GMAC®

Graduate Management Admission Council®
Creating Access to Graduate Business Education®

Quantity or Quality? Work Experience as a Predictor of MBA Student Success

D. Scott DeRue

GMAC® Research Reports • RR-09-09 • September 2, 2009

Introduction

A hallmark of management education for nearly 20 years, work experience has become a fundamental metric by which management education programs and students are judged. Business schools first implemented work experience requirements (in terms of number of years) for two reasons. First, over the last two decades, increased competition in admissions for the Masters of Business Administration (MBA) degree gave business schools an incentive to raise their average years of work experience, because doing so helped raise average salaries upon graduation. Second, work experience has become an integral part of the business school curriculum with a focus on students learning as much from their peers as from professors. These drivers pushed the average years of work experience requirement at top business schools from three years to five years (Miller, 2006).

A recent trend among management education programs, however, is to admit students with fewer years of work experience, or to abolish the work experience requirement altogether. For example, business schools such as Washington University, the University of Texas, Carnegie Mellon, Stanford, and Harvard have begun selectively to drop the work experience requirement (Alsop, 2006; Gloeckler, 2006b; Miller, 2006). The primary driver of this change in admissions policy again is increased competition for students. According to James Danko, dean of Villanova University's School of Business, "…the primary motivator (for this change) is to increase the applicant pool" (Gloeckler, 2006a). As one might expect, critics argue that reducing or eliminating the work experience requirement will result in less learning in the classroom and students who are unprepared to assume leadership positions in contemporary organizations. In fact, a recent *Wall Street Journal*/Harris Interactive survey noted that recruiters are increasingly criticizing MBA students for lacking enough specialized experience. "Most recruiters say they expect a minimum of four or five years' experience, preferably in their industries. Some are even hoping for six or seven years." (Alsop, 2006)

From the perspective of MBA admissions and recruiting, the debate surrounding work experience in management education has largely focused on the number of years of work experience. This perspective is consistent with much of the early research on work experience in organizations, most of which investigated work experience in terms of tenure, defined as years in a job (e.g., McDaniel, Schmidt, & Hunter, 1988), years in an organization (e.g., McEnrue, 1988), or years in a position (e.g., Borman, Hanson, Oppler, Pulakos, & White, 1993). Similar to the MBA admissions and recruiting debate described above, this research described and assessed work experience in purely quantitative terms. Two individuals with the same number of work years, however, can differ dramatically in the types of experiences they have encountered, in the challenge and complexity of those experiences, and in how much was learned from those experiences (Ford, Quinones, Sego, & Sorra, 1992). In other words, the *quality* of one's work experience is conceptually and empirically distinct from the *quantity* of work experience (Tesluk & Jacobs, 1998). As such, the current debate around the optimal number of years of work experience in management education focuses on only one part of a complex issue that affects

admission and selection policies, curriculum development, and recruiting in management education.

This paper differentiates between the quantitative and qualitative components of work experience and examines the degree to which these distinct dimensions of work experience predict individual development and performance in management education, with a specific emphasis on students pursuing an MBA degree. This study combines survey and archival data from 2005 to 2008 to investigate empirically how and to what extent the quantitative and qualitative dimensions of work experience predict student achievement in the MBA program, internship performance, and job market success. As part of this empirical investigation, this research also examines the validity of work experience as a predictor of student achievement relative to other common criteria used to inform selection and admissions decisions in management education, such as standardized test scores, educational record, and personality characteristics. The implications of this research for the admissions and selection policies in management education are discussed.

Background

Prior research offers an organizing framework for how best to conceptualize the work experience of individuals (Quinones, Ford, & Teachout, 1995; Tesluk & Jacobs, 1998). This research suggests that work experience can be conceptualized along two distinct dimensions: quantity and quality. The quantity dimension refers to an individual's total years of work experience or time with a particular job or organization. The quality dimension of work experience refers to the types of experiences one has encountered during this time. In this background section, these dimensions and the relevant research are reviewed.

Quantitative Dimensions of Work Experience

The majority of research on work experience focuses on the quantitative dimension of experience and conceptualizes this dimension in terms of time (Tesluk & Jacobs, 1998), particularly in terms of total years of work experience or time working in a particular job or organization (Borman et al., 1993; McDaniel et al., 1988; McEnrue, 1988; Medhoff & Abraham, 1981). This focus is largely consistent with the selection and admissions protocols used in management education, where this quantity dimension of work experience often serves as one input into the admissions decision-making process. In fact, the average total years of work experience for the student body is often championed as an important criteria used by MBA programs in the marketing of their student body.

Theoretically speaking, there are several reasons why total years of work experience might be an important consideration in making these selection and admissions decisions. For example, experiential learning theories (e.g., Kolb, 1984) suggest that individuals need time to reflect on their experiences and then use what they learn via these reflections to experiment in similar situations. One reasonable assumption might be that, with more time working, individuals have had greater opportunity to reflect on and learn from their actions, develop insights that can be shared in the classroom, and experiment with and refine these lessons over time. In contrast, if individuals have had little total work experience, they have had less time for reflection and experimentation, and their development and readiness for a MBA program may suffer as a consequence.

A similar rationale is provided by human capital theory (Becker, 1962), which proposes that one's total years of work experience will be positively related to that person's performance because of the knowledge and skills that are developed over the course of one's work career. In this sense, individuals who have been working for a longer period of time are assumed to have developed a richer set of knowledge and skills that enables them to achieve higher levels of job performance than individuals who have been in the workforce for less time and, as a result, have not developed comparable knowledge and skills. Both organizational psychologists and labor economists have found at least some empirical support for these assertions (Borjas, 1981; McDaniel et al., 1988; Mellow, 1982; Mincer & Jovanovic, 1981; Quinones et al., 1995).

Qualitative Dimension of Work Experience

One drawback to relying on the quantitative dimension of experience to characterize an individual's work history is that simply counting the number of years an individual has worked provides no information about the qualitative nature of that experience. Yet, current theory assumes that the time spent working has provided an opportunity for individuals to challenge and stretch their job-relevant knowledge and skills, and as a result, achieve greater job performance going forward. Considering the conceptual and empirical distinctiveness of the quantitative and qualitative dimensions of experience (Tesluk & Jacobs, 1998), this is not necessarily a safe assumption. In fact, it is quite possible that prior research on total years of work experience was actually confounded with the quality dimension of experience, and because prior research has generally failed to examine the quantity and quality of experience in the same study, prior empirical evidence may be misleading—thereby emphasizing the importance of considering the qualitative dimension of work experience.

The qualitative dimension of work experience is most often conceptualized as a set of specific types of assignments that an individual encounters during his or her career or job situation. Building on the research of McCall, McCauley and colleagues (McCall, Lombardo, & Morrison, 1988; McCauley, Ruderman, Ohlott, & Morrow, 1994; McCauley, Ohlott, & Ruderman, 1999), Ohlott (2004) suggested that this qualitative dimension of experience could be characterized in terms of five distinct experience types. Table 1 provides a summary description of these qualitative dimensions of experience. More recently, DeRue and Wellman (in press) showed empirically that these five dimensions are distinct and that the dimensions can be conceptualized as an overall level of experience quality. Although the qualitative dimension of work experience has been studied less often than the quantitative dimension, the existing research is quite conclusive and shows that these experience dimensions are important predictors of managerial learning and development (DeRue & Wellman, in press; McCall et al., 1988; McCauley et al., 1994).

Methodology

This research study was conducted in a field setting with 280 full-time MBA students at a large midwestern university. Thirty percent of these students were female, 41 percent were from countries other than the United States, and the average amount of work experience per individual was 54.5 months.

Prior to students entering the MBA program, several individual difference measures were collected. In terms of work experience, the *quantity* dimension was recorded as the total number of years each participant had worked full-time prior to entering the program. These data were collected from each individual's program application. To assess the *quality* of each individual's career work experience, each student was asked to complete the Job Challenge Profile (JCP; McCauley et al., 1999) prior to entering the MBA program. The JCP taxonomy and measure of the qualitative dimensions of work experience was initially developed via interviews and surveys of more than 900 mid-level and senior executives across a variety of organizations and industries. McCauley et al. (1994) confirmed the test-retest reliability and validity of this taxonomy. This study adapted the measure to focus on and assess individuals' total career experiences prior to entering the MBA program, not just their most recent job. In addition to work experience, data were also collected on individuals' "Big 5" personality traits (conscientiousness, extraversion, agreeableness, openness, and emotional stability; Barrick & Mount, 1993), gender, nationality, undergraduate major, and scores on the Graduate Management Admissions Test® (GMAT®). These data were used to assess the validity of work experience as a predictor of student achievement relative to other common selection criteria used during the MBA admissions process.

Outcome measures collected for this study fall into three categories: (1) MBA program performance, (2) internship performance, and (3) job market performance. Student performance in the MBA program was measured in the following three ways. First, students' cumulative grade point averages (GPA) were recorded upon their graduation from the program. Second, all full-time MBA students in this program were organized into five-person teams for all of their first-year courses. During this first year, peer

assessments of individual leadership effectiveness were collected using items adapted from Halpin's (1957) Leadership Behavior Description Questionnaire. Finally, whether students took on leadership roles in MBA-sponsored extracurricular organizations was recorded based on archival data collected via the MBA program office.

Internship performance was assessed via each student's direct supervisor from the summer internship. This outcome measure was adapted from Welbourne, Johnson, and Erez's (1998) job performance measure, and was completed at the conclusion of the internship. Job market performance was assessed in two ways using data collected by the career services office. First, each student's starting base salary upon graduation (excluding any guaranteed bonus compensation) was recorded. Second, recruiters who interviewed the students completed an assessment for each student regarding his or her overall job readiness. Each student had at least three interviewers provide independent ratings of job readiness.

Table 1. Five Distinct Qualitative Dimensions of Work Experience

"High Quality" Work Experiences	Description	Examples
Novel responsibilities	Must handle job responsibilities that are new or different than prior experiences	Experience a major change in one's work role/position
Change initiatives	Create and facilitate change in the way business is conducted, an employee's behavior, or fix a pre-existing problem	Manage a new product launch or acquisition Manage subordinate performance problems Deal with inherited morale problems in a group
High responsibility	Lead initiatives that are highly important to the organization and visible to senior management Lead initiatives that entail extensive scope and scale (e.g., multiple functions, groups, or products/services)	Secure financing for a key acquisition Negotiate with a large customer Assume responsibility for a nationwide initiative
Boundary spanning	Influence or manage people or processes for which one has no direct authority	Convince upper management to support a proposal Manage key interactions with an important labor union
Workplace diversity	Lead people from different cultures, gender, racial or ethnic backgrounds	Lead a team dispersed across several continents Lead a team with extensive gender and racial diversity

Findings

What Is the Relative Contribution of Work Experience as a Predictor of MBA Student Achievement?

The results related to this research question are reported in Tables 2 and 3. Table 2 provides the bivariate correlations for all possible predictors and the outcomes of interest. Table 3 provides the simultaneous regression results that test the validity of work experience as a predictor of MBA student achievement, above and beyond any effect associated with demographics, GMAT, and personality.

Table 2. Bivariate Correlations Among Predictor Variables and Outcomes of Interest

Predictors	MBA Program Performance				Job Market Performance	
	GPA	Leadership Effectiveness	Leadership Position	Internship Performance	Starting Salary	Job Readiness
Demographics						
Gender	.04	-.07	-.14*	-.01	-.07	.04
International	.19*	-.26**	-.23*	.13	.20*	-.04
Business major	.06	.02	.03	-.06	-.06	.14*
Engineering major	.13†	-.10	-.09	.11	.17*	.02
GMAT[a]	.50**	-.31**	-.39**	.11	.13	-.09
Personality						
Conscientiousness	-.03	.11†	.10†	.07	-.02	.04
Extraversion	-.12	.03	.10†	.06	-.03	.15
Agreeableness	-.09	.09	.09	.01	-.03	.07
Emotional stability	-.04	.04	.12†	-.01	-.12	-.03
Openness	.11	-.01	.11†	.11	.18*	-.02
Quantity of experience	.07	-.07	.07	.20*	.35**	.11
Quality of experience	.08	.06	.02	.19*	.29**	.19*
Novel responsibilities	.12	.13*	.10†	.11	.07	.08
Change initiatives	.07	.05	-.01	.13	.14†	.19**
High responsibility	.08	.11	.08	.19*	.32**	.23**
Boundary spanning	.02	.02	.00	.21*	.17*	.17**
Workplace diversity	.03	-.02	-.05	.08	.35**	.04

† p < .10; * p < .05; ** p < .01

[a] For these bivariate correlations, GMAT was corrected for range restriction.

Note: N = 132-280. Gender (0 = female; 1 = male). International (0 = US; 1 = non-US). Leadership position (0 = no position held; 1 = held at least one formal leadership position during the MBA program; 41% of students held at least one leadership position). Major refers to student's undergraduate major. Quality of experience refers to an overall composite of five dimensions measured in the JCP.

Among all of the possible predictors that this study examined, the quantity and quality of individuals' career work experience explained the most variance in MBA student achievement with a few exceptions. Three criteria were examined as measures of student achievement in the formal MBA program: (1) cumulative GPA, (2) peer-rated leadership effectiveness, and (3) whether students held a formal leadership position in a MBA-sponsored extracurricular organization. The GMAT exam was the only positive predictor of students' cumulative GPA in the MBA program ($B = .37$, $p < .01$, $\Delta R^2 = .16$).[1] This finding is generally consistent with prior research showing a positive relationship between GMAT score and GPA (Kuncel, Crede, & Thomas, 2007; Oh, Schmidt, Shaffer, & Le, 2008). It is important to note, however, that GPA was the only outcome examined in this study for which the GMAT exam, had a significant, positive effect, and in several instances discussed herein, the GMAT exam exhibited a significant, negative relationship with MBA student achievement.

[1] Multicollinearity was examined for all regression results reported herein. The maximum variance inflation factor for any predictor variable across all of the regression models was 2.3, indicating that multicollinearity was not a concern in these data.

Table 3. Regressing MBA Student Achievement Outcomes on Demographics, GMAT, Personality and Work Experience

	MBA Program Performance				Job Market Performance	
Predictors	GPA	Leadership Effectiveness	Leadership Position	Internship Performance	Starting Salary	Job Readiness
Demographics						
Gender	.02	-.05	-.16*	-.02	-.07	.08
International	.00	-.24**	-.18*	.05	-.01	-.16†
Business major	.16†	-.04	.01	.12†	.09	.26**
Engineering major	.14	-.03	.04	.07	.16	.17*
GMAT	.37**	-.12†	-.22**	.04	-.01	.03
Personality						
Conscientiousness	.09	.06	.04	.12†	.04	.02
Extraversion	-.09	-.03	.04	.04	-.13	.17*
Agreeableness	-.02	.06	.00	-.06	.04	.11
Emotional stability	-.03	-.03	.03	-.05	-.17†	-.14†
Openness	.11	-.01	.11	.15	.18*	-.04
Quantity of experience	.07	-.07	.12†	.18*	.34**	.10
Quality of experience	.04	.15*	-.01	.12†	.19*	.17*
N	170	277	277	142	127	209
Total R^2	.21	.12	.16	.11	.29	.13

† p < .10; * p < .05; ** p < .01

Note: Gender (0 = female; 1 = male). International (0 = US; 1 = non-US). Leadership position (0 = no position held; 1 = held at least one formal leadership position during the MBA program; 41% of students held at least one leadership position). Major refers to student's undergraduate major. Quality of experience refers to an overall composite of the five dimensions measured in the JCP. The regression analysis for starting salary also controls for whether students interned at their eventual employer.

In terms of peer-rated leadership effectiveness, the quality of individuals' career work experience was the only positive predictor (B = .15, p < .05). In other words, it is not how many years people have worked, but rather what types of assignments and experiences they encountered during this time that explains their leadership effectiveness. Interestingly, international status (B = –.24, p < .01) and the GMAT (B = –.12, p < .10) were both negatively related to peer-rated leadership effectiveness. Collectively, the qualitative components of the JCP experience measure, international status, and the GMAT explained 10 percent of the variance in peer ratings of leadership effectiveness.

For predicting whether students held a formal leadership position in the MBA program, the total number of years of career work experience was the only positive predictor (B = .12, p < .10). For every additional year of work experience prior to entering the MBA program, the likelihood that a student held a formal leadership position in the MBA program increased by 3 percent. Similar to the peer ratings of leadership effectiveness, several demographic characteristics were important in predicting whether students held leadership positions. Specifically, international status (B = –.18, p < .05) and the GMAT (B = –.22, p < .01) had a negative effect on whether students held leadership positions in the MBA program. Gender also had a significant effect on

leadership positions, such that males were less likely than females to hold a leadership position ($B = -.16$, $p < .05$). To illustrate the magnitude of these effects, consider the following:

- 27 percent of individuals who held a formal leadership position were international students (compared with 50 percent international students in the non-leader group).
- Individuals in the non-leader group scored, on average, 44 points higher on the GMAT than did students who held a formal leadership position in the MBA program.
- 38 percent of individuals who held a formal leadership position were female (compared with 25 percent female in the non-leader group)

Collectively, these variables explained 14 percent of the variance in whether students held a formal leadership role in the MBA program.

Among all of the variables examined in this study, the quality and quantity of individuals' career work experience were the only significant predictors of student performance in the summer internship. Total years of work experience had a significant, positive effect on how students' internship supervisor viewed their performance ($B = .18$, $p < .05$), as did the quality of that career work experience ($B = .12$, $p < .10$). Collectively, the quality and quantity of career work experience explained 6 percent of the variance in student internship performance.

The quality and quantity dimensions of work experience also had notable effect on students' full-time starting salaries and interviewer perceptions of job readiness. Total years of work experience ($B = .34$, $p < .01$) and the qualitative dimensions of that experience ($B = .19$, $p < .05$) had a significant, positive effect on students' starting full-time salary. Collectively, the quantity and quality of individuals' career work experiences explained 17 percent of the variance in starting full-time salaries. In fact, those students who were one standard deviation above the mean in total years of work experience benefited from a 4 percent increase in starting salary. Likewise, individuals scoring one standard deviation above the mean on the quality of career work experience were rewarded with a 2 percent increase in starting salary.

In terms of job readiness, the types of assignments and experiences that individuals encountered prior to entering their MBA program were especially important. Specifically, the quality of individual's career work experience had a significant, positive effect ($B = .16$, $p < .05$) on how interviewers evaluated the individual's job readiness. Interestingly, demographics and personality also played an important role in predicting interviewer perceptions of job readiness. Specifically, individuals who majored in business ($B = .26$, $p < .01$) or engineering ($B = .17$, $p < .05$) as undergraduates were rated more favorably by interviewers. In addition, extraversion was positively related ($B = .17$, $p < .05$) to job readiness evaluations. Collectively these experience, personality, and demographic variables explained 13 percent of the variance in interviewer perceptions of job readiness.

What Type of "High Quality" Experience Is Most Important?

Thus far, the results of this study provide considerable evidence suggesting that management education programs need to consider explicitly and more systematically the quality of individuals' career work experience in selection and admissions decisions. Relative to other criteria commonly used as inputs to these decisions (e.g., demographics, personality, total years of work experience), the quality of the assignments and experiences that students encounter prior to entering the MBA program explains unique variance in MBA student achievement outcomes, including leadership effectiveness, internship performance, interviewer perceptions of job readiness, and starting full-time salary. There still remains, however, the question of what types of "high quality" assignments and experiences are most predictive of MBA student achievement.

This research study investigated this question by regressing each of the MBA student achievement outcomes on the quantity of work experience and each of the five distinct qualitative experience dimensions simultaneously.[2] As shown in Table 4, a career

[2] GPA was not investigated in this analysis because career work experience (quality or quantity) did not predict GPA in the prior analysis.

consisting of *High Responsibility* experiences where the individual's work entails extensive scope and scale, and is highly visible to senior management, is a strong predictor of MBA student achievement. Controlling for total years of work experience, *High Responsibility* had a significant, positive effect on four out of five MBA student achievement outcomes examined in this analysis. In addition, a career consisting of *Novel Responsibilities* where the individual regularly had to handle job responsibilities that were new or different had a unique, positive effect on leadership effectiveness (B = .12, p < .10), as well as whether students held a leadership position in the MBA program (B = .11, p < .10). Finally, the degree to which students' careers consisted of *Workplace Diversity* had a significant, positive effect on starting full-time salary (B = .31, p < .01). Thus, of the five qualitative dimensions of work experience, the three that seem most important for MBA student achievement are *High Responsibility*, *Novel Responsibilities,* and *Workplace Diversity*.

Table 4. Regressing MBA Student Achievement Outcomes on the Qualitative Dimensions Work Experience

	MBA Program Performance			Job Market Performance	
Predictors	**Leadership Effectiveness**	**Leadership Position**	**Internship Performance**	**Starting Salary**	**Job Readiness**
Quantity of experience	-.10	.07	.16†	.31**	.04
Quality of experience					
Novel transitions	.12†	.11†	.05	-.11	-.02
Change	-.03	-.10	.01	-.03	.07
High responsibility	.18*	.20*	.06	.22*	.21*
Boundaries	-.02	-.05	.13	-.16	.06
Diversity	-.10	-.10	-.07	.31**	-.11
N	277	277	142	127	209
Total R^2	.04	.04	.07	.29	.07

† p < .10; * p < .05; ** p < .01

Note: Leadership position (0 = no position held; 1 = held at least one formal leadership position during the MBA program; 41% of students held at least one leadership position). The regression analysis for starting salary also controls for whether students interned at their eventual employer.

Are Quantity and Quality of Experience More Important for Some People?

This research also investigated whether certain groups of people benefit more or less from the quantity or quality of their career work experience. Specifically, gender, international status, and all five personality dimensions were examined as potential moderators to the relationship between the quality of individuals' career work experience and MBA student achievement. Based on the data collected in this study, there was statistical evidence supporting an interaction between international status and two outcomes of interest. Namely, international status and the quantity of career work experience interacted to explain an additional 2 percent and 3 percent of the variance in GPA and number of leadership positions held during the MBA program, respectively. Figures 1 and 2 provide illustrations of these interactions. One immediate conclusion from these graphs is that US students benefit from greater quantity of career work experience more so than non-US students. None of the other possible moderation effects were found to be statistically significant, suggesting that the relationships discussed herein are present for both male and female students and across all five personality dimensions.

Figure 1. Effect of International Status on Relationship Between Quantity of Career Work Experience and Graduate School GPA

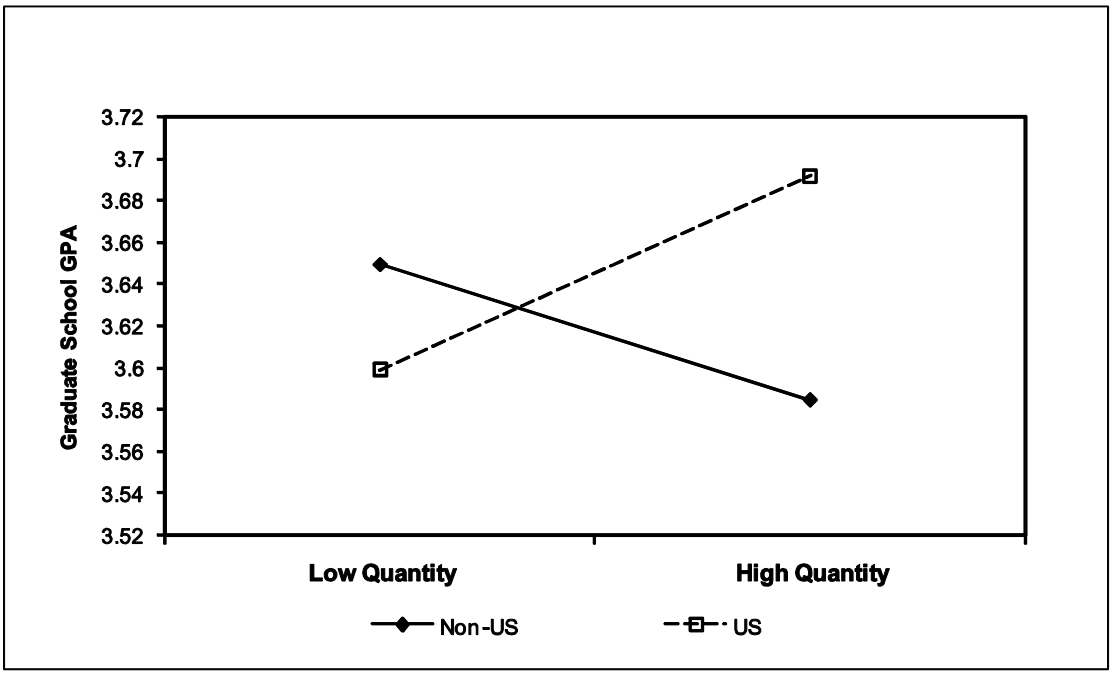
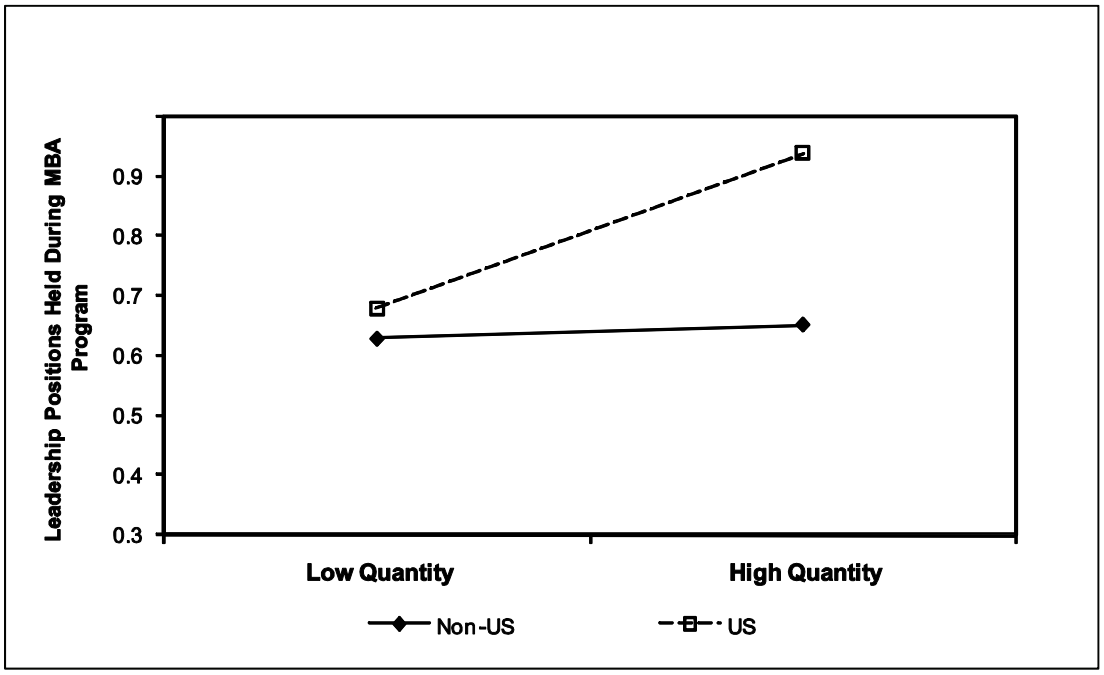


Figure 2. Effect of International Status on Relationship Between Quantity of Career Work Experience and Leadership Positions



Conclusions

The findings from this study have several noteworthy implications for management education institutions and programs. First, the quantity of individuals' career work experience, in terms of total years of experience prior to entering the MBA program, is an important criterion to consider when admitting students. In fact, the total years of work experience that students have prior to entering their MBA program positively predicts whether they hold a formal leadership position in the MBA program, their internship performance, and their starting full-time salary upon graduation. It is clear from this study, however, that the quantity of career work experience offers an incomplete assessment of individuals' prior work experience. The quality of individuals' career work experience, in terms of scope and scale of job responsibilities, visibility to senior management, novelty, and gender and cultural diversity, explains unique variance in MBA student achievement—namely, peer ratings of leadership effectiveness, internship performance, interviewer perceptions of job readiness, and starting full-time salary. Thus, this study provides specific guidance on which types of work experiences are most predictive of MBA student achievement, beyond any effect associated with the number of years of work experience.

Management education institutions should use these findings to enhance their programs in two ways. First, the results of this study should be used to inform and refine the selection and admissions processes in business schools. In particular, management education programs should systematically assess and compare students in terms of the quality of the assignments and career work experiences they have encountered prior to the MBA program. Currently, in most business schools, the quality of applicants' career work experience is taken into consideration but quite unsystematically and with little guidance on which types of experiences are important. Going forward, more systematic assessments of career work experience could be completed via structured interviews and/or survey instruments that gather data on the key qualitative dimensions of work experience identified in this study. An example of a survey instrument that could be used for these purposes is the Job Challenge Profile (McCauley et al., 1999). These data could then be used as input into the selection and admissions decision-making process and complement the other criteria commonly used in this process, including but not limited to GMAT scores, total years of work experience, and prior educational background.

Another way in which management education programs can use the results of this study to enhance their MBA programs is via student development and career services. Clearly, not all students entering MBA programs will have had the luxury of being exposed to the "high quality" experiences identified in this study. The study results clearly indicate, however, that it is essential for students to obtain these experiences during their program. In general, MBA programs have two options for ensuring that students obtain these different types of experiences: either as part of the formal MBA program or via extracurricular opportunities. For example, within the formal MBA program, peer workgroups can be organized such that individuals are forced to work with genders and cultures different from their own. Moreover, experiential opportunities can be designed into the curriculum such that students are exposed to senior managers and high-pressure situations. Currently, many business schools are offering experiential opportunities such as these as part of the formal curriculum; where schools often fall short is supporting the learning process associated with these developmental experiences. These "high-quality" experiences need to be accompanied by extensive feedback and performance evaluation, opportunities for individual and group reflection, and social support (DeRue & Wellman, in press; Ohlott, 2004). In terms of career services, this study provides insight into what types of internships might be most beneficial for students. If a particular student lacks a key type of experience, for example has never be exposed to extensive scope and scale or cultural diversity, career services might direct that student to pay particular attention to internships that offer such experiences. Doing so will round out that student's career work experience and make the individual more attractive during the full-time recruiting season.

Finally, MBA programs should consider modifying their marketing materials so that the "high-quality" work experiences of students are visible to recruiters. Based on the early career outcome data examined in this study, including interviewer perceptions and starting full-time salaries, recruiting organizations value select "high- quality" work experiences, namely experiences that entail *High Responsibility* and *Workplace Diversity*. In addition to promoting the student body's average total years of work experience, MBA programs should investigate novel ways in which to market the quality of students' career work experiences and make this element of the student body visible to recruiting organizations.

Contact Information

For questions or comments regarding study findings, methodology or data, please contact the GMAC Research and Development Department at research@gmac.com.

Acknowledgements

This document was prepared by D. Scott DeRue, University of Michigan.

The views and opinions expressed in this paper are those of the author and do not necessarily reflect those of the Graduate Management Admission Council®.

References

Alsop, R. (2006, May 18). Employers want MBAs with work experience. *The Wall Street Journal.*

Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the Big 5 personality dimensions and job-performance. *Journal of Applied Psychology, 78*, 111–118.

Becker, G. S. (1962). Investment in human capital—A theoretical-analysis. *Journal of Political Economy, 70*, 9–49.

Borjas, G. J. (1981). Job mobility and earnings over the life cycle. *Industrial & Labor Relations Review, 34*, 365–376.

Borman, W. C., Hanson, M. A., Oppler, S. H., Pulakos, E. D., & White, L. A. (1993). Role of early supervisory experience in supervisor performance. *Journal of Applied Psychology, 78*, 443–449.

Bray, D. W., & Howard, A. (1983). The AT&T longitudinal studies of managers. In K. W. Shaie (Ed.), *Longitudinal studies of adult psychological development* (pp. 266–312). New York: Guilford Press.

DeRue, D. S., & Wellman, N. (in press). Developing leaders via experience: The role of developmental challenge, learning orientation, and feedback. *Journal of Applied Psychology*.

Ford, J. K., Quinones, M. A., Sego, D. J., & Sorra, J. S. (1992). Factors affecting the opportunity to perform trained tasks on the job. *Personnel Psychology, 45*, 511–527.

Gloeckler, G. (2006b, February 13). Who needs the real world? *BusinessWeek Online*. Last accessed on Sept. 2, 2009, at: http://www.businessweek.com/magazine/content/06_07/b3971090.htm

Gloeckler, G. (2006a, February 13). Degreed but unprepared. *BusinessWeek Online*. Last accessed on Sept. 2, 2009, at: http://www.businessweek.com/magazine/content/06_07/b3971088.htm.

Halpin, A. W. (1957). *Manual for the leader behavior description questionnaire*. Columbus, OH: Bureau of Business Research, Ohio State University.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Upper Saddle River, NJ: Prentice-Hall, Inc.

Kuncel, N. R., Crede, M., & Thomas, L. L. (2007). A meta-analysis of the predictive validity of the Graduate Management Admission Test (GMAT) and Undergraduate Grade Point Average (UGPA) for graduate student academic performance. *Academy of Management Learning & Education, 6*(1), 51–68.

McCall, J. M. W., Lombardo, M. M., & Morrison, A. M. (1988). *The lessons of experience: How successful executives develop on the job*. Lexington, MA: Lexington Books.

McCauley, C., Ohlott, P. J., & Ruderman, M. N. (1999). *Job challenge profile: Facilitator's guide*. San Francisco, CA: Jossey-Bass.

McCauley, C. D., Ruderman, M. N., Ohlott, P. J., & Morrow, J. E. (1994). Assessing the developmental components of managerial jobs. *Journal of Applied Psychology, 79*, 544–560.

McDaniel, M. A., Schmidt, F. L., & Hunter, J. E. (1988). Job experience correlates of job-performance. *Journal of Applied Psychology, 73*, 327–330.

McEnrue, M. P. (1988). Length of experience and the performance of managers in the establishment phase of their careers. *Academy of Management Journal, 31*, 175–185.

Medoff, J. L., & Abraham, K. G. (1981). Are those paid more really more productive: The case of experience. *Journal of Human Resources, 16*, 186–216.

Mellow, W. (1982). Employer size and wages. *Review of Economics and Statistics, 64*, 495–501.

Miller, K. (2006, August 7, 2006). B-schools: You don't have to wait. *BusinessWeek Online*.

Mincer, J., & Jovanovic, B. (1981). Labor mobility and wages. In Sherwin & Rosen (Eds.), *Studies in labor markets*. Chicago: University of Chicago Press.

Morrison, R. F., & Brantner, T. M. (1992). What enhances or inhibits learning a new job: A basic career issue. *Journal of Applied Psychology, 77*, 926–940.

Oh, I. S., Schmidt, F. L., Shaffer, J. A., & Le, H. (2008). The Graduate Management Admission Test (GMAT) is even more valid than we thought: A new development in meta-analysis and its implications for the validity of the GMAT. *Academy of Management Learning & Education, 7*, 563–570.

Quinones, M. A., Ford, J. K., & Teachout, M. S. (1995). The relationship between work experience and job performance: A conceptual and meta-analytic review. *Personnel Psychology, 48*, 887–910.

Schmidt, F. L., Hunter, J. E., & Outerbridge, A. N. (1986). Impact of job experience and ability on job knowledge, work sample performance, and supervisory ratings of job-performance. *Journal of Applied Psychology, 71*, 432–439.

Schmidt, F. L., Outerbridge, A. N., Hunter, J. E., & Goff, S. (1988). Joint relation of experience and ability with job-performance: Test of 3 hypotheses. *Journal of Applied Psychology, 73*, 4–57.

Tesluk, P. E., & Jacobs, R. R. (1998). Toward an integrated model of work experience. *Personnel Psychology, 51*, 321–355.

Welbourne, T. M., Johnson, D. E., & Erez, A. (1998). The role-based performance scale: Validity analysis of a theory-based measure. *Academy of Management Journal, 41*, 540–555.