

## **Strategy Simulation as Experiential Learning and Assessment Tool: Two benefits for the effort of one.**

### **Description for Proceedings**

Assessment grows increasingly rigorous relative to accreditation (important to program development and student recruitment). Knowledge exams may not satisfy this increasing rigor. Research identified potential validity issues with commonly used assessment tests of knowledge, and their measure of value added. The “Business Strategy Game” simulation which provides a rich learning experience, may also serve as an additional assessment tool to satisfy the quest for measures of knowledge, application, and critical thinking without extra burden on instructors. Session participants will discuss the use of this pedagogical tool to triangulate this performance based assessment in a fluid environment to traditional assessment measures.

### **Theoretical Grounding**

Accreditation institutions such as AACSB (founded in 1919) have been assessing business schools. Recently, the emphasis of assessment has been shifting from the focus on number and types of subjects taught, the method of instruction, the percentage of faculty with PhD’s, and the money spent on programs and facilities (Zoffer, 1997), to assessment of learning outcomes (Henninger, 1994). With this emphasis on learning outcomes comes the responsibility of business schools to substantiate that the students completing their programs have in fact learned the subject matter of all the courses. Business schools desiring successful accreditation and re-accreditation are now being held accountable for setting these outcomes/standards and verifying that the outcomes/standards have in fact been learned, and that the results are factored in to the continuous improvement of academic programs (Henninger 1994).

One common tool used for this has been the Educational Testing Service (ETS) Major Field Test in Business (MFT-B). If applied systematically, and based on the standardized nature of the MFT-B, Black & Duhan (2003) found that the exam does provide some measure of mastery of knowledge; subject to content validity issues due to the sampling of topics to be included and the exam not matching the subjects taught at all institutions). The MFT-B has also been identified as a tool to serve as a graduation requirement or to identify areas of student remediation. As many as 585 institutions in the United States have utilized the MFT-B in their assessment of learning (Bielinska-Kwapisz & Brown 2014). As such, the MFT-B has attracted a lot of interest of researchers interested in understanding factors that impact the student performance on the exam. Many of these studies sought to validate the MFT-B as a tool to assess student proficiency, common terminology, and knowledge of the basic business disciplines (Simmins, Jones, & Bolt 2015; Bagamery, Lasik & Nixon 2005; Black & Duhon, 2003; Mirchandani, Lynch, & Hamilton 2001). Through these efforts, we are now aware of several predictors of performance on the MFT-B, including input variables such as SAT scores and GPA’s of transfer students (Mirchandani et al, 2001). Black & Duhon (2003) identified ACT scores, and race and ethnicity

as predictors. These represent preexisting conditions that would seem to have little to do with the institutions' efforts to assess the student's learning outcomes achieved during the program. In other words, being better prepared for the program does not in fact measure the effectiveness of courses in that program or the program itself. They simply reflect good students coming in results in good students going out.. Mirchandani et al (2001) along with Allen & Bycio (1997) both found some correlation of course grades implying that students that expended more effort to learn the material would in correlation to higher grades, score better on the MFT-B. Bycio & Allen (2007) and Terry, Mills, & Sollosy (2008) explored the impact on student motivation on MFT-B performance. The above studies provide little support that the MFT-B does in fact completely measure the achievement of all learning outcomes but instead, that the MFT-B confirms that good students results in good performance on MFT-B. Good scientific methods would suggest that if we are interested in measuring improvement, that we should give the MFT-B as a pre-test at the beginning of the program and as a post test at the end. Of course, many might suggest that this is cost prohibitive and that perhaps the MFT-B is not well suited (by virtue of its 120 questions 'sampled' from various disciplines) for a pre and post treatment procedure such as this. Never-the-less, the MFT-B is still an excellent verification for the assurance that the learning of key disciplinary concepts has occurred, it may not provide the evidence that the learning has occurred in the program or which elements of the program are working better than others. It is also a "snapshot" in time and students are usually given time to prepare for this exam. As may be expected, students cram knowledge in for the MFT-B which is generally forgotten after the importance of the exam has passed. They may not carry this knowledge to graduation or even beyond. Some other assessment evidence would be helpful in order to triangulate the results in a form that supports the assurance that the students are competent with the knowledge which would also imply that the students should be able to apply that knowledge. It is to this end that we are suggesting that a widely used business simulation such as the Business Strategy Game (BSG)(Glo-Bus Software, Inc. – marketed by McGraw Hill) warrants some discussion at this conference. This simulation exercise is typically used in conjunction with the Strategic Management Capstone Course as an experiential learning technique. The simulation typically serves as a course embedded assessment measure; however, being that this is used in the capstone course, it may also serve to help in the assessment of programs. Barbosa & Pesek (2012) found that students that did well on an analytic component of a senior project did better on the MFT-B. Baba & HakemZadeh (2012) demonstrate that "decision making is at the heart of management practice." The BSG simulation is a highly analytical exercise that requires students or teams of students to utilize skills and knowledge of all business disciplines to make effective decisions in a highly fluid and competitive environment. The BSG simulation also has several tools built in that can assist the course instructor as well as the institution with access to some very useful assessment measures. Like the MFT-B, the BSG can be used to compare the performance of students from other institutions since typically over 1300 teams from over 400 institutions participate (not competitively but statistically) in the simulation in any given semester. Of course, all the students in one course or one industry compete with each other utilizing the knowledge learned in prior course work to successfully compete with and surpass other teams in their industry. In this discussion, participants can share their experience and learn from others how to not only implement the BSG

simulation into their course but to also assist their institution in the assessment for accreditation by providing additional evidence as to how well their programs have prepared students for their roles in the real world.

### **Session Description**

The session will be broken down into two parts for which presenters will offer some suggestions and then open the floor to participants for suggestions, sharing of experiences, questions and discussion. Depending on number of attendees, participants may be broken down into smaller discussion groups for which after each session we would add another 10-15 minutes to compare the results of the breakout groups.

Part A - The true benefit of the simulation as an experiential learning tool

Presenter presentation 5-10 minutes

Suggestions, sharing, questions, discussion 10-15 minutes (20-30 if breakouts)

Part B – The components of the BSG simulation that may be useful as course and program assessment tools – alone or to substantiate MFT-B or similar knowledge tests.

Presenter presentation 5-10 minutes

Suggestions, sharing, questions, discussion 15 – 25 (25-40 if breakouts)

The total session should last between 35 and 60 minutes (55-90 if breakouts are used)

### **Application to Conference Theme and Sub-Themes**

#### **Development of effective classroom experiences for our students in the changing academic environment.**

By itself, the BSG simulation represents an excellent experiential exercise for the capstone strategic management course. Unlike case studies which are extensively used in this type of course, the BSG simulation encourages students to utilize their combined prior knowledge as well as their critical thinking abilities in order to surpass students in their competitive industry. Those students, while theoretically possessing the same core knowledge, will apply that knowledge differently at the outset of the simulation and as adaptations to changing conditions as the simulation progresses. This is a learning advantage AND an assessment advantage above and beyond the MFT-B such that the simulation tests knowledge through the application of that knowledge. Related to this session, The BSG also provides the course instructor as well as the program to assess critical thinking in addition to core knowledge of the disciplines.

### **Providing unique ideas for utilizing the changing and evolving technology to enhance the learning experience.**

BSG has been being used for decades and has in fact utilized advances in technology to develop this simulation into what may be considered as one of the most complex decision making environments offered by a business simulation. This technology allow students or teams of students to compete with each other and forces each to try to predict what the others are planning, and in the face of other complications, adapt their courses of action to survive and perhaps even to prevail. This is a much more exciting exercise than case studies through which you may add the element of competition by pitting students or teams against each other as potential consultants vying for a contract. The simulation provides ample performance indicators and competitive intelligence each period of the simulation for which the students can apply their knowledge, perform thorough analyses, and get the period results before progressing to the next of the ten possible periods. Unlike simulations from decades ago, there is little point in trying to figure out how the algorithms work in order to beat the system. With BSG, students are best advised to make their decisions as if it were a real business situation.

### **Creating a forum for demonstrating effective tools to be utilized in navigating higher education.**

Assessment of learning outcomes, knowledge, critical thinking, problem solving skills, and others, are becoming more important objectives in assessment for accreditation and reaccreditation at business schools. Today, the MFT-B may be enough to satisfy this; however, if we want to stay ahead of the evolution of assessment requirements, proactive institutions should be looking for additional tools now.

### **Creating dialogues on important topics related to the changing demands of higher education that need to be navigated.**

If an institution currently uses an assessment team or has an individual in charge of assessment, that person or group is probably facing increasingly rigorous assessment requirements. Capstone course instructors can benefit from the experiential learning pedagogy of the simulation while at the same time, assist their institutions by providing yet another source of assessment information.

### **Understanding how the role of the education changes through his/her career and how to best navigate these changes.**

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**This work has not been previously presented at any conferences or in any paper (submitted or published).**

## **References**

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