Service–Learning in Higher Education
Paradigms & Challenges

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CHAPTER 18

IMPROVED COGNITIVE OUTCOMES FROM DEEPER REFLECTION IN SOUTH AFRICAN MBA STUDENTS

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Abstract

Service-learning (SL) has been implemented in MBA programs in only a few countries, despite the fact that the pedagogy represents possibly one of the most effective teaching tools available to the contemporary management professor. Service-learning is a logical pedagogical approach for MBA programs in that it creates opportunities for real workplace learning to occur while students are still within the educational system.

Reflection is core to adult learning, and SL should include reflective activities to justify its theoretical foundations. Furthermore, numerous publications reference the fact that managers need to reflect if they are to be effective.

The focus of this chapter is to demonstrate whether a positive relationship exists between the depth of reflection and the level of cognitive outcome (using Bloom’s taxonomy) achieved when SL is implemented in MBA degree programs.

Using an action-research approach, two Organizational Design and Development (ODD) courses within MBA programs in South Africa incorporated SL. An advocacy/participatory paradigm, focused on bringing about change in practices, informed the practical, collaborative research. Groups of students acting as consultants undertook their academic assignments within community (nonprofit or nongovernmental) organizations. They researched, conducted a required intervention, and produced a report of value to their organization, building organizational competence in the process. The students’ assessments were based on reflective journals structured around generic management competencies so that reflection was an active, cognitive activity, relating student experiences to the course content.
A chi-square test of independence conducted on the raw data (alpha=0.05) indicated a significant positive correlation (p < 0.001) between the depth of reflection in structured assignments and the level of learning achieved; thus, MBA students experienced real workplace learning in a bona fide context where the outputs of the work that they undertook through their academic assignments was applied usefully by the community organizations with which they worked. Students addressed a number of social needs while also meeting their academic objectives as measured by Bloom's taxonomy of cognitive outcomes.

**Introduction**

The Master of Business Administration (MBA) degree is one of the best-known academic brands of qualification worldwide, and numerous business schools around the world offer it as their primary product. Service-learning (SL) has been implemented in management education (Kolenko, Porter, Wheatley & Colby, 1996) and MBA programs (Coffey & Wang, 2006) in some countries, although not to a great extent, despite the fact that the pedagogy represents possibly the most effective teaching tool available to the contemporary management professor:

It provides students with exposure to the vast network of interdependencies of business and society as well as expansive real-world management experience that gives traction to theory—preparing them to be workers in the economy and citizens in a democracy (Papamarcos, 2005, pp. 325–326).

It was established in this study that MBA students acting as consultants experienced real workplace learning in a bona fide context (Kenworthy-U'Ren, 2000), where the outputs of the work that they undertook through their academic assignments were applied usefully by the community organizations with which they worked. Students were able to address a number of social needs while meeting their academic objectives, which were measured using Bloom's (1956) taxonomy of cognitive outcomes.

The focus of this paper is in demonstrating a relationship between the depth of reflection and the level of cognitive outcome achieved when SL is implemented in MBA degree programs in the context of improving the perceived return on investment (ROI) of undertaking an MBA degree (Carmichael & Sutherland, 2005).

**Factors Contributing to the Perceived ROI of an MBA Degree**

Individuals make significant investments into the rigorous undertaking of MBA programs to progress upward within their organizations and attract due reward
as the result of their efforts (Carmichael & Sutherland, 2005). Such progression is ideally, based on performance and not merely on the acquisition of new knowledge and skills. The practical experience gained through SL is designed to lead to such improved performance, and organizations typically pay what it takes to attract and retain top performers.

Where SL has been implemented, graduates have developed better skills compared to those who did not engage in SL (Eyler, Giles & Braxton, 1997). Students report a greater awareness of civic responsibility, community enrichment and cross-cultural interactions (Chesler & Vasquez Scalera, 2000) in diverse communities (Griffith, 1999); a more solid identification of values (Eyler et al. 1997); and knowing that they can make a difference (Wade & Yarborough, 1997). Service-learning is inextricably linked to leadership development (Althaus, 1997) and collaborative inquiry, critical thinking, systems thinking, information literacy, and problem solving (Griffith, 1999). Engineering students (Talbert, Farnkhopf, Jone & Houghtalen, 2003) not only met their course objectives but also achieved more sophisticated learning...through application, constructive critique and synthesis (p. 214).

Such development is expected to create more effective managers and leaders with a strong sense of ethical responsibility and sufficient practical experience to be immediately effective on returning to their workplace, both during and upon completion of their MBA. Because it follows, all other things being equal, that increased individual (manager) performance leads to increased organizational performance and that the business sector is expected to actively recruit higher-performing managers and leaders, MBA graduates should have greater control and leverage over their career capital, leading to improved business performance.

Earlier work undertaken as part of this study has been published (Carmichael & Sutherland, 2005). The model developed in that work, illustrated in Figure 1, is taken as the starting point for the purpose of deeper inquiry into the potential value of introducing SL into MBA programs.

Although it is possible that some of the principles inherent in the model above and the brief recap that follows may apply to other educational settings, the specific context here is that of MBA education. The critical cross-field outcomes (CCFO) referred to within the circle in Figure 1 are a set of assessable generic competencies legislated to be embedded into all South African qualifications (Isaacs, 2000). These are, briefly:
1. Identifying and solving problems in which responses display that responsible decisions using critical and creative thinking have been made.

2. Working effectively with others as a member of a team, group, organization, or community.

3. Organizing and managing oneself and activities responsibly and effectively.

4. Collecting, analyzing, organizing, and critically evaluating information.

5. Communicating effectively using visual, mathematical, and/or language skills in the modes of oral and/or written persuasion.

6. Using science and technology effectively and critically, showing responsibility toward the environment and the health of others.

7. Demonstrating an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation.

The model was developed based on the view that education is a transformational process. Students enter the system, which then transforms their knowledge, skills, and worldview through teaching, learning, and assessment. They emerge with a new qualification, ready to reap the benefits accruing from their (assumed)
improved performance. Student objectives in immersing themselves into the MBA transformation system are linked with varying levels of importance, to financial and nonfinancial benefits, as illustrated in Figure 1. An important point emerging from the model is that the benefits are likely to be realized only if performance is improved, not merely on attainment of the qualification.

As was made explicit in Carmichael & Sutherland (2005), the activities taking place in the circle in Figure 1 represent learning and assessment methods, being major areas under the control of faculty members in maximizing the effectiveness of the educational experience. In the terminology of the South African educational system, applied competence is the application of foundational (knowledge) and practical (skills) competence in a variety of contexts (Isaacs, 2000) but seldom falls under the control of faculty, because it occurs in the workplace, usually after students have completed their degrees.

In the study discussed in this chapter, SL was added to the process within the functional academic context specified by the course, in a selected community organization.

Service-learning is a logical learning method for MBA programs in that it creates opportunities for real workplace learning to occur while students are still within the educational system. With such experience, students would be more immediately effective (with their proven applied competence) in the organizations employing them, to their own and organizational benefit. Service-learning has the potential to create such opportunities (Coffey & Wang, 2006; Dumas, Blodgett, Carlson, Pant & Venkatraman, 2000).

Organizational performance is the key to sustainability; performance should be measured as actual outcomes versus targeted outcomes. Mager & Pipe (1997) provide a model that clearly differentiates between competence and performance. Competence is the ability to perform a specific task or achieve a specific outcome (Isaacs, 2001), whereas performance relates to the achievement of business results in the workplace. It could be said that performance is the application of competence in the absence of organizational barriers (such as lack of resources; Gosling & Mintzberg, 2004; Mager & Pipe, 1997) or personal barriers (such as lack of motivation; Hersey, Blanchard & Johnston, 1996), which leads to the achievement of organizational objectives.

In the context of this research, it was anticipated that MBA students who experience SL will be more competent managers and leaders, which in turn will enable their employer organizations to perform at a higher level. It is also anticipated that
recipient community organizations will perform at sustainably higher levels as a result of the strategic change-agent role (Jones, Woods, Coles & Rein, 2001) played by the students as they support the organizations with business tools and capacity building.

As early as 1970, Townsend (p. 175) emphasized that the only way to learn how to manage is on the job, a principle that is heavily and prolifically supported more recently by Mintzberg (1994, 2004a, 2004b; Gosling & Mintzberg, 2004). Classroom-only-based management education (without the practical or reflective elements) can result in ideas of management that have little contextual reality. Fortunately, application of SL to MBA programs could provide a workplace context in which real management learning can take place (Kenworthy-U'Ren, 2000).

**Adult Learning Styles and Reflection**

Adult learning styles are well documented (Honey & Mumford, 1992; Kirkpatrick, 1996; Knowles & Holton, 2000) so will not be covered in-depth here. Established theory has been enriched with the addition of action-learning, which has been deemed essential for real learning to occur (Kenworthy-U'Ren, 2000; Erasmus, 2005).

**Figure 2. Kolb’s Experiential Learning Cycle in the Context of SL.**

Evaluating Kolb’s (1984) learning cycle within the context of SL (Figure 2), the concrete experience would take place in the community or organization. The reflection or reviewing process followed by the abstract conceptualization stages could take place in study groups, self-study, or the classroom, where theories and concepts would be discussed in the context of the concrete experience. Furthermore, the reflection
should be structured (more than merely thinking about an experience) so that deeper learning can result, so a particular focus or point of view can be encouraged (Bringle & Hatcher, 1999). These extra steps enable the learner to answer the question “Why?” contextualizing the problem, which in turn facilitates adult learning (Knowles & Holton, 2000).

Reflection is core to adult learning and, as such, SL must, and generally does include reflective activities to justify its theoretical foundation (Bringle & Hatcher, 1999; Rama, Ravenscroft, Wolcott & Zlotkowski, 2000; Bringle, 2005; Stanton, 2005). In support, with regard to management effectiveness, Mintzberg (2004a, 2004b; Gasting & Mintzberg, 2004) has made repeated reference to the fact that managers need to reflect and that management education needs to include reflective activities.

Bringle (2005) and Stanton (2005) emphasize that reflection must be an active, cognitive activity, engaging students’ minds to intentionally relate their experiences to specific learning objectives; to do this, students must focus their attention on what they are doing; it is active. The reflective activities should be ongoing, take different forms, and be connected to the course content and included in the course assessment. Bringle (2005) also encourages both retrospective and prospective reflection: What happened? What does it mean? What do we do next? This is one of the simpler models of reflection, labeled the “what, so what, now what” model, and is the one applied in this study.

Kenworthy-U'Ren (2000) contextualizes the value of including SL in management education by emphasizing not only the value of linking the experiential activity to conceptual learning but also that the pedagogy “provides students with a non-traditional, service-oriented social context for management learning. It challenges them to confront, sort through and excel in the dynamic, chaotic, non-linear world of a community-based organization. Real world learning takes place as they assume the role of professional consultants producing goods [and services] that will, in fact, be used” (p. 55).

Assessment in SL Courses

One of the difficulties in university education is assessing Kirkpatrick’s (1996) level four (behavior change) and Phillips’ (1996) level five (ROI) of learning interventions. Measurement at these levels is facilitated by the authentic work context in which SL activities take place and by feedback requested from the community organizations in which the students have worked.
There is some feeling in the literature (Rama et al., 2000) that examinations are not appropriate for SL courses because they are not designed to measure innovative thinking and judge experiential learning. Should the major part of SL assessment be linked to structured reflective journals (Bringle & Hatcher, 1999; Bringle, 2005; Stanton 2005) or research papers, it may be possible to judge higher-order thinking skills, such as may be seen in Bloom’s (1956) taxonomy of educational outcomes. The cognitive levels in the taxonomy provide the assessor with a framework to use as a basis for judging the depth of cognitive learning from written assignments or journals. The levels are:

1. Knowledge (the lowest level of cognitive outcome)
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation (the highest level of cognitive outcome)

Recommended in the literature are assessment of student assignments or journals by using criteria, tools, measurement scales, or any combination thereof (Bringle, Phillips & Hudson, 2004) designed to measure levels of reflection and thinking skills, including content analysis (Rama et al., 2000) and quantitative measures of complexity.

Methodology

Using an action-research approach in search of provisional rather than absolute answers (McNiff & Whitehead, 2006), SL was incorporated into two Organizational Design and Development (ODD) courses. Creswell’s (2003) advocacy/participatory paradigm, focused on bringing about change in practices, informed the research. Creswell further describes the practical, collaborative nature of this type of research in that it is conducted with others, rather than to others, and the developmental process is iterative and evolutionary.

Based on the model suggested by Kenworthy-U’Ren (2000) and Jones et al. (2001), groups of students-as-consultants undertook their assignment within a community organization such as a nongovernmental organization (NGO) or nonprofit organization (NPO). The objective for the students was to take the role of consultants to that organization, on the assumption that the organization would not normally be able to afford such consultants, to research and produce a report of value to
that organization, building organizational competence as part of the process. The competence transfer was deemed essential as part of the sustainability aspect of this project. The intervention would be selected on the basis of an organizational needs analysis performed by the students as part of the project, in the context of the academic ODD course requirements.

The population was defined as all MBA students in South Africa, and the sample was all MBA students taking the ODD course in their MBA at the Graduate School of Business Administration at the University of the Witwatersrand (WBS) in 2006; one full-time and one part-time class were included.

The assignments were analyzed by seeking evidence of (1) the depth of cognitive reasoning (Bloom level) found in the content of each section and (2) the depth of reflection using the “what, so what, now what” model (Bringle, 2005) as follows:

1. none; no reflection demonstrated
2. “what”; a description of what the student observed or experienced
3. “so what?”; a description of “what” and the implications thereof
4. “now what”; a description of “so what” plus possible future actions

A category for none was included because, in some cases, no reflection was evident.

The students’ assignments were analyzed to determine whether any significant (alpha=0.05) correlation existed between the depth of reflection and the extent of cognitive development achieved in the individual assignments.

Results and Discussion

The frequency distribution of the depths of reflection attained by students is presented in Figure 3 (n: 59). A total of 66.59% of all students achieved a reflection level of “so what” or higher, indicating that most of them did at least reflect on the implications of their experiences, but only 33.41% projected future possibilities.

A total of 43.83% of students achieved a level-3 (“so what?”) reflection; and a further 33.41% achieved level-4 reflection, indicating that most students did reflectively interrogate the SL experience to a greater or lesser extent. The shifting toward higher Bloom levels with increasing depth of reflection is shown graphically in Figure 4. For this analysis, all 7 CCFOs were analyzed separately, giving a sample of 413.

Where students did not reflect on a CCFO at all, the highest Bloom level achieved was level 2, although the modal value was at the theoretical Bloom 0. Reflection at the “what” level gave a modal Bloom value of 3 but dropped off rapidly after that and constituted only 7.75% of responses.
The deeper “so what” also had a modal Bloom level of 3, but with a much high percentage of 20.34%, and the deepest reflection (“now what”) resulted in a mode value of Bloom 6. Of all respondents, only 21.31% achieved Bloom 6.

A chi-square test of independence was conducted on the raw data (alpha=0.05 and a significant correlation (p < 0.001) was found between the depth of reflection and the Bloom level achieved.

Critical reflection following implementation of a project or activity is essential for learning to occur and for attitudinal changes to take place (Kolb, 1984; Mintzbe:
1994; Dumas et al., 2000; Knowles & Holton, 2000). As such, reflection as a management activity is inextricably linked to the concept of the learning organization (Senge, 1990). If MBA students are not taught to reflect, they would have no reason to take the practice back to the workplace with them and would be the poorer for it.

The findings from this study have clearly shown the significant correlation between depth of reflection and cognitive achievement, particularly as it relates to the generic competencies encompassed by the CCFOs, or, as noted by Dumas et al. (2000, p. 232), “the people skills, the creativity, the negotiation skills, an aptitude for teamwork and the ability to speak and write with clarity—in short, the skills required of a good manager.” One cannot avoid observing that Dumas and colleagues do not include any functional skills in their proclamation, linking this fact in the same publication to a comment about the short half-life of knowledge, particularly in fields relating to technology.

It seems clear that, by teaching students how to think, business schools can deliver managers to the world of business who are able and willing to take responsibility for maintaining their own competence in a rapidly changing world.

Although learning facilitators have not been in a position to assess application of the acquired competence back at the workplace—i.e., applied competence—they can apply learning methodologies such as SL that help to internalize learning and build good academic and business practices.

**Conclusion**

This study has shown a significant positive correlation between the depth of reflection in structured reflective assignments given to MBA students and the level of learning achieved as measured by Bloom’s taxonomy of cognitive outcomes.

Because structured reflection appears to enhance learning and SL exposes MBA students to authentic work situations while they are still within the processing phase of the model demonstrated in Figure 1, the application of this pedagogy can potentially enhance MBA graduates’ workplace skills, to the benefit of both the students (as managers) and the organizations employing them.

**References**


About the Author

Teresa Carmichael, PhD, started work in the arena of agricultural research after completing her BSc (Hons) in microbiology and biochemistry. After migrating to South Africa from Zimbabwe, she moved into sales, marketing and then training within the pharmaceutical industry. Several years later, she resigned to start her own HR development consultancy, where she focused on supporting organizations to align with new South African legislation to drive the transformation of skills development among the largely unemployed and poorly educated majority in the newly democratized country. Dr. Carmichael found her true love in academia as she joined Witwatersrand (Wits) Business School as a lecturer in human resources after completing her Master in Management (HR) cum laude. She followed this immediately with her PhD, awarded in August 2007 after completing her dissertation entitled *Service-Learning in MBA Degree Programmes in South Africa*. In addition to SL, Dr. Carmichael’s research interests lie in the areas of both national and organizational culture, diversity issues of many types, corporate social investment, and the education of managers. She is keen to collaborate with colleagues in the international arena with a view to furthering research and promoting innovative teaching practices such as SL in South Africa and other African countries.
About the Artist

Bonnie Kwan Huo is an award-winning international artist who was born in China, raised in Hong Kong, and received her B.A. from the University of California at Berkeley and Dip.Ed. from the University of Hong Kong. Her works are included in museums, corporate and private collections. She was a visiting artist at the University of Indianapolis in 2001 and now resides in Hong Kong.

About the Painting

The dreamlike cover image painted by renowned artist Bonnie Kwan Huo evokes a sense of promise and potential, suggesting an environment conducive to the exploration of possibilities. This is certainly in keeping with the goals of this book, which invites readers to investigate paradigms, benefit from the successes of others in the field, and meet the many challenges to be found in service-learning in higher education as we all work toward a future of greater civic engagement and growing partnerships.

Title: “Untitled”
Medium: Watercolor
Year of Creation: 2008