Bill's Building Blocks

Supply Chain Final Exams

The *NY Times* recently ran a couple of articles promoting the idea that technologies, like robotics and artificial intelligence, are eroding the benefits of higher education. Proctoring the supply chain final exam for 28 graduate students at NYU Monday evening gave me a lot of time to think about the education process. What did the students really learn this semester, or were they just proficient at cramming for the final? Did the course expand the student's ability for critical thinking? Was the subject presented in an engaging enough way that will promote a future curiosity to learn more? One of the *NY Times* articles went on to say that lifelong learning remains the key to staying competitive.

Practitioners turned adjunct professors are not usually formally trained about how to be an effective teacher. You have to somehow learn this on your own. This is what I have learned since 2010 after teaching my fifteen week Supply Chain Engineering course twelve times to 240 graduate students at NYU Tandon School of Engineering, and teaching a section of Demand Planning And Fulfillment for four semesters to 160 undergraduate students at The Rutgers Business School, Newark Campus. Education involves the mastery and integration of three components: curriculum, pedagogy, and assessment. The course syllabus is used to list the instructor, the content, the textbook, the approach, the meeting time and place, the schedule, the method of assessment, and certain university policies.

Curriculum concerns the content of WHAT is taught. The APICS body of knowledge, the principles of supply chain management, logistics, lean six sigma, etc. are each fine examples of content. Degree curricula in a particular discipline are sets of related content that lead to the mastery of that discipline. This is what you learn, and practitioners are experts in this area of education. Over the years the APICS Certification and Curriculum Council has built sets of content around production and inventory management; supply chain practice; and logistics, transportation, and distribution.

Pedagogy, besides being difficult to pronounce, concerns HOW content is taught. Howard Gardner's Theory of Multiple Intelligences, Bloom's Taxonomy, the flipped classroom, and current studies about how the human brain functions are examples of approaches to pedagogy. Look them up on the Internet. This is how you learn, and practitioners are often weak in this area of education. APICS offers a series of three courses to enable practitioners to become qualified instructors to teach certification. These courses are: 1) Train-The-Trainer (TTT), 2) Learning Dynamics for Instructors (LDI), and 3) Applied Instructor Skills (AIS).

Assessment concerns the MEASURE OF LEARNING. While practitioners are often quite good at operational measures, the measurement of someone learning content is more subtle. The APICS testing process for CPIM, CSCP, and CLTD certification involving item writing, test question pools, computer based testing, and statistical evaluation of test scores are examples of the tools used to assess learning. However, the best measure of learning is a person's ability to apply that content on-the-job.

APICS understands the educational concepts of curriculum, pedagogy, and assessment. APICS can be your pathway to lifelong learning and personal competitiveness.

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