Self-reporting MBA key experience assessment: evidence from Lincoln University

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ABSTRACT

This paper empirically provides an innovative way of thinking about the MBA program at Lincoln University (hereafter LU) by giving students an opportunity to rate their work experience based on how they currently see themselves. This manuscript develops the instrument prepared by McMillan & Hearn (2004) by creating a questionnaire including 21 statements covering ten skills. The results indicate that the average work experience of second-year MBA students is greater than that of first-year students, indicating the effectiveness of the MBA program. Furthermore, respondents with educated parents have a higher average of work experience than MBA students with uneducated parents, knowing that this factor (parent's background) does not necessarily improve business skills, but it should be considered as part of the self-reporting for work experience. By using the Exploratory Factor Analysis (EFA), four factors were found to be the most important part of business skills for first-year MBA students while only two factors were considered important for second-year MBA students. Both groups give high rating to certain skills that are not technically taught by instructors, such as interaction with people from other countries and working outside of the country. It is concluded that students obtained these skills from other sources, such as traveling from their countries to the U.S. to work with foreign people. Thus, these findings help conclude that the Self-Reporting Questionnaire (SR-Q) can be utilized as a vehicle for giving feedback on learning abilities. Because of some limitations, these results must be interpreted with caution.

Keywords: Self-Reporting, business experience, MBA program, Factor Analysis, Student learning

INTRODUCTION

As a consequence of modern tools of assessment, the instructors in LU are not the only evaluators, but also LU uses end-of-semester Student Evaluation of Teaching Effectiveness Questionnaires (SETE) that is used in the faculty promotional process and for course assignments (Tailab, 2014, p. 142). In addition, as part of the faculty evaluation process, the instructor's instructional behaviors are directly observed and evaluated in courses they teach by qualified instructional evaluators. Therefore, students should be trained to rate their learning progress, and to identify their strengths and weaknesses (Birjandi & Tamjid, 2010).In higher education literature, student self-assessment stands alone in its promise of improved student motivation and engagement, and learning (McMillan & Hearn , 2008, p. 40). In general, there are two types of assessment: formative assessment, which is known as assessment-for-learning and summative assessment, often called assessment-of learning[1](Hotard, 2010). Education literature has some evidence that formative assessment enhances student achievement, and motivates them to learn (Cauley et al., 2008). This paper adopts assessment-for-learning (AfL) because the main goal is to help students answer the question of where they are now. Chappuis et al. (2011) confirmed that assessment-for-learning, which happens while learning is still underway, can assist instructors in investigating their students needs, and allows them to plan the next steps in their teaching process. Not only this, but offering ongoing feedback helps students improve their work qulaity.

As it is generally acknowledged that learning skills combine knowledge, ability and experience to enable someone to do something well (Boyatzis & Kolb, 1991), this paper uses the self-report on student learning of work experience as a part of learning skills. The consideration of work experience has been significantly increased as a main part of the Master of Business Administration (MBA) program's curriculum, and business students are increasingly seeking international experience in the short-term (Tucker et al. 2011, p. 1). It is expected, therefore, that MBA program directors consider students previous business experience (Sharbatoghlie et al. 2011). There is the belief that MBA students who have prior business experince are more motivated to learn, and more successful in the classroom (Derher & Ryan, 2002). Thus, the main question of MBA programs is how to provide learning skills that help students improve their work experience.

Similar to that which is prevalent in American universities, LU's objective is to prepare students for a variety of professional careers in leadership and service in the current global work environment (Tailab, 2014, p. 142). Lincoln University enrolls students from more than fifty-two countries. As indicated, the biggest challenge for business schools in the 21st century is the growing international mix of MBA students (Lyubovnikova et al. 2015). LU, with its international orientation, recognizes how important it is for its students to improve their business skills in order to be competitive in the global arena. This is done through the program, which is based on varied assessment of student performance.

To contribute to this goal, this work uses self-reporting measures for student learning. It innovates a new method to involve students in the assessment process, in order to increase the internal consistency of self-assessments (reliability). So, instead of allowing students to judge the learning progress directly, they are given a chance to rate their work experience based on how

[1] Formative assessment is a tool used by instructors to monitor their students learning and give ongoing feedback, which helps instructors improve their teaching style, and to help students enhance their own learning progress, while summative assessment used to assess students learning by comparing it against standard criteria.

they currently see themselves. The assessment environment should then be translated in the classroom.

It is believed that when students rate their learning progress, they may be more motivated for learning (Spiller, 2009). The objective of this research, thus, is to collect information on student learning to assess their work experience skills, to maintain students' attention, and to train them how to use self-assessment for learning progress-achieving the International Assembly for Collegiate Business Education (IACBE) requirements in measures of student learning.

RESEARCH FRAMEWORK

Even though there are a wide variety of self-reporting forms, this paper develops its form to achieve the same goal. The measuring instruments in this self-report cover the main subjects that the MBA program at LU offers in both core and concentration courses. This framework was guided by instruments prepared by McMillan & Hearn (2004) with some modifications. Although all respondents speak English as a second foreign language, the initial form has been rewritten to be clear for them, and to establish the content validity for the skills collected by each item.

Alongside the items suggested by McMillan and Hearn, this work adds other items assessing the experience of big data analytical application, supply chain, and project management applications. These instruments include ten main groups as shown in Table 1(Appendix A). These groups are called: Working Globally (WG), Operating a Business (OB), Starting a Business(SB), Leading Organization Change (LOC), External Partnerships(EP), Working in Partnership and Alliance(WP), Leading People (LP), Working in Teams (WT), Collaborating Across Organizations (CAO), and Business Analytics (BA).

After this framework was created, the Self-Report-Questionnaire (SR-Q) was designed as an anonymous survey, and tested in a pilot study. The SR-Q, which includes 21 statements, asks students to rank their work experience using a 4-point Likert scale from 1 (no experience) to 4(extensive experience) as indicated in Table 8 (Appendix B). Because students were asked to use their perception to rank their business skills, self-reporting for learning would be more objective than the subject of bias.

The methodology of the SR-Q in this work is if second-year MBA students show lower experience skills than first-year MBA students, this assessment will be reviewed carefully. Finally, the SR-Q was constructed based on the belief that students who grow up with educated parents have more business experience than those whose parents are uneducated, but it will not be taken as a necessary factor to impact student learning.

SAMPLING AND DATA COLLECTION

The population of this paper was all students who registered in LU in the spring semester of 2017. Of the 750 total students enrolled, 153 were excluded from the research because they were in the first semester. Therefore, the target population was 597 students. A random sample was selected with the assistance of the faculty members. A total of 130 students received the SR-Q. Because the questionnaire was distributed by faculty members, as expected, there was a good response rate; 100% of the survey forms were filled out completely and returned by the students, and were found to be valid for the analysis. The primary data were gathered over a period of two

weeks, starting on March4, 2017. This short period ensures that the demographic features of participations will not be altered during the study period.

RESULTS

Description of the Sample Demographic

The demographic profiles of the respondents are gender, age, study year, and parents graduate statuses. Of the 130 valid responses, 61(47%) respondents were females and 69(53%) were males. Participation was also distributed across various ages 26-29 was the largest group (39%), and ages 20-22 was the smallest group (5%)). Out of the total sample in this study, 44 (34%) students were in the first year of the MBA program while 86 (66%) were in the second year of the program. The sample characteristics point out variability in the parents' background. Table 2 (Appendix A) shows that 31% of the students' parents were uneducated, while 48% had graduated. Due to the methodology of this paper, not only the MBA program enhances students' work experience, but this experience can be developed by the parents' status. This work assumes that students who grow up in educated families have a greater opportunity to improve their work experience and communication skills than others before embarking on an MBA program. In line with this assumption, the findings presented in Table 3 (Appendix A) reveal that respondents with educated parents have a higher average of work experience than others, except for Working in Teams and Collaborating Across Organizations groups.

Descriptive Statistic

The descriptive statistic shows the main average for work experience of MBA students at LU, and a standard deviation. Group one is the first-year MBA students and the second one is the second-year MBA students. By using the visual presentation as recommended by Boyatzis and Kolb (1995), the accumulated learning skills on business experience for the two groups are demonstrated in Fig 1(Appendix A).

The results depicted in Fig 1 indicate that students in the second year have more experience than the first-year MBA students in the assessment of 21 learning skills. This is the main goal of the MBA program at LU, which aims to help international students improve their experience skills in the short-term. The average experience skills for the second-year MBA student is between little experience and moderate experience. This average is acceptable compared to the interval age of this sample. Young students (26-29) are not expected to have extensive experience.

The summary of findings is presented in Table 4 and 5 (Appendix A). Results shown in Table 4 reveal that the average of work experience skills for the whole sample ranges from very little experience (Mean = 1.69, SD = 0.87) to moderate experience (Mean = 2.53, SD = 1).The Working Globally skills group contains two items. The overall mean of Working Globally was higher than little and close to moderate experience. The highest mean score was (Mean = 2.71, SD = 0.97) for the item "interaction with people from other countries for work," while the lowest mean score was 2.35 (SD = 1) for the item "experiences working outside of the country."

The Operating a Business category includes three statements with mean scores ranging from 2.18 to 2.49. The descriptive statistic shows that the highest mean score was 2.49 (SD = 0.99) for the item "Experience holding responsibility for operational performance." While the

lowest mean score was 2.18 (SD = 0.99) for the item "Experience handling business profit or loss" although a self-assessment confirms that respondents more often have little experience in owning their own business, and the lower average confirms that they cannot handle their final performance, whether positive or negative. This may indicate minimal fear among students about risk.

As for starting a business, the mean value of skill was 2.02 (SD = 0.99), which shows that MBA students have little experience leading the startup of their business.

The responses also showed that students had little work experience with external partnerships, which was measured by one item, "Develop strategic relationships with external stakeholders.

Results related to leading organization change were measured by two items. Respondents reported their own experience developing strategic organizational initiatives by the score (Mean = 2.02, SD = 0.97) and by process management or reconfiguring initiatives with a score (Mean = 2.02, SD = 0.99).

Working in partnerships and alliances was reported as another experience skill with quite a low average (Mean = 1.69). MBA students have very low experience with mergers and acquisitions.

The skills of leading people (LP) was measured by three items. The average of experience running business activity with two or more participants (joint ventures) was Mean =1.81, SD = 0.97, experience scores for leading, supervising, coaching or mentoring others was Mean = 2.45, SD = 1.04, and experience as a first-line supervisor was Mean = 2.25, SD = 1.04.

Respondents had almost no experience leading large teams. This result is consistent with the previous one, which shows a lack of experience running a business with two or more partners. This cannot be used to indicate a weak point in the MBA program, or ineffective teaching, but it is expected from young students, and it is appropriate with the students' average age (26-29 years old).

Experience collaborating across organizations was measured by four items. The average ranges from 2.17 to 2.83. Experience working as a member of work teams and groups has the highest average (Mean = 2.83; SD = 0.95) while the respondents' experience in a cross-functional perspective was the lowest (Mean = 2.17, SD = 1.01). In addition, MBA students scored their experience by using a broad network of relationships with the average (Mean = 2.22; SD = 0.96), while their average skills when it comes to cooperating toward a common goal is Mean = 2.54, SD = 1.04.

Business Analytics was measured by three items. The descriptive statistic shows no experience associated with using big data analytical applications and using project management applications, but it indicates a bit of experience using analytical applications for customer service and marketing. This result is justified by looking at the MBA's curriculum at LU. The MBA at LU is an organized degree program requiring at least 36 graduate credits for graduation. Marketing Management (BA 304) is a core course required for all students. So, there is a belief that the respondents have already taken it, and have received information about customer service and marketing, while Project Management (BA 305) is listed only for the general business concentration with eight courses where students can select only two courses. So, there is an assumption that the respondents did not take this course to improve their skills for project management applications[2].

[2] Note that one of the authors conducts a Lap for Project Management course by running Software 2013

FACTOR ANALYSIS

To investigate the factor structure of the SR-Q, the 21 items were analyzed using the principle component analysis and varimax factor rotation method. This method reduces the number of factors to have more interpretation. In addition, the Exploratory Factor Analysis (hereafter EFA) was employed to have a sophisticated understanding of the underlying structure of the data (Chu & Choi, 2000).

The reliability test was computed. Reviewing the previous studies in self-assessment showed that reliability of self-assessment is quite high (Ross, 2006). The alpha coefficients as shown in Table 7 range from 0.84 to 0.96 for the first-year MBA students and from 0.92 to 0.95 for the second-year students. This confirms that these instruments are reliable. So, there is no need for further adjustment on the questionnaire items.

The value of the Kaiser-Meyer-Olkin (KMO) test was 0.82 for the first-year MBA students, which is meritorious 0.92 for the second-year students, which is marvelous (Kaiser , 1974, p. 35). Table 6 (Appendix A) also shows the value of the Bartlett's test, which measures the correlation among the variables. According to its null hypotheses, Bartlett's test assumes that the variables are uncorrelated in the population. It was found that the p-value of Bartlett's test is significant. This means that correlations among these variables significantly existed. Therefore, these findings support the use of factor analysis in this study.

Finally, the communalities range from 0.66 to 0.89 with the average about Mean = 0.78 for first-year students, and it ranges from 0.41 to 0.8 with the average about Mean = 0.65 for second-year students. These values indicate that the variance of the original values can be explained by the common factors (Chu & Choi, 2000, p. 369).

The results point out that a four-factor solution emerged in the first-year MBA students, and a two-factor one in the second-year MBA students. This analysis yields extracted factors with eigen values over 1.0, and the factor loading values are higher than 0.5 for both groups. These extracted factors could explain 77.95% of the total variance for first-year MBA students, while it is 64.54% for the second-year MBA group. The rest of the variance was explained by other factors, which are least important in this study. Items and loading values are presented in Table 7 (Appendix A).

First-Year MBA Students

Table 7 indicates that the first factor is referred to leading people, operating a business, working in teams, and collaborating across organizations, and these are the most important skills that students obtained. As for collaboration across organizations, which is measured by three items, cooperation toward a common goal was loaded on the third factor, indicating that it is associated with business analytics and working in partnerships and alliances. This factor expands 31.61% of the variance.

The second factor consists of starting a business, skills for developing strategic relationships with external stakeholders, leading organization changes, and running business activity with two or more partnerships. These items were the second most important skill for first-year students, which explains 19.77 of the total variance.

Factor three is referred to as business analytics, in addition to mergers and acquisitions. Four items are loaded on this factor and explain 16.74% of the total variance.

The last factor, which indicates the least important skill, is working globally.

Second-Year MBA Students

The business skills for the second-year MBA students have been divided into two factors only. The first factor is referred to as starting and operating a business, developing a network and communications with external partnerships, leading institution changes, and business analytics. The rest of the 21 items are loaded on the second factor. The 37.91% and 26.63% of the variance were explained by those two factors.

DISCUSSION AND POLICY IMPLEMENTATION

The main goal of this paper is to develop a self-report in order to collect information on student learning and evaluate their work experience. This was achieved by applying the factor analysis of 21 business skills. According to the cognitive teaching style at LU, these business skills are very comprehensive and equip MBA students to meet the employers' needs rather than just contribute to them. Some of these skills entailing interaction with people from other countries, and working outside of the country, are not technically taught by instructors, and there is no specific textbook to improve them. Therefore, students obtained them from other sources, such as traveling from their country to the U.S. to work with foreign people. Thus, the responsibility of instructors at LU is to encourage students to explore their hidden skills, and collaborate with them to develop them. However, other skills such starting up a business, leading people, working in a team, collaborating across organizations, holding external partnerships, and leading organization change are taught in the MBA program through numerous courses. Fortunately, these skills were found to be the most important skills for the MBA student in this study.

This study confirms that the MBA program improves students' skills in many areas such as working globally, collaborating across organizations, acting as first-line supervisor, and working in teams. However, some business skills such as operating a business, business analytics, leading organizational change, and mergers and questions still need more attention from the instructors in the program even though these skills are presented as a little experience from the students themselves. The generalization is out of the paper's scope due to several reasons: (1) The common limitation of self-report questionnaire is that students may select a high rate of their experience to make themselves more attractive. (2) There is a good chance that respondents interpret the questions differently. These limitations should be considered in future research.

To apply these results in higher education and further research, it is recommended that this study should be replicated in other MBA programs in other colleges and universities to help determine if the findings of this study can be generalized across all types of MBA programs (traditional, cohort, online, flipped classroom, hybrid, etc.), the expectations of graduate business students are: (1) To become a subject matter expert in their academic concentration, (2) Working professionals returning to school to pursue a graduate business degree, and (3) Shows a connection between work experience and academic studies.

CONCLUSION

This paper provides new insight into thinking about the MBA program, where students can be equipped with business skills in the very short-term, in turn influencing their academic

achievement and preparing them for leadership in the global workplace. To this end, this research develops self-report measures of previous work experience, including 21 learning business skills. The results show that the average of work experience related to the second-year MBA students is greater than the first year-MBA students, indicating the effectiveness of the MBA program at LU. The EFA yields a clear four-factor solution for the first-year students, and two-factor solutions for the second-year MBA students. These factors were found to be the most essential factors in business skills.

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APPENDIX A

Table 1 - Definition of Self-Reporting for Student Learning

Item	Abb	Explanation
Working Globally	WG	Working outside; interaction with forging people
Operating a Business	OB	Managing an entire operation, responsibility for operational performance, handling business profit or loss
Starting a Business	SB	Leading a start up
Leading Organizational Change	LOC	Developing strategies, reconfiguring initiatives
External Partnerships	EP	Relationships with external stakeholders
Working in Partnerships and Alliances	WPA	Mergers and acquisitions
Leading People	LP	Joint ventures, supervising, coaching, mentoring others, first-line supervisor
Working in Teams	WT	Leading a large team
Collaborating Across Organizations	CAO	Broad network of relationships, cross-functional perspectives, cooperating toward a common goal
Business Analytics	BA	Big data analytics, supply chain, project management applications

Table 2 - Respondents' Demographic Profile

	First-Year MBA		Second-Year MBA		Total Sample	
Panel A: Respondents by Gender						
Gender	Responses	Percentage	Responses	Percentage	Responses	Percentage
Male	23	52%	38	44%	61	47%
Female	21	48%	48	56%	69	53%
Total	44	100%	86	100%	130	100%
Panel B: Respondents by interval's age						
Age	Responses	Percentage	Responses	Percentage	Responses	Percentage
20-22	3	7%	3	3%	6	5%
23-25	11	25%	19	22%	30	23%
26-29	17	39%	34	40%	51	39%
30-35	11	25%	24	28%	35	27%
Above 35	2	5%	6	7%	8	6%
Total	44	100%	86	100%	130	100%
Panel C: Respondents by their Parents' Status						
Education	Responses	Percentage	Responses	Percentage	Responses	Percentage
Both	22	50%	40	47%	62	48%
None	12	27%	29	34%	41	31%
Father	8	18%	10	12%	18	14%
Mother	2	5%	7	8%	9	7%
Total	44	100%	86	100%	130	100%

Table 3 - Self-Reporting for Student Learning Based on Parents' Background (*N*= 130)

	Parents are uneducated		Parents are educated	
Item	Mean	SD	Mean	SD
Working Globally	3.25	1.02	**2.59**	0.95
Operating a Business	2.30	0.96	2.49	0.98
Starting a Business	2.02	0.86	2.03	1.05
External Partnerships	1.89	0.96	2.11	1.11
Leading Organizational Change	2.00	0.94	2.19	1.07
Working in Partnerships and Alliances	1.74	0.81	1.87	1.04
Leading People	2.20	1.03	2.30	1.07
Working in Teams	1.97	1.01	2.03	1.10
Collaborating Across Organizations	2.55	1.00	**2.41**	1.01
Business Analytics	2.02	0.98	2.04	0.98

1= No experience2 = Little experience 3= Moderate Experience 4= Extensive Experience

Fig .1 - Accumulated Learning Skills for First-Year vs. Second-Year MBA Students

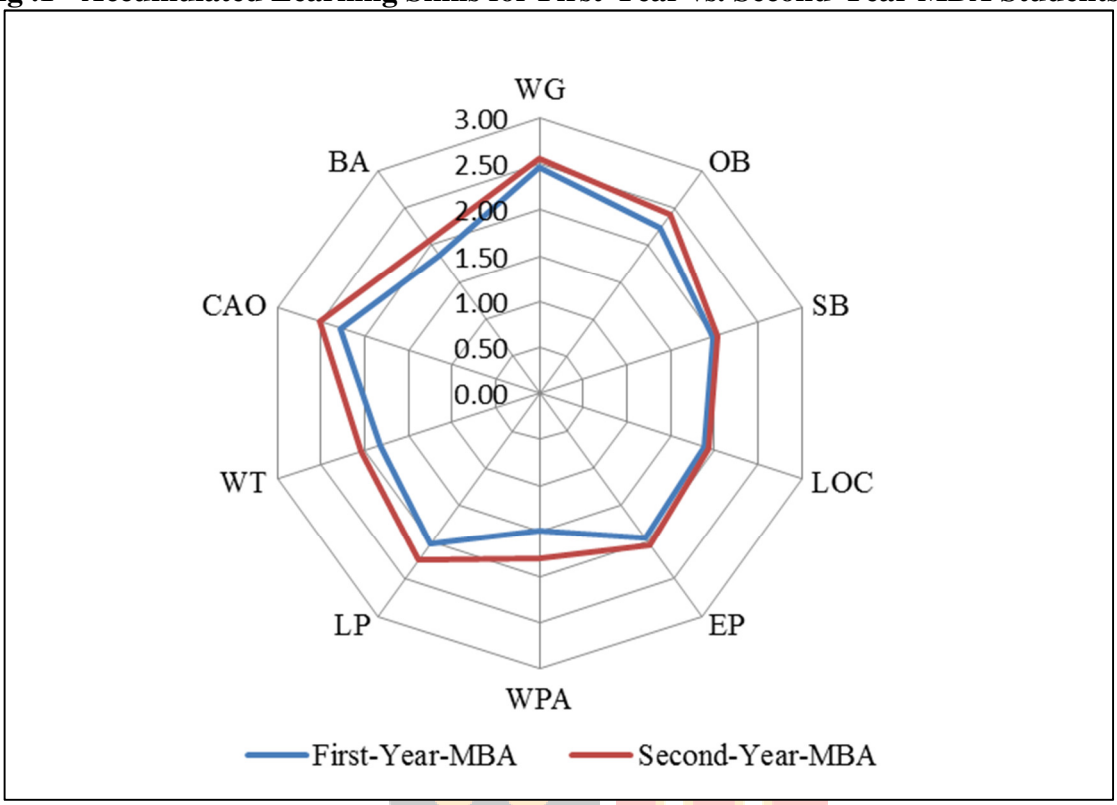

Table 4 - Perception of Students Regarding Experience Assessment

	First Year of MBA		Second Year of MBA		Total Sample	
Item	Mean	SD	Mean	SD	Mean	SD
Working Globally	2.47	1.04	2.56	0.97	2.53	1.00
Operating a Business	2.24	1.02	2.42	0.95	2.36	0.97
Starting a Business	1.98	0.98	2.03	1.00	2.02	0.99
External Partnerships	1.89	0.97	1.94	1.03	1.92	1.01
Leading Organizational Change	1.95	0.98	2.05	0.98	2.02	0.98
Working in Partnerships and Alliances	1.5	0.71	1.79	0.93	1.69	0.87
Leading People	2.03	1.03	2.24	1.06	2.17	1.05
Working in Teams	1.82	1.08	2.03	0.98	1.96	1.87
Collaborating Across Organizations	2.28	1.04	2.52	1.01	2.44	1.03
Business Analytics	1.86	0.93	2.05	0.97	1.98	0.96
Undergraduate GPA	82.08	14.82	80.52	16.03	81.05	15.59
Graduate GPA	86.29	10.45	87.16	7.57	86.87	8.62

1= No experience 2= Little experience 3= Moderate Experience 4 = Extensive Experience

Table 5 - Descriptive Statistics of Students Learning Skills in an MBA Program

	N	Min	Max	Sum	Mean	SD	Kurtosis	
							Statistic	Statistic
Q1	130	1	4	306	2.35	0.1	0.10	-1.05
Q2	130	1	4	352	2.71	0.97	-0.32	-0.83
Q3	130	1	4	312	2.4	0.93	0.00	-0.87
Q4	130	1	4	324	2.49	0.99	0.00	-1.02
Q5	130	1	4	284	2.18	0.99	0.36	-0.91
Q6	130	1	4	262	2.02	0.99	0.61	-0.71
Q7	130	1	4	250	1.92	1.01	0.76	-0.61
Q8	130	1	4	262	2.02	0.97	0.59	-0.69
Q9	129	1	4	261	2.02	0.99	0.55	-0.82
Q10	130	1	4	220	1.69	0.87	1.08	0.27
Q11	130	1	4	235	1.81	0.97	0.81	-0.64
Q12	130	1	4	319	2.45	1.04	-0.11	-1.17
Q13	130	1	4	292	2.25	1.04	0.16	-1.24
Q14	130	1	4	255	1.96	1.02	0.62	-0.86
Q15	130	1	4	368	2.83	0.95	-0.43	-0.71
Q16	130	1	4	288	2.22	0.96	0.45	-0.70
Q17	130	1	4	282	2.17	1.01	0.38	-0.98
Q18	130	1	4	330	2.54	1.04	-0.06	-1.16
Q19	130	1	4	247	1.9	0.94	0.77	-0.35
Q20	130	1	4	269	2.07	0.98	0.56	-0.71
Q21	130	1	4	258	1.98	0.96	0.68	-0.48

Table 6 - Results of KMO and Bartlett's Test

KMO and Bartlett's Test		First-Year MBA	Second-Year MBA
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.82	0.92
Bartlett's Test of Sphericity	Approx. Chi-Square	856.67	1490.90
	df	210	210
	Sig.	0.000	0.000

Table 7 - Exploratory Factor Analysis for Business Experience in the MBA Program at LU (*N = 130)*

First-Year-MBA students (*N*=44)						Second-Year-MBA students (*N* = 86)			
	Component						Component		
Item	Factor 1	Factor 2	Factor 3	Factor 4	Comm*	Item	Factor 1	Factor 2	Comm*
Q12	0.91				0.73	Q8	0.86		0.80
Q13	0.88				0.74	Q9	0.81		0.71
Q5	0.78				0.85	Q7	0.80		0.70
Q4	0.78				0.84	Q6	0.80		0.74
Q3	0.77				0.83	Q21	0.78		0.73
Q14	0.72				0.74	Q11	0.74		0.65
Q18	0.68				0.76	Q19	0.73		0.61
Q15	0.66				0.75	Q10	0.72		0.62
Q16	0.63				0.75	Q5	0.68		0.61
Q17	0.59				0.75	Q20	0.65		0.58
Q8		0.82			0.87	Q3	0.65		0.54
Q11		0.82			0.67	Q4	0.64		0.60
Q7		0.76			0.85	Q15		0.82	0.69
Q6		0.72			0.85	Q12		0.76	0.68
Q9		0.65			0.89	Q2		0.72	0.56
Q19			0.89		0.78	Q16		0.68	0.66
Q21			0.79		0.82	Q18		0.68	0.69
Q10			0.62		0.67	Q13		0.66	0.64
Q20			0.61		0.80	Q17		0.64	0.75
Q2				0.80	0.78	Q14		0.62	0.60
Q1				0.75	0.66	Q1		0.60	0.41
Alpha	0.96	0.92	0.84	0.84		Alpha	0.95	0.92	
Items	10	5	4	2		Items	12	9	
Mean**	1.04	1.90	1.77	2.47		Mean	2.10	2.46	
Variance	31.61	19.77	16.74	9.83		Variance	37.91	26.63	
Total variance				77.95		Total variance		64.54	

*Communalities

** This mean was calculated as an average of the score across each item loaded in that factor

APPENDIX B

Table 8 - Self-Reporting Questionnaire (AR-Q)

1= No experience 2 = Little experience 3 = Moderate experience 4 = Intensive experience

Item		
Panel A: Working Globally		
Q1	My experience of working outside of my country is	① ② ③ ④
Q2	My experience interacting with people from other countries for work is	① ② ③ ④
Panel B: Operating a Business		① ② ③ ④
Q3	My experience managing an entire operation, business, or major project is	① ② ③ ④
Q4	My experience owning responsibility for operational performance is	① ② ③ ④
Q5	My experience handling a business profit or loss is	① ② ③ ④
Panel C: Starting a Business		① ② ③ ④
Q6	My experience leading a startup of my business is	① ② ③ ④
Panel D: External Partnerships		① ② ③ ④
Q7	My experience developing strategic relationships with external stakeholders is	① ② ③ ④
Panel E: Leading Organizational Change		① ② ③ ④
Q8	My experience developing strategic organizational initiatives is	① ② ③ ④
Q9	My experience with process management or reconfiguring initiatives is	① ② ③ ④
Panel F: Working in Partnerships and Alliances		① ② ③ ④
Q10	My experience to mergers and acquisition is	① ② ③ ④
Panel G: Leading People		① ② ③ ④
Q11	My experience with joint ventures is	① ② ③ ④
Q12	My experience leading, supervising, coaching or mentoring others is	① ② ③ ④
Q13	My experience as a first-line supervisor is	① ② ③ ④
Panel J: Working in Teams		① ② ③ ④
Q14	My experience leading a large team is	① ② ③ ④
Panel K: Collaborating Across Organizations		① ② ③ ④
Q15	My experience as a member of work teams and groups is	① ② ③ ④
Q16	My experience utilizing a broad network of relationships is	① ② ③ ④
Q17	My experience with a cross-functional perspective is	① ② ③ ④
Q18	My experience cooperating towards a common goal is	① ② ③ ④
Panel L: Business Analytics		① ② ③ ④
Q19	My experience using Big Data analytical applications for work is	① ② ③ ④
Q20	My experience using analytical applications for customer service, marketing, supply chain, or finance is	① ② ③ ④
Q21	My experience using project management applications for work is	① ② ③ ④