Constructing Knowledge in Military Higher Education

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This paper was completed and submitted in partial fulfillment of the Master Teacher Program, a 2-year faculty professional development program conducted by the Center for Faculty Excellence, United States Military Academy, West Point, NY, 2017.

Introduction

I am a foreign active duty officer serving at the Modern War Institute as the very first Fulbright Scholar ever in the history of the United States Military Academy (USMA). I am also a faculty member of the National University of Public Service (NUPS) at Budapest in Hungary. This university is responsible for the military higher education on all (BS, MS and PhD) levels as well as the education and research activities of other state related professionals such as law enforcement and public administration. Beside my duties as a research fellow I am teaching in the Defense and Strategic Studies where I was offered with the opportunity to join the Master Teacher Program conducted by the Center for Faculty Excellence (CFE). Originally this program has been designed to provide a 2-year professional development program for staff and faculty at USMA; however, my time here is limited for the 2017 academic year. I am so glad that the CFE authorized me to enroll in the accelerated version of the program in order to fulfill the program requirements in two semesters.

Being a commissioned officer of the Hungarian Defense Forces (HDF) and a senior lecturer of NUPS as well as graduating from and teaching in different programs and special courses/ seminars associated with the US Armed Forces provides me with the unique experience and the possibility to compare these two nations’ methods of constructing the knowledge of future officers. Therefore, in this literature review I shall focus on the constructivist approach of the teaching/ learning process. Historically and culturally the education process in the US (anglo-saxon) and in Hungary (prussian-russian) defers in many ways; however, we shall see that in the last decade since HDF have become a more active member of NATO this gap between the two is getting smaller.

Constructivist approach

The core commitment of a constructivist position is that knowledge is actively built up by the learner rather than transmitted directly from one knower to another.¹ This belief based on those interactions that working in groups to construct knowledge improves cadet participation and can help them to change their approach to learning. By allowing each individual to bring his or her own unique experience in order to contribute to a particular task, as well as creating a climate of open dialogue between them at all academic levels. Therefore, learning becomes an inclusive exercise that potentially benefits and empowers all of the actors (cadets and teachers)

¹ DRIVER, Rosalind; ASOKO, Hilary; LEACH, John; MORTIMER, Eduardo; SCOTT, Philip: Constructing Scientific Knowledge in the Classroom, Educational Researcher, Vol. 23, No. 7, p. 5
and excludes none. Moreover, the person-to-person interaction via external dialogue inherent in
the social constructivist approach lends itself to encouraging higher order thinking under the
guidance of the facilitating instructor. It also provides a type of practice or primer that engenders
cognitive maturation and, ultimately, metacognitive abilities.²

Cognitive and social constructivism

Cognitive constructivism focuses on internal, individual constructions of knowledge. This perspective, which is derived from Piagetian theory, emphasizes individual knowledge construction stimulated by internal cognitive conflict as learners strive to resolve mental disequilibrium. Essentially, cadets as well as older learners (MS and PhD students) must negotiate the meaning of experiences and phenomena that are discrepant from their existing schema. Cadets may be said to author their own knowledge, advancing their cognitive structures by revising and creating new understandings out of existing ones. This is accomplished through individual or socially mediated discovery-oriented learning activities. This mainly happens in the academic side of USMA as well as NUPS³

Social constructivism views the origin of knowledge construction as being the social intersection of people, interactions that involve sharing, comparing and debating among learners and mentors. Through a highly interactive process, the social milieu of learning is accorded center stage and learners both refine their own meanings and help others find meaning. In this way knowledge is mutually built. This view is a direct reflection of Vygotsky’s sociocultural theory of learning, which accentuates the supportive guidance of mentors as they enable the students to achieve successively more complex skill, understanding, and ultimately independent competence. The fundamental nature of social constructivism is collaborative social interaction in contrast to individual investigation of cognitive constructivism. Through the cognitive give and take of social interactions, one constructs personal knowledge. In addition, the context in which learning occurs is inseparable from emergent thought. This latter view known as contextualism in psychology becomes a central tenet of constructivism when expressed as situated cognition. Social constructivism captures the most general extant perspective on constructivism with its emphasis on the importance of social exchanges for cognitive growth and the impact of culture and historical context on learning.⁴ This is mainly happening in the US Cadet Corps as well as in the Ludovika Battalion (the Hungarian version of USCC with the difference that this is an active infantry (rifle) battalion of the HDF), where cadets are assigned with different levels of leadership responsibilities under the mentorship of officers and senior non-commissioned officers.

The contest of Scheme Theory

³ BAKOS, Csaba Attila, FARKAS, Sandor: Gyakorlat orientált oktatas, képzes és kikepzes, avagy a palyaszocializacio a katonai felsooktatasban, Honvedesgi Szemle, Vol., No. 4, p. 87
⁴ APPLEFIELD, James. M; HUBER, Richard; MOALLEM, Mahnaz: Constructivism in Theory and Practice: Toward a Better Understanding, The University of North Carolina at Wilmington, p. 7
Two of the basic concepts of Piaget’s theory of cognition are assimilation and accommodation. Both terms must be understood in the context of his constructivist theory of knowledge. This learning theory can be summarized by saying that cognitive change and learning take place when a scheme, instead of producing the expected result, leads to perturbation, and perturbation, in turn, leads to accommodation that establishes a new equilibrium. Learning and the knowledge it creates, thus, are explicitly instrumental. His theory of cognition involves a two-fold instrumentalism. On the sensory-motor level, action schemes are instrumental in helping organisms to achieve goals in their interaction with their experiential world. On the level of reflective abstraction; however, operative schemes are instrumental in helping organisms achieve a coherent conceptual network that reflects the paths of acting and thinking as well which, at the organisms’ present point of experience, have turned out to be viable. As such, may be of some philosophical interest – above all because it entails a radical shift in the conception of “knowledge”, a shift that eliminates the paradoxical conception of Truth that requires a forever unattainable ontological test. The shift that substitutes viability in the experiential world for correspondence with ontological reality applies to knowledge that results from inductive inferences and generalizations. It does not affect deductive inferences in logic and mathematics. In Piaget’s view, the certainty of conclusions in these areas pertains to mental operations and not to sensory-motor material.5

Learner centered instruction

In a teacher-centered (prussian-russian) model of instruction, the instructor’s role is seen as imparting knowledge to students, and instruction proceeds from the instructor’s point of view. The teacher decides for the learner what is required from outside the learner by defining characteristics of instruction, curriculum, assessment, and management. Instruction is the activity in which the information knowledge, skills, attitudes, values is moved into the learner. In contrast, learner-centered (anglo-saxon) instruction (LCI) fosters opportunities for learners to draw on their own experiences and interpretations and aligns with the constructivist perspective. LCI proposes that teachers need to understand the learner’s perspective and must support capacities already existing in the learner to accomplish desired learning outcomes. Learning goals are then achieved by active collaboration between the teacher and learners who together determine what learning means and how it can be enhanced within each individual learner by drawing on the learner’s own unique talents, capacities, and experiences. Learner-Centered Psychological Principles, based on previous research on teaching and learning, provide a framework for LCI and acknowledge the uniqueness of each individual’s prior learning as an important factor in learning. The principles are factors that influence all learners both inside and outside of the classroom and provide an integrated perspective of learning, with a holistic view of the learner. Although these principles appear broad and eclectic, leaving a number of questions about the nature of knowledge unanswered, the notion of LCI provides one dimension along which classrooms can be differentiated with respect to the role of a child’s personal experience and knowledge.6

6 SCHUH, Kathy L: Knowledge Construction in the Learner-Centered Classroom, Journal of Educational Psychology, Vol. 95, No. 2, pp. 427
Furthermore, specialists in the structure and the norms of dialogue have identified the fundamental concept of commitment. When people engage in talk together, they are committed in different ways and their commitment influences the dialogue. For example, critical dialogue has structural and formal properties that characterize a commitment to understanding and accommodation of divergent viewpoints whereas disputational dialogue conveys the commitment of the participants to win. Commitment induces implicit dialogue rules that interact with the cognitive processes of the participants. The identification of kinds of classroom dialogues therefore constitutes a step in the study of the construction of knowledge in classrooms.7

Military Higher Education

Constructing the knowledge of the future generation of military leaders is not an easy call in the context of the rapidly changing contemporary war where traditionally conventional enemy goes unconventional. Taking into consideration of the rapid changes of the technology as well it seems that the only constant factor of the future is the changing environment. Therefore, the most important schema of future leaders is the ability of adaption. It requires a lifelong learning process with a tool that provides them with the necessary skillset in order to accordingly plan, prepare and execute their own education for meeting the challenges of this environment. In both USMA and NUPS cadets thoroughly study the Army’s Operations Process (Plan, Prepare, Execute and Assess). Because of the differences of the two system the methods of teaching are different as well; however, the foundation and pillar of the knowledge are very similar. A successful character of leader requires physical endurance and has to master the basics of soldering. Having achieved this fundamental requirements, further development is necessary in academics in order to develop critical thinking. Further military training is needed as well to create a better understand on operations. The most important activity is to fulfill cadet leadership roles, when individuals can gather firsthand experience of their future professional.

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