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Authentic Learning: A Practical Introduction & Guide for Implementation

[Clif Mims](#)

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From the standpoint of the child, the great waste in school comes from his inability to utilize the experience he gets outside while on the other hand he is unable to apply in daily life what he is learning in school. That is the isolation of the school--its isolation from life.

--John Dewey, 1916

Introduction and Background

According to educational psychologist Howard Gardner, many of today's students do not actually understand what they learn. For many students, education has become nothing more than drill and response; there is no relevance for the materials the students are expected to learn (Gardner, 1991). As a result, teachers are accustomed to students inquiring, "Why do I need to know this? When will I ever use this?"

Piaget and other psychologists believe that the learner must be active to be engaged in real learning (Piaget, 1954, 1974). Learning becomes active when students are able to connect new knowledge with their prior understanding. Constructivists take this notion a bit further stating that a meaningful context that brings the real world into the classroom learning environment is key to promoting learning (Brown, Collins, & Duguid, 1989). Learning is a process of interacting with the outside world, and continually reanalyzing and reinterpreting new information and its relation to the real world (Brown et al., 1989; Lave & Wenger, 1991). Traditional learning situations in which students are passive recipients of knowledge are inconsistent with the learning situations of real-life (Lave, 1988). In order to make student learning relevant to real life experiences, learning environments must be authentic.

Authentic learning is a pedagogical approach that allows students to explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant to the learner (Donovan, Bransford, & Pellegrino, 1999). The term authentic is defined as genuine, true, and real (*Webster's Revised Unabridged Dictionary*, 1998). If learning is authentic, then students should be engaged in genuine learning problems that foster the opportunity for them to make direct connections between the new material that is being learned and their prior knowledge. These kinds of experiences will increase student motivation. In fact, an "absence of meaning breeds low engagement in schoolwork and inhibits [learning] transfer" (Newmann, Secada, & Wehlage, 1995). Students must be able to realize that their achievements stretch beyond the walls of the classroom. They bring to the classroom experiences, knowledge, beliefs, and curiosities and authentic learning provides a means of bridging those elements with classroom learning. Students no longer simply learn rote facts in abstract or artificial situations, but they experience and use information in ways that are grounded in reality. The true power of authentic learning is the ability to actively involve students and touch their intrinsic motivation (Mehlinger, 1995).

Authentic instruction will take on a much different form than traditional methods of teaching. The literature suggests that authentic learning has several key characteristics.

- Learning is centered on authentic tasks that are of interest to the learners.
- Students are engaged in exploration and inquiry.
- Learning, most often, is interdisciplinary.
- Learning is closely connected to the world beyond the walls of the classroom.
- Students become engaged in complex tasks and higher-order thinking skills, such as analyzing, synthesizing, designing, manipulating and evaluating information.
- Students produce a product that can be shared with an audience outside the classroom.
- Learning is student driven with teachers, parents, and outside experts all assisting/coaching in the learning process.
- Learners employ scaffolding techniques.
- Students have opportunities for social discourse.
- Ample resources are available. (Donovan et al., 1999; Newman & Associates, 1996; Newmann et al., 1995; Nolan & Francis, 1992).

The North Central Regional Educational Laboratory (NCREL) states that authentic tasks often "involve multiple disciplines...bear a strong resemblance to tasks performed in non-school settings and require students to apply a broad range of knowledge and skills...[and] often, fill a genuine need for the students and result in a tangible end product" (*Authentic tasks*, 2000).

Examples of student learning in a traditional classroom might involve students reading a textbook and answering a few questions related to the lesson content. Perhaps in a mathematics class students would be solving problems in a workbook. However, if students were engaged in an authentic lesson related to solving the city's problems with air pollution the classroom environment probably would look quite a bit different. Students could work in groups and divide up the various tasks that need to be accomplished to solve this real-world

issue. Perhaps you would find a group of students looking through newspapers to gather data related to the local weather, while another group searched the Internet for information about air pollution, as other students collected data about the city's population. These students would simultaneously be engaged in science, mathematics, and reading. They would also be utilizing their technical skills and search skills as well as exercising their skills in social communication.

Anatomy of a Model Case

Let us take a look at an instructional project that exemplifies all the characteristics of an authentic learning activity. The information discussed in this section refers to a fictional authentic learning project that can be accessed at <http://www.arches.uga.edu/~cmims/panda>. Please note, that authentic learning is a fluid process. This paper reports the characteristics of authentic instruction in this specific example by segmenting the students' activities into "phases" and discussing traits that are exemplified within each phase. In practice, all of these attributes are present throughout the authentic learning experience.

Setting: This activity involves middle-school students that are enrolled in an introductory technology class. Some of the key technological skills developed are related to word processing, hypermedia, graphics, designing and building websites, digital technologies, the Internet, file transfer, data organization and manipulation, and basic design principles. The primary aim, though, is to help students develop the ability to apply these technological skills in areas such as learning, work and recreation by weaving them into the learning process in their classroom instruction.

Scenario: In this hypothetical activity, the teacher has been approached by Zoo Atlanta requesting the students' assistance in a local advertising campaign. The first goal of this campaign is to educate the community about Giant Pandas and their struggle to continue to exist as a species. Secondly, the zoo hopes to increase park visitation from the Athens area by publicizing their Georgia Panda Project and creating interest that will draw people to the zoo.

Phase I – Engagement & Inquiry: After hearing about this opportunity, the students are excited and immediately become enthralled with the project. Initially, the students engage in lengthy discussions as they map out the details of their new advertising campaign. They begin by first becoming more knowledgeable about Giant Pandas. They do this by breaking off into small work groups and using a variety of classroom resources (reference books, CD-ROMs, newspapers and magazines), quality Internet resources and materials found in the university's library. In addition, some students contact experts on Giant Pandas (by phone, email, and in person) and acquire first-hand knowledge related to pandas. The culmination of this phase is an informal meeting/discussion in which all the groups report their findings to the entire class. The result is an increased understanding and knowledge about these endangered bears for everyone, including the teacher who is only serving a support role.

The Take Away: There are four primary characteristics of authentic learning exemplified in the above description. First, it is clear that the students in this

classroom are actively engaged in a genuine experience that is of interest to them. They become so intrigued and motivated with this project that they inquire about pandas of their own initiative; another attribute of authentic learning. While gathering and sharing research, they learn about the scientific classification of Giant Pandas, what pandas eat, information about panda reproduction and their life span, and much more science related content. They are immersed in researching, discussing and reading and writing about information related to these bears; all important language arts skills. The students become involved with mathematics as they convert all the metric measurements (Giant Pandas are native only to China), and learning about the geographic region that is home to pandas incorporates both geography and science. This well demonstrates the feature that authentic environments are interdisciplinary. During this time, students did not view the research and information collection as an assignment where the goal was to memorize a set of basic facts. Instead, the students viewed the research and information as a vehicle to dealing with a much larger, upcoming task – the advertising campaign. The campaign has provided the students with a real-world project and opened the walls of their classroom. This tie to the outside world is a key feature of authentic learning.

For the purposes of this particular course's aims, the students are using technology in a variety of meaningful ways. They are gaining experience using CD-ROMs, searching for resources online and searching through the library's electronic database. Once the students find information they must first decide whether it is credible and appropriate to their goals. These judgment skills are important in today's information society as they try to ascertain quality resources for their own personal, educational and professional use as well as acquiring resources that can be shared with their classmates. Once useful information is found, the students must organize it in some way. Some students will choose to do this using word processing, email, spreadsheets, or a database. All of these learning opportunities with the technology will "emerge" and are priceless as they will be driven by a genuine need for the students as they march towards their goal.

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Phase II – The Learning Process: It should be noted that in this example there is clearly some overlap between the first two phases.

With their increased love for and understanding of Giant Pandas the class began developing their advertising campaign. The chief goal was to develop a local advertising campaign that would both make the community more knowledgeable about Giant Pandas and create interest in visiting the Georgia Panda Project at Zoo Atlanta. During phase II the students developed their advertising plan. They chose a four-pronged approach to delivering their message. Once these four goals (advertising projects) were identified, the students organized themselves into small groups based on their interests in a specific project(s) and their abilities to help accomplish the project goal. The students then set out acquiring and developing the materials and technical skills needed for each advertising project. Initially, these work groups were well defined, but as the students diligently worked a synergy developed and individual students moved among groups offering assistance and expertise as necessary.

The following are brief descriptions of the four advertising projects. Examples of these projects may be accessed online at <http://www.arches.uga.edu/~cmims/panda>.

1. Website - A website was designed to educate online visitors about and create enthusiasm for Giant Pandas and the Georgia Panda Project. The website URL was included in all of the advertising, and served as a common reference database to which everyone could be "pointed."
2. Flyers - Thousands of flyers inviting the citizens of Athens to meet Zoo Atlanta's pandas, Lin-Lin and Yang Yang, were distributed around town and the university. This project was viewed as warm, friendly, "inviting"

advertising. The flyers included a picture and the names of the bears. No “educational” information was included.

3. TV Ad - A 30 second television promotion that aired on the local community access station was created. The ad included numerous images of Lin-Lin and Yang Yang and information about the plight of pandas as an endangered species. The hope was that people would be touched and/or intrigued by the pictures and information and wish to visit the pandas.
4. Pamphlets - Local businesses and organizations made our Panda Pamphlets available to the public. These pamphlets provided an introduction to Giant Pandas, information about their declining numbers, and the goals of the Georgia Panda Project.

The Take Away: All of the features of authentic learning mentioned in the first phase continue to be present during this phase. Students continue to be engaged with real-world problems and situations that motivate them to seek to understand about a wide variety of subjects. Another characteristic illustrated in this phase is students’ engagement with higher-order thinking skills (analysis, synthesis, and evaluation). The students simultaneously took all their information about pandas and their knowledge about technology, analyzed and interpreted it, and used this to help them design their advertising campaign. Students were involved in these higher-level activities by their own actions. Their drive to be successful caused them to push themselves in these ways.

In relation to the aims of this technology course, the students were involved in a wide variety of learning goals. All four of the advertising projects involved word processing, graphics, images and basic design principles. Each project also involved students in a set of experiences that were unique to that project’s aim. For instance, the group developing the television ad needed a much greater level of expertise in issues related to visual design and mass media. They gained this knowledge with the assistance of faculty and students in the university’s communications department as well as from volunteers from a local advertising firm. These students then shared their new expertise as they helped the other groups improve their projects. This acquisition and sharing of knowledge was present throughout this phase of the experience and greatly enhance students’ mastery of the course’s goals.

Phase III – Communication: After all the advertising projects are completed, the students kick-off their ad campaign. The flyers are handed out, placed on cars, and tacked on bulletin boards all over town. The pamphlets are placed in business and organizations that have volunteered to distribute them and the television commercial begins playing on the local community access channels. The flyers, pamphlets and commercials all direct community members to visit the newly launched website. The students are proud of their finished products and enjoy the chance to “showcase” them during the campaign. They find that, repeatedly, they are given the opportunity to share their learning experiences with others as a result of the public advertising.

The Take Away: The primary element of authentic learning that can be demonstrated in this phase is that students need the opportunity to share their finished projects with an audience outside of the classroom. The literature offers varying degrees to which this should be done, but the key point is that students should find the entire experience and their finished project relevant to the real-world. This ability to transfer their new knowledge and skill beyond the

walls of the classroom and make practical application of it is the most powerful characteristic of authentic learning.

An objective of this class is for students to learn to integrate technology into the learning process. This has been demonstrated in numerous ways over the course of this learning experience. One example includes an information database that the students created to help them keep record of each student's expertise with technology. As an advertising project group encountered a problem that none of them could solve, they would consult this database to find a class member that possessed the needed expertise. This database sprang out of, what the students' viewed, a necessity. It was not an extrinsically imposed requirement, but rather something the students thought would help assist in their experience.

Overall Take Away: There are some aspects of authentic learning that are best illustrated by looking at this entire experience. Throughout this process learning was student driven with the teacher acting only as a guide or coach. Inquiry and scaffolding were used as students constructed their understanding of the information and there were always ample resources available. The final feature that has been illustrated is the opportunity for social discourse among the students throughout the learning process. These students engaged in whole group meetings to develop the advertising plan, in small group discussions about individual projects, and countless one-on-one conversations about numerous aspects of this experience.

Practicing Authentic Learning

To teachers that are considering using authentic learning in their own classrooms I offer some practical advice.

1. *You must think like a coach.* Authentic instruction calls you to a much different role than traditional teaching methods require. The students are now in control of their learning and it is important that you not take that power away from them.
2. *Bring earplugs.* Realize that your classroom environment will drastically change. Students will be actively working, participating in discussions, hunting for information, and enjoying the entire process. Desks will have to be moved around and students will need to have freedom to move about the room. It will become important for you to develop the ability to distinguish between "energetic learning" and other energetic activities.
3. *Ease your way into it.* Perhaps undertaking a two-week authentic experience in your initial effort is not a good idea...for you or for your students. All of you will need to become acclimated to this new process.
4. *Get some help.* There are quality examples and resources to help you design authentic instruction, both at the bookstore and on the Internet. Use their ideas and take advantage of any advice they offer. It might also be a good idea to have adult volunteers come into your classroom and assist you initially. The students will have many questions and needs, not just related to the lesson, but also as they begin to adjust to this new process. An "extra set of hands" could be helpful in dealing with this.
5. *You are learning, too.* Think of your first attempt at implementing authentic instruction in your classroom as a learning experience for you.

Summary

There has long been a discrepancy between the traditional process of learning in schools and the process of learning in the real-world. As a result, students have been unable to see any real-life connection with what they learn in school. Authentic learning offers the opportunity for teachers to bring the outside world into the classroom. In doing so, students can begin creating those connections. This will empower them to transfer their knowledge and skill learned at school into their everyday lives outside of school, thus making the value of learning much more important to them.

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