Work experience and learning:
a case study of MBA students

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ABSTRACT

Should the M.B.A. program directors consider students' prior work experience in their admission criteria? This is a very crucial question as it influences the M.B.A. admission criteria. The aim of this exploratory study is to evaluate the effect of students' prior work experience on their learning in an MBA program utilizing the Learning Skill Profile (LSP). The twelve learning skills consisting of relationship skills, adapting skills, information-gathering skills, information analysis skills, goal-setting skills, action skills, initiative skills, planning skills, quantitative skills, and technology skills were measured for students having prior work experience and those who did not have any work experiences.
The results indicate that the two groups of students are not significantly different in any of the learning skills defined by Kolb's LSP. As prior work experience is considered as a mandatory admission criterion by many business schools, knowing the fact that this factor does not necessarily increase learning skills required in the program will give an incentive to revise the M.B.A. admission weighting criterion.

Keywords: Work Experience, Admission Criteria, Learning Skills Profile, MBA Program, Learning Assessment

INTRODUCTION

According to Baruch (1996, p. 1) "the aims of MBA programs are to prepare their graduates for managerial roles, help them gain a better understanding of the industrial and business world and its needs, enrich their skills and provide them with competences relevant to their careers."

As the popularity of MBA studies is growing, graduate schools of business are seeking students with higher qualifications and abilities in order to differentiate their institutes among others. Effective candidates' selection from the applicants has always been a dilemma for every graduate school of business. "Successfully recruiting the most able students has implications for the design of the educational experience, student graduation rates, school reputation, and the number of companies willing to recruit and hire the institution's graduates" (Dreher and Ryan, 2000, p.1). A number of criteria have been defined so as to select candidates. Many of well-known business schools consider GMAT score as a predictor of their candidates' success in the program. Undergraduate GPA, letter of reference and years of work experience are the other prevailing factors. In this study, however, the impact of the work experience is taken into consideration in the M.B.A. performance.

Statement of the Problem

The effect of work experience on the performance of MBA programs is a controversial issue. Many reports have emphasized the importance of work experience on learning: "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",(GMAC, 2009, p.1). In contrast, some empirical researches have shown that there is little support for the view that previous work experience (as assessed by typical admission procedures) leads to higher levels of academic achievement (Dreher, Ryan 2000) .

Purpose

The purpose of this study is to investigate the impact of prior work experience as a selection criterion on the learning of MBA students. The results will show whether work experience has a substantial influence on students learning, and if so, in what ways. Additionally, if work experience was a highly weighted selection factor in recruitment process, the program designers could make the courses more efficient knowing the students weakness and strength in learning.

Significance of the Study

This study is based on an empirical investigation of the students at the top ranking MBA program in Iran. Sharif University of Technology's Graduate School of Business and Economics was founded in 1999. A Nation wide examination is used to help in the selection decision. This exam consists of three parts: 1. General Mathematics, 2. GMAT, 3. English Language. Undergraduate GPA is also integrated to the final score of this examination. Every year this business school confronts with a pool of applicants competing to enter the M.B.A. program. About 50 per cent of the candidates are awarded a tuition-free MBA program; whereas, the other 50 per cent pay for their own tuitions. Until recently, it was mandatory for the second group to have at least 3 years of work experience. Today, students who have just

completed an under graduate degree are eligible to apply to the M.B.A. program in both groups. The result of this research will show how school's recruitment policy may affect the average learning skills of new candidates. Also, this research can be helpful to this and other similar schools' officials in formulating better recruitment policies.

Research Question and Hypotheses

The following is the main research question that this study is trying to address: What is the impact of prior work experience, as defined and measured by the LSP, on the MBA students' learning? The study used the following 12 hypotheses for the assessment and the measurement of the students' learning skills using the LSP model.

H1 - Leadership Skills: students with pre-MBA work experience have higher leadership skills than their fresh counter parts

H2 - Relationship Skills: students with pre-MBA work experience have higher relationship skills than their fresh counter parts.

H3 - Help Skills: students with pre-MBA work experience have higher help skills than their fresh counter parts.

H4 - Adapting Skills: students with pre-MBA work experience have higher adapting skills than their fresh counter parts

H5 - Information Gathering Skills: students with pre-MBA work experience have higher information-gathering skills than their fresh counter parts

H6 - Information Analysis Skills: students with pre-MBA work experience have higher information to explain analysis skills than their fresh counter parts

H7 - Goal Setting Skills: students with pre-MBA work experience have higher goal-setting skills than their fresh counter parts

H8 - Action Skills: students with pre-MBA work experience have higher action skills than their fresh counter parts

H9 - Initiative Skills: students with pre-MBA work experience have higher initiative skills than their fresh counter parts

H10 - Planning (Theory) Skills: students with pre-MBA work experience have higher planning (theory) skills than their fresh counter parts

H11 - Quantitative Skills: students with pre-MBA work experience have higher quantitative skills than their fresh counter parts

H12 - Technology Skills: students with pre-MBA work experience have higher technology skills than their fresh counter parts

BACKGROUND

Derue (2009, p.2) proposed 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 their report, the effect of quantity and quality of experience were assessed against MBA program performance, internship performance and job market performance.

Dreher and Ryan (2000), in their study titled "Prior Work Experience and Academic Achievement among First-Year MBA Students," revealed that prior years of experience were related to performance in the foundations core (first semester). Prior work performance did not predict performance in the functional core (second semester). Two years later Dreher and Ryan (2002), in another study, evaluated the relationship between "Pre-MBA Work Experience and Post-MBA Career Outcomes." This study suggested that "counter to

conventional promotions, MBAs without prior work experience were more satisfied, and received more promotions, and earned more cash compensation than some of their more experienced counterparts" Dreher and Ryan (2002, p.1). Apart from these studies in which work experience has been considered specifically, some researches were conducted taking into account admission criteria and work experience together with other factors such as undergraduate GPA, and GMAT scores (Adams and Hancock, 2000). Different performance indicators have been utilized such as graduate grades and salary; however, to the best of authors' knowledge none of the researches has given attention to learning skills as indicators.

Definition of Terms

David Kolb (1984) formed an experiential learning model that is widely accepted. This model suggested skill taxonomy to measure what MBA students learn during a program. Kretovics (1999) employed this model to analyze how the 12 important skills of management and business education improve in graduate management program. He concluded that "…the MBA program studies increase the learning skills of its participants compared to entering student scores and a control group. Seven of the 12 skills showed statistically significant increases" Kretovics (1999 , p. 1) . LSP was used by Levy (2005) to draw a comparison between on-campus and online MBA programs. The results of his study indicate that although both the programs provide positive enhancement of the managerial skills, the online MBA program seems to provide better enhancement of such skills.

For the purpose of this research, learning skills and classification criteria are operationally defined as follows:
• Leadership skills: The ability to inspire and motivate others
• Relationship skills: The ability to establish trusting relationships with others
• Help Skills: Sensitivity to others
• Adapting skills: The ability to adapt, to change, and to deal with new situations
• Information gathering skills: The ability to be sensitive to and aware of organizational events
• Information analysis skills: The ability to assimilate information from various sources
• Goal-setting skills: The ability to establish work standards
• Action skills: The ability to commit to objectives, to meet deadlines
• Initiative skills: The ability to seek out and take advantage of opportunities
• Planning (theory) skills: The ability to adopt a larger perspective, to conceptualize
• Quantitative skills: The ability to use quantitative tools to analyze and solve problems
• Technology skills: The ability to use computers and computer networks to analyze data and organize information
• Student with work experience: a respondent who stated his/her years of experience more than one year
• Student without prior work experience: a respondent with one or less than one year work experience stated in his/her questionnaire

METHODOLOGY

To address the research question, a cross sectional study design was used. The average demographic characteristics of participants did not alter during the study period and students entering the program were almost at the same age and had similar grades at National Wide Entrance Exam. The Learning Skill Profile (LSP) instrument was employed at the same time to both groups of students, students with work experience and their inexperienced

counter parts, to find out in what dimensions of learning does the prior work experience have significant impact.

Population and Sampling

The study's population consisted of all MBA students who were enrolled in the graduate management program during the sampling time frame. 300 MBAs were involved in the program at the time of the research. This figure represented the population size. Participants were selected with the help of the faculty members, during nearly three weeks. 100 questionnaires were distributed among the population. 72 completed forms were returned and found to be usable for the analysis. Using a sample size calculator, the statistical summary of this sample would represent the population parameters with a confidence interval of 10% and a confidence level of 95%.

Instrumentation

The Learning Skills Profile (LSP) is a 72-item, modified Q-sort assessment instrument designed to assess learning skills. The LSP can be used as a vehicle for providing personal and organizational feedback on skills, and to describe the skills required by different jobs and educational programs (Boyatzis and Kolb, 1991). In experiential learning theory (ELT), the model of style is characteristics based on a theory of learning (Kolb, 1984). The theory defines four phases in the process of learning from experience: concrete experience, reflective observation, abstract conceptualization and active experimentation as indicated in figure 1 (Appendix A).

For effective learning, these four phases are necessary (Kolb 1984, Smith, Kolb 1985);

1. Concrete Experience (CE): provides the basis for the learning process. Lessons at this stage engage the individual personally and learning relies on open-mindedness and adaptability rather than a systematic approach to the situation or problem.
2. Reflective Observation (RO): makes sense of the experience. In this stage, a person considers his/her concrete experiences from a variety of perspectives and articulates why and how they occurred. Learning occurs as a result of patience, objectivity, careful judgment and observation. Reflection helps a person break his/her experiences into parts and to categorize them for use in the next stage of learning.
3. Abstract Conceptualization (AC): assimilates and distills the observations into a theory or concept. In this stage, a person comes to understand the general concept of which their concrete experience by assembling their reflections on the key parts of his/her experience into a general model. Abstract conceptualization requires students to use logic and ideas, as opposed to feelings, to understand situations and problems.
4. Active Experimentation (AE): tests the theories and leads into new experiences. In this step, a person uses the theories he/she developed during the abstract conceptualization stage to make predictions about the real world and then act those predictions. A person's actions, of course, are a new concrete experience. The learning cycle begins anew.

The 12 learning skills measured by this instrument can be classified into following areas:

1. Interpersonal skills
2. Information gathering skills
3. Analytical skills
4. Behavioral skills

These major skills can fit the four phases of learning as shown in figure 2 (Appendix A).

Data Collection

The survey was administered during three weeks. Although web based surveys have been pervasive recently, a paper based approach was utilized to target the sample elements with the intention of increasing the response rate. A three page questionnaire was provided to each interviewee. The first page begins with an informed consent paragraph, instruction and some classification questions. Additionally, the interviewer clarified the instruction and restated the informed consent orally. As expected, because the interviewers were selected from the students peer, the survey experienced a good response rate; more than 72% of questionnaires were filled out completely by the interviewees.

Data Analysis Plan

In addition to classification questions asking GPA, years of work experience and years passed in MBA program, a seven-point Likert scale (where 1=No skill or experience in this area, 7= A leader or creator in this area) was provided for respondents to indicate their skills in each area. Then, all the 72 questions were categorized into 12 groups according to learning skills such as Help, Sense Making, etc. The score given to each learning skill would be the sum of all individual questions in each group. Subsequently, a figure ranging from 6 to 42 showed the scores calculated for each learning skill.

The 12 learning skills scores served as the dependent variables in this study. Whereas, having work experience was considered as independent variable. Following previous LSP research (Boyatzis &Kolb, 1991, 1995; Kretovics, 1999; Levy 2005), a one-way ANOVA was conducted for each of the 12 learning skills by SPSS statistical software. The Cronbach's alpha was measured for all 12 dimensions and the result was above 0.660. Boyatzis and Kolb (1991, 1995) proposed presenting the results in a star-type graph showing the aggregated mean for each learning skills on a separate axis. This graphical tool, however, was also used to answer the propositions put forth by this study (please see the figure 3 (Appendix A).

Validity Reliability

There are several studies reported utilizing the LSP as a measurement instrument for skills enhancement that a graduate management and business program provides. Boyatzis and Kolb (1991) found the internal scale reliabilities as measured by Cronbach's alpha to be ranging from 0.618 to 0.917, with an average of 0.778. Likewise, the LSP was demonstrated to be internally consistent with alphas ranging from 0.800 to 0.935 by Squires (1995). Kretovics (1999) also conducted a reliability analysis of the data gathered in his study. Alphas in his research ranged from a low of 0.651 (information gathering) to a high of 0.911 (technology). In another research, Kretovics (2002), the same values of alphas was found in evaluating the effect of different types of instructional delivery on learning outcomes using LSP. According to Levy (2005), Cronbach alpha reliability coefficients of the 12-item learning skills (LSPs) were found to be 0.891 for students entering on-campus EMBA, 0.971 for graduating from on-campus EMBA, 0.973 entering online EMBA and 0.974 for graduating from online EMBA. The magnitude of Cronboch alpha identified in the last research efforts indicates the instrument to be highly reliable. However, a reliability analysis was conducted on the data obtained from this study. The alphas found in this sample concur

with those indicated in the literature. Table I (Appendix A) demonstrates alphas calculated based on the data gathered for the purpose of this study.

The LSP is a self-reported instrument. "The process of self evaluation fits the belief that individuals are in the best position to assess [their abilities] since they have access to a large database on their own successes and failures in their abilities" Harrington (1995, p.4). Self-report instruments have also been supported in literature by Harrington and O'Shea (1993), Harrington and Schafer (1996), Kelso et al. (1977) and Kempen et al. (1996).

RESULTS

Description of the sample

Table II (Appendix A) exhibits the descriptive statistic of the sample collected for this study.

Analysis

An assessment of 12 learning skills was carried out to test 12 hypotheses defined by this study. A One-way ANOVA was conducted on the data to find out how the two groups are statistically different in each learning skill. Summary of the results is presented in table III (Appendix A).

The results indicate that students owning work experience report higher scores in some learning skills. The following evaluations can be made on 12 dimensions in order to address the question "What is the impact of prior work experience, as defined and measured by the LSP, on students' learning in an MBA program?"

H1: Help: Students owing work experience had higher mean value in help learning skill; however the difference between two groups was not found to be statistically significant.

H2: Sense Making: The results revealed that mean value of sense making skill was greater for students with work experience, however, the difference between two groups was not significant.

H3: Information Gathering: The mean value of this skill was higher for the group with prior work experience, however, the difference was not significant.

H4: Information Analysis: Although analysis showed that mean value was higher for those with work experience, they were not statistically different.

H5: Theory: As it was obvious, fresh students have higher mean value in theory skill; but, the difference was not significant.

H6: Quantitative: Fresh students had higher mean value in quantitative skill comparing to experienced ones.

H7: Technology: work experience had an impact on mean value of this skill; however, the difference between the groups was not significant.

H8: Goal Setting: This skill had higher mean value for fresh ones in comparison with experienced students.

H9: Action: Fresh students had higher mean value in action learning skill. This also was not found to be statistically significant.

H10: Initiative: The mean value of this skill was higher among fresh students. This, however, was not found to be significantly different.

H11: Leadership: students with work experience had higher mean value when being compared with fresh student.

H12: Relationship: This skill was found to have higher mean value for experienced students as compared to fresh ones; however, the difference between the groups was not statistically significant.

As suggested by Boyaritzis and Kolb (1991, 1995), aggregated Learning skills for the two groups of student is depicted in a star-type in figure 3 (Appendix A).

Scope and Limitations

Perhaps the most significant limitations of this study are the small sample size and using cross sectional design. The former had impeded better generalization of the results and the latter had presented threat to the validity of the study. Given the changes in admission policy in last few years, demographic characteristics of the sample might not be homogeneous as it was expected. Further research may employ a longitudinal study to evaluate the impact of demographic and selection criteria on the average learning skills.

Although the study took advantage of a well-proven research instrument, the results may still suffer from some errors. These errors might stem from translation of the questions into Persian, boredom of respondents in answering numerous questions and using questionnaire forms instead of Q-sort card method.

Conclusions and recommendations

In this study, the effect of prior work experience was examined on learning skills in an MBA program employing the LSP model. Two groups of students were compared on the basis of 12 learning skills as defined by Kolb. Although the mean values of some learning skills were higher for students with work experience, the difference between the two groups was not found to be statistically significant.

All 12 hypotheses of this research were rejected by the analysis of the data. The results of this research concur with the findings of Dreher and Ryan (2000) indicating that prior work experience does not result in higher levels of academic achievement. It was identified that in addition to the absence of substantial effect of work experience on academic achievement and post-MBA career outcomes (Dreher and Ryan 2002); the impact of working before MBA is not significant on the program participants' learning skills.

On the other hand, increase competition in admissions to MBA programs has given business schools an incentive to raise average years of work experience. This has helped raise average salary rates upon graduation (DeRue 2009).

Theoretically speaking, some reasons may support the effect of work experience on learning, for instance, experiential learning theory suggest that individuals need time to reflect on their experiences and then use what they learn via these reflections to experiment similar situations (Kolb, 1984). In fact, one might assume that "with more time working, individual 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" (DeRue 2009, p.2) . On the contrary, the results of this study confirm that total years of work experience are not an important factor affecting learning skill.

Although the results of the assessment in this research demonstrated similar learning skills profile for the two groups of the students owing work experience and their fresh counter parts, it is still recommended to recruit a fair combination of the two types of applicants. In doing so, students will benefit from learning from their peers as well as their professors (Derue 2009).

The findings from this study have some noteworthy implications for those managing the graduate schools of business and specifically School of Management and Economic of Sharif University. First, the experience gained at work does not improve any of the 12 important learning skills of management and business education. This may provides insights to the designers of an MBA program when they are considering required skills for learning in

each course. Second, as prior work experience is considered as a mandatory admission criterion by many business schools, knowing the fact that this factor does not necessarily increase learning skills required in the program will give an incentive to revise the admission weighting criterion.

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Appendix A

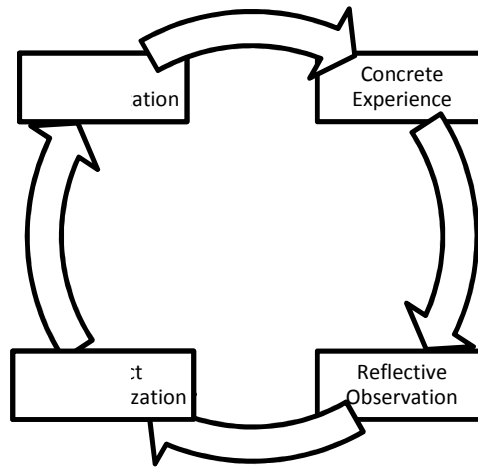Figure 1- Kolb's Experiential Learning Model

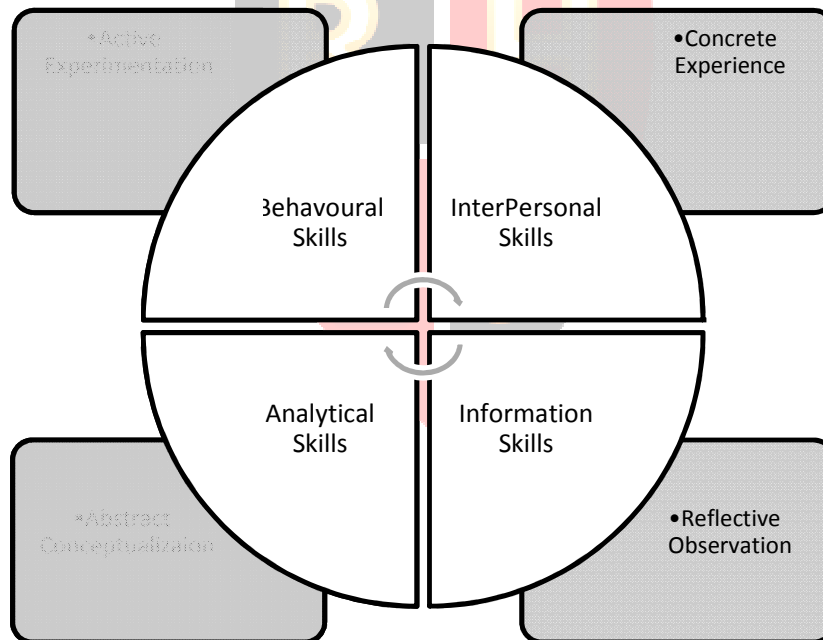Figure 2- Major four skills and four phases of learning

Table I- Reliability coefficients of the LSP learning skills

Learning Skill	M	SD	Alpha
Action	4.815	1.949	0.790
Goal setting	4.734	1.581	0.815
Help	4.889	1.701	0.772
Initiative	4.968	1.585	0.766
Information analysis	4.824	1.742	0.761
Information gathering	4.567	1.907	0.662
Leadership	4.778	1.964	0.831
Quantitative	4.160	1.967	0.830
Relationship	5.102	1.410	0.709
Theory	4.708	1.758	0.816
Technology	4.880	12.125	0.739

Table II- Descriptive statistic of the sample

	Minimum	Maximum	Mean	Std. Deviation	Variance
Year of entrance	1	4	2.06	0.79	0.62
Years of work experience	0	25	2.92	3.80	14.47
Relevance of work experience to Management	0	5	2.32	1.60	2.56
GPA	14.5	19.17	17.31	1.08	1.18

Table III- Group comparison employing One-way ANOVA

Learning skill	Without work experience		Owing work experience		One way ANOVA	
	M	SD	M	SD	F	Sig
Action	29.10	4.791	28.74	6.485	0.065	0.800
Goal setting	28.62	4.663	28.26	5.097	0.078	0.781
Help	28.38	5.653	29.98	5.097	1.558	0.216
Initiative	29.83	5.303	29.79	5.199	0.001	0.977
Info. analysis	28.34	5.327	29.35	5.304	0.618	0.434
Info. gathering	26.90	4.370	27.74	5.421	0.492	0.485
Leadership	27.38	6.002	29.53	6.065	2.206	0.142
Quantitative	25.07	6.397	24.88	6.087	0.015	0.902
Relationship	29.48	4.695	31.37	4.293	3.111	0.082
Theory	28.90	5.906	27.81	5.645	0.614	0.436
Technology	28.41	5.454	29.86	5.784	1.134	0.191
Sense making	29.31	4.929	29.40	5.425	0.005	0.946

Figure 3- Aggregated learning skills for student owning work experience vs. student without work experience