



## Constructivism in University Education: Taking an Example from Museums

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### *Abstract*

*Education is the primary goal of both universities and museums. What makes these institutions similar in their challenges is the diversity of their audiences. I contend that the university campus learning environment has the capacity to better deliver curricular content to an increasingly diverse student body by adopting and applying a Constructivist educational theory.*

*Constructivism is an educational theory that is based on a view of knowledge as a personally-constructed understanding that results from educationally-oriented activities. There has been widespread adoption of this approach within museums, herein I assert that by developing intentional Constructivist learning opportunities on university campuses, students will be better able to develop and create their own meaning from educationally-oriented activities that allow exploration and experimentation along with conclusory thinking.*

*Key words: Constructivism, museums, university programs, curriculum*

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### **Introduction**

#### *Museums as educational institutions*

Curiosity about objects and artifacts led people to collect them and to show and tell others about them. Eventually these informal arrangements became more formalized, and by the middle of the 19th Century, the modern museum emerged from the curio cabinets and World Fairs (1).

Today's museums are sophisticated educational institutions bearing little resemblance to the earlier institutions that focused on acquisition and exhibition. However, there is one aspect of museums that has stayed constant: museum patrons are not forced to go to a museum but instead, they choose to visit. A person might visit just for the sheer joy of learning something different and interesting, or to take friends and relatives to show them something new. Today there is still a sense of anticipation and fun associated with a visit to a museum. In this light, I pose

the question: How can we create that same enthusiasm for learning on college campuses?

#### *Museums vs. universities: Differences amidst similarity*

While museums and universities share the mission of educating the general public about specific subjects, by necessity the manner in which these institutions approach the task is different. Museums educate the general public using collections (and research on those collections) as a basis for educating; museum visitors include persons of varying ages, backgrounds and knowledge levels; anyone can visit a museum. Universities, by contrast, educate students using information as a basis for tutelage. Students attend classes on specific subjects. Students can only attend those classes if they meet minimum proficiency requirements. Even students in introductory classes are a select group, as they had to gain admission to the university in order to be accepted into a class.

Unlike university professors, museum professionals host visitors from the general public. It is hard to predict how much knowledge visitors might have. They are of all ages, social classes, incomes, and cultures. To maintain and even increase annual visitation numbers, museum professionals focus on understanding how people learn and then develop learning opportunities that are comprehensible to people with different backgrounds and experiences. Museum professionals know that visitors “vote with their feet” and will only return if they have pleasant and satisfactory learning experiences. When visitors don’t attend a museum, it is the museum professionals’ responsibility to find out how to increase visitation. The institution views it as its mandate the need to impart knowledge in a way that is appealing to the general public.

By contrast, outside of education departments, university faculty members tend not to focus on how people learn. Professors lack real pressure or incentive to reflect on how they teach, and only rarely obtain training in how people learn. Most faculty members teach as they remember being taught — using memories as a guideline for how to impart knowledge. The students in class are a captive audience. They want to earn course credit and will attend class regardless of whether they are satisfied with their learning experience. What’s more, the general atmosphere of the university is such that professors are often insulated from confronting deficiencies in their teaching methods. Students are required to attend classes (at least to some extent). If students “vote with their feet” and miss classes, the institution views it as a violation, and initiates corrective actions — penalizing students for missing classes. Essentially, faculty members tend to view it as their job to set the penalty high enough so that students will experience more discomfort by not attending a class than for attending (and sitting through a presumably boring lecture).

However, as university campuses continue to grow in diversity, there are louder rumblings about the need to improve the way that subjects are taught. Forcing attendance with the threat of penalties finally may be recognized as a poor teaching tool. It may no longer be acceptable to let bright professors without basic knowledge or training in education theory and practice into a classroom and teach class essentially as they were taught 10 or 20 years ago.

Perhaps the time has come for universities to take a look at how museums educate the public. The educational mission of museums over the last half century has ac-

knowledged the benefit of active learning environments within a social environment, and the legitimacy of multiple viewpoints (2). The underpinning of this approach is on educational theory known as “Constructivism”. This theory calls for active learners to draw their own conclusions from the learning environment and integrate these conclusions into their own knowledge base. This is in contrast with more traditional ways of teaching in which the professor imparts knowledge and students are expected to assimilate this knowledge as an absolute, externally-defined “truth” (3).

### **Background**

*A brief overview of knowledge, learning, and educational theory*

Hein contends that theories of education are rooted in theories of knowledge and of learning (4). Therefore, a brief overview of each and their interrelationship will aid in understanding Constructivism.

Theories of knowledge or epistemologies delve into questions of what knowledge is and where it exists. Hein eloquently presents these issues as they relate to theories of education:

“Does knowledge exist externally, independent of individuals, or does it reside only in our minds?... If knowledge is external, how do we come to know it? If it resides in our minds, how can we share it?” (4)

Educators inform their instruction based on how they view knowledge, as well as how they view the act of learning. Theories of learning range from the transmission-absorption model of learning to the student-construction model of knowledge. The transmission-absorption model revolves around the student as a passive recipient of “knowledge,” whereas the student construction of knowledge is based on the student as an active participant in the construction of knowledge from results of experiments and erudition from which rational conclusions are individually drawn.

Constructivist thought views knowledge as personally and/or socially constructed. It espouses active learners, whose conclusions are validated within their constructed realities, rather than passively acquired or accepted absolute externally-defined “truths” (4).

While Constructivist theory encompasses the experiential approach to learning and encourages “hands-on” methods

of instruction, it goes further by advocating a “minds-on” aspect of instruction. By adopting a Constructivist approach, museums are creating environments where visitors can interact with exhibitions and programming that have been intentionally developed to reach multiple audiences via diverse avenues of experience.

For example, in striving to achieve a Constructivist approach, many museums are developing exhibitions that have:

- Multiple points of accession, with no specific path or begin or end;
- Accommodation for a variety of learning modes;
- Many points of view;
- A variety of opportunities for visitors to connect to objects and ideas through the use of their own life experiences; and
- Programming for students to have experiences that allow for experimentation, conjecture and drawing conclusions (3).

#### *Why should universities adopt this approach to learning?*

One of the values of the Constructivist approach that is important to the university community is the use of different delivery methods to address content. Within a university classroom, a Constructivist approach to learning provides experiential learning based on experimentation and conclusions that lead to a better understanding of the process. This kind of meaning-making is more complex than merely experiential learning based on “hands-on” activities. It requires a “minds-on” approach where students are “constructing” meaning from their learning experience and integrating it into life experiences. Constructivism is necessary in order to reach an increasingly diverse student body, but perhaps more importantly, it is paramount to the transformation from a 19th and 20th century notion of learning to one that acknowledges the importance of personal meaning-making.

#### *How can universities adapt?*

Given a general consensus that classroom content is not intended to be merely memorized, but instead, transformed into the scaffolding necessary for further development of understanding, then the personal construc-

tion of knowledge and meaning is a useful concept for university-based learning. Developing a Constructivist approach within classrooms requires more time to create meaningful activities that are more than simple demonstrations. The activities should be experiments that allow students “... to interact with the world, to manipulate it, to reach conclusions, experiment, and increase their understanding; that is, their ability to make generalizations about the phenomena with which they engage” (4). Unlike more traditional approaches to university teaching, intentional training for a Constructivist approach should be introduced on university campuses.

#### *One university example*

One of the most amenable educational disciplines to a Constructivist approach is anthropology coursework in the Anthropology Program at the Florida Gulf Coast University (FGCU). One course that has exemplified a Constructivist approach is Archaeological Field Methods. The inherent activity-oriented nature of the course certainly makes it a “hands on” class. Students are busy in the field learning the basics of troweling, screening, mapping, data recording and the like.

But Constructivism is more than experiential or “hands-on” learning. Constructivism calls for “minds-on” learning opportunities. In the Archaeological Field Methods class, students grow intellectually as they participate in regular field meetings, afternoon talks providing background to the field work, and then interpret the site, providing visitors with specific information or knowledge of the site. As they engage in these activities, archaeology students integrate the knowledge they gain to construct their own interpretation of the activities and the class.

FGCU shapes a curriculum that also requires archaeology students to engage directly with the data that is being recovered (results of their field method work) and come to conclusions about what the next decision that must be made in archaeological inquiry. Not only are students involved in practicing proper archaeological field methods, they are also involved in helping determine the next appropriate step by studying and discussing pertinent information about what has been recovered and the intentions of the field work. Students must evaluate the data as a professional archaeologist does and develop a series of possible steps that can be taken at each decision point. Of course the co-directors of the field school guide this process to ensure that the steps proposed by the students are

rational; but, a variety of proposals are acceptable within the framework of the research.

### *Benefits to the use of constructivism on university campuses*

1. Teaching on campus should be more thoughtful, engaging and meaningful. With each day, our students should be learning more of the fundamental building blocks they will need as they progress through their academic careers. It is time to help a new cohort of students to better understand the processes being studied because they have constructed meaning by adding to their own experiences and understanding through meaningful learning activities.

Citizens who have been guided in this way will not wait for the “teacher” or authority figure to pronounce the “correct” answer, but instead will be empowered to construct meaning by reaching rational conclusions from data. This will benefit businesses, government, and communities, as well as the students themselves during lifelong learning pursuits.

2. With ever-increasing diversity on college campuses, students come with more varied experiences than ever before. Each student starts from a different place based on his or her own experiences and understandings. Constructivist approaches can provide multiple access points that recognize the differences in experience and background knowledge.

### **Conclusion**

Museums and places of higher education are important community portals to learning. Museums have moved away from being static, didactic artifacts. Instead, in order to maintain their cornerstone location in community education, they have transformed exhibitions and programming to reach more visitors in more meaningful ways using Constructivism as a centerpiece. This has led to the creation of exhibitions and programs that present multiple points of accession to serve visitors who come from different backgrounds; that accommodate multiple learning modes; deliver many points of view; provide a variety of opportunities for visitors to connect to objects and ideas using their own life experiences; and that offer experiences through experimentation, conjecture and drawing conclusions (3).

Higher education may not experience the same economic pressures as museums to be successful in drawing students to their campuses, but with an increasing level of diversity on these campuses, providing a Constructivist learning environment can provide greater accessibility to curriculum as well as an environment that fosters individual construction of meaning. It’s time to accept Constructivism and begin building a strong, educated community.

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### **Competing interests**

The author declares that she has no competing interests.

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