

# **Development of MBA Outcomes Assessment:**

## **Phase One**

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Measuring the effects of instructional interventions has been an ongoing and challenging problem for program assessors (Wexley and Latham, 1991). Although much of the program assessment research attention has focused on Organizational Development and Training interventions, the assessment results can be just as important for understanding the impact of an instructional intervention such as an MBA Program. What follows is a description of the initial steps of an assessment development project to help the WWU College of Business and Economics understand the instructional impacts of the current (recently redesigned) MBA program.

## Phase One Study

### Purposes of the present study

The present study is part of a broader assessment development effort. The present study had several central objectives. These included:

- Identifying and defining relevant programmatic dimensions for assessment.
- Testing the basic data collection process as embedded in other assignments<sup>1</sup>.
- Providing MBA faculty and administrators with information about relative gains in different outcome areas through generating a data set from the 2002 graduating class.

### Conceptual background of present study

The faculty assessors managing the present study were fundamentally concerned about: 1) focusing on learning outcomes rather than simply instructional processes, 2) insuring that the program measures were clearly aligned with the program objectives, and 3) understanding the educational impact from the viewpoint of the learners.

### Instructional Objectives.

The macro view of what to include in the MBA academic knowledge assessment was drawn from the central objectives suggested by the Association to Advance Collegiate Schools of Business<sup>2</sup> (AACSB), the business school accrediting agency. This AACSB set of standards would suggest attention to evidence that speaks to student growth in:

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<sup>1</sup> A sub-objective here was to collect a reasonable amount of data in an unobtrusive manner.

<sup>2</sup> Association to Advance Collegiate Schools of Business (AACSB) is the international business school accrediting agency.

- Understanding of organizational contexts/environments (e.g. political, social, demographic, legal, ethical, regulatory, environmental, and technological issues at domestic and global levels).
- Financial reporting, analysis, and markets.
- Creation and distribution of goods and services.
- Human behavior in organizations
- Oral and written communication skills, quantitative analysis, and computer skills
- Area of specialization, if any.

In addition, to the above core dimensions, the WWU faculty (program developers) were concerned about a number of broader "life success" skills so students are encouraged to include evidence to support your growth in additional skill areas including:

- Personal financial planning
- Career management and personal development
- Leadership and teamwork

### Methodology and design

The assessment challenge is document changes in complex conceptual and skill domains that occur during the experience in the program. For this Phase One segment, the assessment problem is compounded by not having independent assessments of student accomplishment levels at entry into the program, so a pre-post design was not possible. Since measures would be available only at the end of the MBA experience, assessors adopted a "Post-Then methodology." This approach asks individuals for a current assessment and also an estimate at a specified previous point in time. Considerable investigation suggests that a "Post-Then methodology" is an effective method for assessing programmatic change (Terborg, Howard, & Maxwell, 1980). The "Post-Then" method appears especially appropriate when the performers' conceptualization of the dimensions begin measured change as a result of an intervention<sup>3</sup>. Terborg et. al. (1980) indicate there is some evidence that "Post-Then" measures may, in fact, be more accurate than pre-post in situations of complex change.

"Instrumentation Bias"<sup>4</sup> can be reduced by using specific behavioral anchors (Lindell & Dexter, 1979). Given the complexity of learning across a two-year program, it was decided that specific behavioral anchors would create an unworkably large assessment. In order to limit the task loading for students, assessors decided to: 1) focus on central program objectives, and 2) use conceptual anchors in lieu of specific behavioral anchors. An array of skill levels was articulated and then illustrated with a familiar, but non-program related examples. (see Appendix A).<sup>5</sup>

<sup>3</sup> This is referred to as "gamma change." see Golembiewski, R.T., Billingsley, K., & Yeager, S. (1976). This is clearly a kind of change which occurs in a rich educational program.

<sup>4</sup> Change attributable to change in the measurement instrument over time.

<sup>5</sup> This taxonomic approach was drawn from work by of Quinn, R.E., Faerman, S.R., Thompson, M.P., & McGrath, M.R. (1996) and Bloom, B.(1956).(ed.).

The data collection process itself was nested within a larger assignment. In the final quarter of the program, students are required to prepare a "portfolio" and also to draft a self-reflective capstone paper. The data collection process became a framing activity for the reflective capstone paper, as can be inferred from Appendix A. Students were asked not only to assess their level of competence on the referenced scale, but also to point to accomplishments that could be used to document their learning. Students were asked to append the self-assessment to their capstone reflective paper. Both the exit portfolio and capstone papers are graded assignments, but no specific points were assigned for the self-assessment reporting activity.

## Results

Inspection of the raw data forms and casual conversations with students indicated students appeared to work adequately within the conceptual framework. They provided reasonable descriptions and pointed to appropriate specifics to document their accomplishments.

Twenty-six of the 27 persons enrolled in MBA524c (the capstone skills course) completed the data forms in a useable manner. Not all students completed all items, but for the most part, almost all of the exiting students are represented. The data and data summaries are presented in Appendix B. Student responses are represented in rows and indicated by a sequence number on the first page (names have been eliminated for confidentiality). The columns are organized by dimensions (coded D1, D2 etc) and sub-categorized as "pre," "post," and "difference" (coded Pr, Po and D) with summary statistics at the bottom of the table. The order of the columns in Appendix B corresponds to the order of the questions in the data collection form and are keyed with a brief description. The summary on the last page presents the overall dimension average for each student along with his or her entry GMAT score.

Since the data set is small, a conservative interpretation of the data seems appropriate. Still, an inspection the results suggests the following<sup>6</sup>

### At the student level of analysis

- Students reported clear and consistent gains across all areas.<sup>7</sup>
- Some students reported more substantial changes during the program than others. Interestingly, there was a strong negative correlation between GMAT score and the average difference score across the program. (i.e., the higher the aptitude, the less overall dimensional change).<sup>8</sup>
- The modest but positive correlation between average "pre" scores and the GMAT suggests students were representing their entry levels of competence reasonably well.

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<sup>6</sup> Inferential statistics are not presented due to the small sample size and violation of a number of relevant assumptions in post-then data sampling. Please see the Terborg et. al. (1980) article for a discussion of these issues.

<sup>7</sup> In fact there was only one occurrence of "data reversal" where a person reported less proficiency at the end of the program as compared with the beginning, which may have to do with reframing of the dimension.

<sup>8</sup> This finding will require some additional analysis to interpret. It may be a ceiling effect of the measures, demand effects, or the specific aptitude measure.

### At the outcomes level of analysis

Clearly, students made considerable gains overall on each of the dimensions. It may be informative for program development to look at the data extremes as a start toward understanding the program effects.<sup>9</sup>

- The highest estimates of exit competence are in written communication, life balance, and oral communication. Clearly students see themselves as quite competent at program entry as well in these areas.
- The lowest estimates of exit competence are in understanding the domestic regulatory environment, domestic and global financial markets, and of the impacts of global technology. Students do not see themselves as particularly strong in these areas at program entry.
- The largest estimates of competency change are in the areas of team leadership/interpersonal processes, the domestic creation and distribution of goods, and personal learning/career development.
- The smallest estimates of competency change are in the areas of understanding the effects of domestic and global regulatory environments and the impact of global technology.
- Entry level heterogeneity can present challenges for instructors and program design. This data set would indicate students vary widely at the time of entry in competence in computer applications, written communication, and project management.

### Discussion

Clearly students see considerable change in their competencies on this set of dimensions. When this perspective is combined with instructor perceptions of growth, a strong case can be made for the impact of the program. The residual problem, of course, in the context of a complex change intervention is to understand what parts are working well and what parts might need some tuning. There are undoubtedly some strong interaction effects between program elements such as course sequencing, nature of the internship, individual student-professor relationships, and entry competencies which may effect the relative growth. The assessment of these interaction effects will await further study.

In the near term, the MBA Committee may wish to explore the programmatic implications of several of the findings. For example, the entry-level heterogeneity noted, if considered problematic by instructors, might be reduced through the selection / admissions policy or through additional prerequisite course requirements. Additionally, in the areas where exiting students do not have a strong sense of competence (understanding the domestic regulatory environment, domestic and global financial markets, and of the impacts of global technology), the MBA Committee may wish to discuss the curriculum with an eye toward revisions. Also, the MBA Committee may wish to review the assessment and assessment dimensions overall, with the objective of gathering improved information.

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<sup>9</sup> Specialty areas are excluded from analysis here.

In going forward with this assessment development, there are several important steps that might be accomplished in follow-up studies. First, would be the opportunity to do a "pre-post-then" study as suggested by Terborg et.al (1980). This step is embedded in the assessment plan for the next phase. Second, a review / redefinition of some of the dimensions may well be in order. For example it may be that the "global technology" dimension is vaguely conceptualized or articulated which may adversely impact scores on this dimension. Some new dimensions may need to be added. Additionally, it will be important to start to look for convenient ways to develop multiple items on dimensions that might be used for reliability checks. Third, it may be important to further investigate the relationship of the GMAT scores with outcome measures. Fourth, it would seem to be important to start to build measures which will investigate some of the interaction effects, so that consistent benefits might be folded into program changes.

### **References**

- Wexley, K & Latham, G. (1991). *Developing and Training Human Resources in Organizations*. (2ed.) New York: Harper Collins.
- Terborg, J., Howard, G., & Maxwell, S. (1980). Evaluating Planned Organizational Change: A method for Assessing Alpha, Beta, and Gamma Change. *Academy of Management Review*, 5(1), 109-121.
- Golembiewski, R.T., Billingsley, K., & Yeager, S. (1976). Measuring change and persistence in human affairs: Types of change generated by OD designs. *Journal of Applied Behavioral Science*, 12, 133-157.
- Bloom, B.S. (1956). *Taxonomy of Educational Objectives: The Cognitive Domain*. New York: David McKay.
- Quinn, R.E., Faerman, S.R., Thompson, M.P., & McGrath, M. (1996). *Becoming a Master Manager: A Competency Framework*. (2nd ed). New York: John Wiley & Sons.
- (See Appendix below for detailed Individual Development Worksheet used in study)*

## Appendix A

### Individual Development Worksheet

The following activity is to help frame your self-reflective paper; a paper that provides a foundation document for your MBA exit portfolio. You should complete a "first pass" through this worksheet as you start to draft your self-reflective paper. You are asked to attach a completed copy as an appendix to your final self-reflective paper. In addition to helping you understand your growth during the program, the data will be used by the College of Business and Economics to assess program effectiveness.<sup>10</sup>

In this worksheet, you will be asked to accomplish two tasks: a) Assess your level of mastery in a number of instructional areas of the MBA program, and b) Point to evidence that can document your current level of mastery. Instructions for both activities follow.

#### Stages of mastery<sup>11</sup>

The "stages of mastery" scale is intended to articulate a broad range of performance from no knowledge, to a seasoned master. Please carefully note the descriptors as you read through the stages so that you can use the scale to assess your level of mastery at different points in time.

1. Entry Stage. At the entry stage, the performer does not have mastery of basic vocabulary, facts, or concepts. The performer may not be aware of the basic processes, models, methods, or implications of using these tools. (Chess – Does not know names of pieces or basic moves of pieces)
2. Novice stage. At the novice stage, the performer understands basic facts, models, theories or rules of a process. The performer interprets and guides her/his performance by strict adherence to specified rules and procedures. (Chess – Knows names of pieces and how each piece is allowed to move on the board)
3. Apprentice Stage. The performer understands models, methods, and processes well enough to correctly apply them to new situations to generate a specified result. The performer can recognize basic patterns and allows for factors not specified in the rules. (Chess – Player starts to recognize advantage of different board positions)
4. Competence Stage. Performer recognizes complexity and cues not covered by rules. Performer can decompose problems and understand relationships among components using concepts and models. Performer can evaluate cues and focus on most important issues. Performer starts to experiment and build own "rules of thumb" to compliment known models, processes, and theories. (Chess – Knowingly sacrifice an important pieces to gain board position)
5. Proficiency Stage. Performer is sufficiently skilled that rational analysis disappears, i.e., models and theories become background as reliance upon experience becomes foreground. Performer experiments and is creative in that s/he "reads" ongoing

<sup>10</sup>. You will find that this exercise is 1) outcomes focused, 2) targeted on program objectives, 3) uses a "post-then" methodology, and 4) indexes your perceived level of competence.

<sup>11</sup> Based on work of Quinn, R.E., Faerman, S.R., Thompson, M.P., & McGrath, M.R. (1996). *Becoming a Master Manager*. (2<sup>nd</sup>. ed). New York: John Wiley and Sons. and Bloom, B.(1956).(ed.). *Taxonomy of Educational Objectives: The Cognitive Domain*. New York: David McKay.

situations and responds with adjustive strategies to real-time and forecasted changes. Performer displays capability in a wide variety of situations. Grasp of situations is intuitive and holistic (Chess – Can play well against opponents with a variety of styles and skills).

6. Mastery stage. A master can quickly grasp of the essence of a situation which leads easily to exemplary performance. Performers may not be aware of their discrete processes but have holistic understanding of multidimensional contexts and processes. They problem solve intuitively and can easily reframe strategy based on changing cues. Performers become respected, sophisticated judges of the applications of models and methods by others. (Chess – Can create innovative strategies and play multiple games with other masters).

### Evidence of Mastery

In addition to the ratings, you will be asked to point to a source of evidence to support your "exit rating" for each of the dimensions. In each case, evidence should be an identifiable product or outcome (e.g. a term paper, videotape, team peer evaluation, letter of recommendation from internship supervisor, a web page you designed, case study write-up, etc). Just noting or describing a process (e.g. I took a class in finance, completed an internship, held a graduate assistantship) is not an acceptable form of evidence. Developing this "evidence" documentation is not an easy task. You may find there are some areas for which you do not have good evidence. You may also find that one evidence source may support several areas. If you can identify the important outcomes in this exercise, you will find accomplishment of the portfolio much easier.

### Instructions

Using the "stages of mastery" scale above, please rate your knowledge and skills (1 through 6) on the following dimensions both at the time of the entry to the program and also now as you are ready to exit the program. Because opportunities and interests differ, not all persons will change in the same way during the program. You will likely find you have made substantial gains in some areas and modest gains in others. You may have made gains in some dimensions which are not large enough to warrant a scale score change. That is expected, and you should be as objective in the ratings as possible.

At program entry		At program exit
	Understanding of domestic political, social, and demographic impacts upon organizations	
Evidence:		

At program entry		At program exit
	Understanding of global political, social, and demographic impacts upon organizations	
Evidence:		

At program entry		At program exit
	Understanding of domestic legal, regulatory, and environmental impacts upon organizations	
Evidence:		

At program entry		At program exit
	Understanding of global legal, regulatory, and environmental impacts upon organizations	
Evidence:		

At program entry		At program exit
	Understanding of domestic technological impacts upon organizations	
Evidence:		

At program entry		At program exit
	Understanding of global technological impacts upon organizations	
Evidence:		

At program entry		At program exit
	Understanding of financial analysis, reporting requirements and processes	
Evidence:		

At program entry		At program exit
	Understanding of domestic and global financial markets	
Evidence:		

At program entry		At program exit
	Understanding of creation and distribution of goods and services in domestic markets	
Evidence:		

At program entry		At program exit
	Understanding of creation and distribution of goods and services in international markets	
Evidence:		

At program entry		At program exit
	Leadership and managing of team and interpersonal processes	
Evidence:		

At program entry		At program exit
	Management of personal learning, networking, and career development	
Evidence:		

At program entry		At program exit
	Implementing ethical business practices	
Evidence:		

At program entry		At program exit
	Competence with personal life balance, time, and stress management	
Evidence:		

At program entry		At program exit
	Competence with oral communication (presentations, interpersonal interactions)	
Evidence:		

At program entry		At program exit
	Competence with written communication (reports, memos, letters)	
Evidence:		

At program entry		At program exit
	Competence with quantitative analysis	
Evidence:		

At program entry		At program exit
	Competence with computer applications (software)	
Evidence:		

At program entry		At program exit
	Project leadership and management	
Evidence:		

At program entry		At program exit
	Specialty area I (specify)	
Evidence:		

At program entry		At program exit
	Specialty area II (specify)	
Evidence:		

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