assistance provided by the tutor may take a variety of forms, including verbal prompts, questions, clarification, or demonstration. For example, in the case of Math, the tutor might demonstrate how to solve a problem or perhaps explain just one specific step in the process. When checking for comprehension, the tutor might ask the tutee a direct question or have the tutee “talk through” the problem or concept as it is being solved. An especially effective strategy when providing Math tutoring is to have the tutee work at a chalkboard, explaining aloud the solution process. The tutor can observe the tutee at work and offer guidance through the application process. Communication is an extremely important part of tutoring, providing the tutee with an opportunity to ask questions as he/she strives to grasp a new concept. The clarification and cueing that are provided by the tutor must be specific, accurate, and clear. The tutor can use and reinforce the language of the field while tutoring, thereby

contributing to the tutee's grasp of the information within the broader context of the subject being studied.

Scaffolding and Learning

Tutoring offers a certain degree of spontaneity and freedom from the classroom "constraints" that are necessary in order to maintain the instructor's concentration and flow of thought. A tutor has the advantage of time and being responsive to the tutee in a way that a classroom instructor generally does not. The immediacy of the assistance provided by a tutor helps to eliminate confusion and enhances the speed and depth of learning. For most students, independent study serves to reinforce what was learned in the classroom and enhance their own learning. However, there are times when a student simply does not have the understanding or the skills to clarify his or her own confusion. During tutoring the use of scaffolding can usually eliminate the confusion, paving the way for continued learning by working within the tutee's zone of proximal development and moving on to the next higher level of understanding or skill.

One goal of tutoring is for the tutee to be able to successfully transfer or generalize scaffolded knowledge back to the classroom, or more importantly, to retain the information in memory and to transfer or apply later in other contexts. After all, one characteristic of learning is the ability to apply what is learned to another setting. Without the ability to generalize and transfer, "learning" would indeed have very minimal application. In fact, without the ability to transfer knowledge and skills, one could question whether any learning even took place. Murphy and Messer (2000) investigated student ability to transfer scaffolded knowledge to a setting or task different from which it was learned. They found that the more similarities of skills between the two settings, the more effective the transfer.

Immediacy of feedback as one learns a new task, combined with successful performance of that task, increases student understanding as well as transfer (Muthukrishna, N. and Borokowski, J., 1995). Both immediacy of feedback and successful task performance are standards for scaffolding as well as for effective tutoring. These two characteristics are quite often readily accomplished in the elementary schools as teachers observe and assist with the seat work of individual students. However, both are a less common occurrence at the high school level and are sometimes nonexistent in the college classroom unless the instructor assigns "seat work" or group work, such as for math problem solving, or during a recitation session that follows lecture. Needless to say, these two variables are significant when answering the question of what happens during tutoring that is so valuable to the tutee's learning. One answer is, "immediacy of feedback" and that leads to successful task performance. Add tutor reinforcement following successful task performance and it becomes increasingly clear why some students learn much more quickly during a tutoring session than during lecture.

It is commonly known that the more one knows about a subject, the easier it is to learn more. We are neurologically hard wired to learn by adding and associating new information to that which is already stored in memory. By adding more knowledge to memory via scaffolding during tutoring, the tutee is provided with an extremely efficient method of acquiring new material. Immediacy of feedback during one-to-one tutoring, successful performance of the task, and tutor reinforcement all have a substantial and positive impact on learning. It should not be

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surprising that students recognize this during tutoring and choose to continue the activity until course completion.

Additional Benefits of Scaffolding

It was previously noted that tutee ability to independently transfer newly acquired skills is a clear indication that learning has occurred. During the acquisition of new skills and prior to the actual transfer, tutees also acquire effective learning and problem solving strategies. These skills are often considered to be an added bonus of tutoring from which tutees emerge as skilled and self regulated learners. They have acquired the study strategies that are most effective for them, from how to approach and analyze a problem to how to apply or analyze new concepts. They have an opportunity to learn metacognitive strategies that strengthen their problem solving and critical thinking skills. Scaffolding during tutoring is used regardless of *why* there is a gap in tutee skills. That is, whether the material is new, or complex, or whether the tutee is underprepared, scaffolding can help the student to gain the necessary skills to move forward and beyond their current level of understanding.

Summary

Effective tutoring requires the effective application of scaffolding. This results in increased student comprehension and learning. A bonus of scaffolding is the increased self confidence and motivation observed in many tutees as the semester progresses, culminating in academic success and autonomy as learners. This is why tutoring matters.

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