MEASURING BUSINESS MANAGEMENT STUDENTS' PERCEPTIONS TOWARD THE BUSINESS ANALYTIC COURSES

R K Jena[*]

Abstract: This paper uses a model to measure the importance of the business analytics courses, with respect to their practical significance to students' interest and career option. Post graduate management students from universities and colleges from central India were participated in this study. The study found that most of students' were shown interest towards business analytics course and students having technical background were more keener on pursue career in analytics. These results should help to develop a marketing campaign which will integrate and highlight the substantially important attributes of the analytics courses from a student's perspective.

Keywords: Business Analytics, Indian Students, Student Perception

INTRODUCTION

We are living in a world of information overload. According to former Google CEO Eric Schmidt, the amount of data generated every two days is approximately equal to all the data from the dawn of time until 2003. In the present time, there is always a need to have the right information. Data science, big data and business analytics are thus the primary tool for any organization, society or government to seek a competitive advantage and optimize their existing ecosystems. In recent times, there has been a sudden rise in demand of business analytics. The prime reason behind this surge is the data driven and techno focused approaches that majority of organizations have willingly embraced. But, for how long is this scenario going to stay beneficial. Will it still be advantageous for a student graduating five or ten years from now? Future of a business or career is solely depended on market demand as well as its own versatility. The benefit for businesses that use analytics is simply that, big data enables managers to make better business decisions. In the other hand, industries that are data-rich, such as R&D, customer service, sales, marketing, all make use of analytic tools the most among all other sectors, predominantly to identify and reduce risks, improve revenue, and upraise the overall efficiency of their processes. There is a marginal use

* Institute of Management Technology, Nagpur, India

of analytics by IT and manufacturing sectors too. In most developed countries like USA and many European countries business analytics was just one of the processes like marketing, finance or administration, however, the use of analytics has gained much prominence in the last 10 years or so, especially in India.

Incidentally, India has the talent advantage (over the world) where the offshoring of analytics business is the highest; we are talking about the Knowledge Process Outsourcing (KPO) business. India delivered service worth $375 million out of the total $500 million worldwide, and that is just in the year 2012. The KPO market is estimated to grow 21% in 2015, bringing total revenue to $5.6 billion in India. A majority of revenue, thus generated, is essentially driven by organizations like Mu-Sigma, Fractal, Absolut Data, Latent View and the like. This is just a clear indication that there will be a high demand for business analysts and pay hikes for everyone already present in the field. Above all, these statistics should encourage patrons to build their career in this field, too. In the same time, global companies will continue to look towards India as a major destination for business analytics. The major reason for growth of business analytics and intelligence in India is the fact that since the whole concept of analytics revolves around data, it is very challenging to successfully complete the analytics course running in different universities and colleges. Hence, there is a scarcity of expert analysts. According to Louis Columbus (2015), there was a 123.60% jump in demand for Information Technology Project Managers with big data expertise, and an 89.8% increase for Computer Systems Analysts. It's going higher by every single passing day.

The Harvard Business Review (Dominic Barton and David Court, 2012) quoted something very interesting; "job of a data scientist is the sexiest job of 21st century". According to the McKinsey Global Institute report (James Manyika et. al., 2011): "By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of big data to make effective decisions."

From the above discussion, it is understood that analytics is an ever-growing branch of study in management education particularly in India. Many skilled professional are required for filling the ever increasing demand for analytic professionals. But by the nature of course, a student requires technical skills and interest to learn. Therefore this paper will investigate the perception of business management students towards business analytic course.

LITERATURE REVIEW

Companies have always looked at past data to make key decisions. In fact, having some form of data, gave decision-makers of the company a strategic advantage. In this day and age, when the minds of the consumer are always shifting to the next-best-thing, in comes the process of Business Analytics that use statistics and tools to decode consumer insights. The foremost importance of using analytics for any business,

across any sectors, is to avoid subjectivity in decision-making. As a number of CXO's would agree, there are times when they base a few of their key decisions on instincts alone – without facts! Moreover, most of these key decision makers don't have access to data required to do their jobs. Although, human brains are advanced enough to process multiple dimensions of data, but it still doesn't have the consistency of a rational process such as the tools on a computer. That is exactly why business analytics is an appropriate armament against the inconsistencies of the subjective type of decision making. Business data, accrued from either voluntary or involuntary means, helps in fact-based decision-making.

It is clear that there is more competition within the higher education sector to produce skilled analytics professionals. Therefore it creates a greater burden on academic organizations to address these needs (Binney, Kennedy & Hall, 2004; Cheng & Tam, 1997). Many studies of student satisfaction (Elliot and Shin 2002; Gremeler & McCollough 2002) and some of the quality assurance guidelines methods used to oversee difference concern in higher education (Centre for Education and Development and Support 2004; King *et al.* 1999). There are many complex issues that are presented when studying large heterogeneous class room environments (Cuseo 2007), as large business management classes are usually a combination of students across various disciplines and backgrounds. Thus, the view may be a bit distorted as students may have a different reason or point of view about the analytic class they are taking since business analytics is not their major field of previous study. This paper focuses solely on students who are in verge of completing the first year of business management courses. Consumers' attitude towards product attributes influences their purchasing behavior toward these products as marketing theory and research indicates (Hatzious, 1996; Claiborne & Sirgy, 1990). Centered on their image of the product consumers develop these attitudes (Hatzious, 1996). Considering student as a consumer and analytics courses as the product, the perception of students towards analytics courses will be measured in this research.

Perception toward the behavior is defined as "a person's general feeling of favorableness or un-favorableness for that behavior" (Ajzen and Fishbein, 1980), Lutz (1981, p. 234) definition of attitude is one expressing hidden feelings of liking or not liking towards an object, person, issue, or behavior. Perception toward behavior is a function of the product of one's belief that performing the behavior will lead to certain outcomes and an evaluation of the outcomes i.e., positive feeling towards a career in analytics will shape a students' perception towards the analytic course.

PURPOSE OF THE STUDY

The objective of this paper is to establish how Indian business management students feel about analytics specialization courses and their perception towards them. The study addresses the following research objectives, specifically:

1. What is their interest in the analytic courses?
2. What is their evaluation of the courses offered in the analytics program?
3. What is their view of analytics as a career option?

This research study determines how students at different the university in India view the characteristics of the analytic courses and then assesses the association of each of those evaluations and perception towards the students' perception towards careers in analytics. The findings help instructors to generate effective marketing campaigns to inform and attract students in order to retain them in the program, by establishing the effectiveness of the programs from a student's perspective.

METHODOLOGY

The research study was empirical in nature with a questionnaire being used and sent via e-mail to students who are in the final semester in their 1st year of PGDM/MBA courses. The basic sets of information towards measuring or evaluating the perception toward analytic as a career and interest towards analytic courses was required. To gauge the student's perceptions and interest towards the courses; a questionnaire consisting of variables that measured their interest and perception as a career option toward the analytics course or the analytic program was designed. Despite the demographic questions, the questionnaire has questions to measure two constructs like interest towards analytic course and analytics as a career option, there were 5 questions each to measure both the constructs. The response to these questions were measured in 5 point likert scale. (Strongly agree=5 to strongly disagree=1)

In this research, simple random sample strategic was used to select sample. Out of 400 distributed questionnaires, two hundred and forty (240) valid responses were collected from different college and universities in central India. From Table 1, it was found that 60.0% of the students are male and 40.0% are female. Furthermore, engineering students (67.0%) show higher proportions compare to non-engineering students

Table 1
Demographic Information of sample

Attribute	Characteristics	n	(%)
Gender	Male	145	60
	Female	95	40
Academic Background	Technical	162	67
	Non-Technical	78	33

Source: Author

RESULTS AND DISCUSSION

The first objectives of the study was to measure their actual interest is in the subjects of analytics. Although many students were interested in understanding the basics of

analytics, some are interested in analytics because of career choices or using the knowledge in the future. The score more than 3 for each question were treated as supporting the statement otherwise against the statement The variation in the answers given suggests that students have some interest in understanding the subject, but it is at best rather fragmented, as some are interested because of the subject matter and some because of career choices.

Table 2
Interest in Business Analytics

Questions	Responses (% age)	Cronbach's Alpha
Understanding principles of Business analytics	157 (65.4)	0.74
Understanding advances in Business analytics	200 (83.3)	
Pursuing a career in Business analytics	210 (87.5)	
Using analytic knowledge in the future	220 (91.6)	
Working on analytic related assignments/projects	164 (63.8)	

Secondly, Students were asked their point of view towards a career in the analytic field. Although many students evaluated the course based on their career path and how the analytic course will help them in the future, most indicated that they strongly agree that the course helps them in their understanding of analytics concepts, even though they would not pursue a career in analytics. The variation in the answers given suggests that students had many reasons to believe that choosing analytics course would be either helpful in the future or with their careers.

Table 3
Viewpoint towards a career in Business analytics

Questions	Responses (% age)	Cronbach's Alpha
Course helps in understanding analytic concepts	196 (81.6)	0.71
Helps in choosing a career path	176 (73.3)	
Find a job after graduating	224 (93.3)	
Useful in the future	201 (83.75)	
I will pursue a career in analytics	214 (89.1)	

Reliability measures the degree to which the questionnaire supplies consistency of respondents' answers to all the items in a measurement. A reliability analysis (Cronbach's alpha) was conducted after all data were collected and the study was completed; to establish the internal reliability of the questionnaire responses. An alpha score of .70 or higher is desired and was achieved for the research, which means, internal reliability of the measures used in this research can be considered to be good. These attributes are shown in Table 2 and 3.

A one-way analysis of variance (ANOVA) was implemented to establish if the groups had differences in students' characteristics: differences among the construct. This test was used to determine whether there were differences in the reflection of the

constructs across the students' different demographic profiles and behavioral characteristics. The dependent variable was each of the individual constructs i.e student's interest and career perception. The independent variable being each of the demographic profiles and behavioral characteristics such as: gender, and academic background.

For the Interest construct, the tests shows (Table 4) that there were no significant differences by the category of gender for showing rest towards analytics courses. But there was a significant difference in interest towards analytic course with respect to academic background (F =8.11,p<0.05). Technical back ground students are showing more interest towards opting business analytics as a specialization in compare to student having less technical exposure.

For the Career construct, the tests show (Table 4) that there were significant differences among students with respect to their academic background (F=9.34, p<0.05). But the gender showed no difference to choose analytics as a career option. Although both male and female showed their interest to choose analytics as their future career (mean (M)= 4.19, mean (F) = 4.07. This indicates academic background showed differences in how they perceived the analytic course will help their future career.

Table 4
Profiles based on demographics and behavioral characteristics

Construct/ Demographic and Behavioral Variables	Interest	Career
Gender	F=1.98	F=1.09
Male	3.89	4.19
Female	3.72	4.07
Academic Background	F=8.11*	F=9.34*
Technical	4.24	4.21
Non-Technical	3.12	3.63

*p < 0.05 (source: Author)

CONCLUSION

The aim of this study was to assess the perception Indian business management students towards analytic courses. The basic scale was comprised of two constructs; Interest and Career. The subjects were divided into groups based on their gender and academic background. The results indicate that while there is a relationship among the groups on some of the constructs, there is a difference among the groups in terms of career and interest. The results also showed that students having previous technical experience shows more interest towards making career in business analytics. The strongest attributes were that the majority of students, regardless of their demography and field of study, indicated that enrolling in a analytic course is helpful to their study, knowledge and eventually their future career.

The findings of such research as this one can support program coordinators and educators of education programs to support and possibly adapt future education programs successfully; to appeal and to keep interested students. Moreover, further research can be conducted to gauge students' perceptions towards other university degree programs (e.g., Marketing program, Accounting program, Finance program), and then decide how these education programs compare with each other on students' perceptions, evaluation and attitudes towards their management program.

Refereces

Ajzen, I. and Fishbein, M. (1980), Understanding Attitudes and Predicting Social Behavior (PrenticeHall, Englewood Cliffs, New Jersey).

Binney, W., Kennedy, W., Hall, J. (2004), Self-determination theory and needs satisfaction in marketing education: are we meeting the needs of students in large marketing classes?, conference paper: ANZMAC 2004 : marketing accountabilities and responsibilities : proceedings : 29 November - 1 December 2004, Wellington, 2004.

Centre for Educational Development and Support (2004), Using the Student Evaluation of Teaching (SET) and Student Evaluation of Subjects (SES) Questionnaires, Centre for Educational Development and Support, Victoria University, Melbourne.

Cheng, Y. C., Tam, M. M. (1997), Multi-models of quality in education, Quality Assurance in Education, 5. 22-31.

Claiborne, C. B., & Sirgy, M. J. (1990), Self-image congruence as a model of consumer attitude formation and behavior: A conceptual review and guide for future research. In Dunlap, B. J., & Cullowhee, A. (Eds.), Developments in Marketing Science: v. 1 (pp. 3-7). North Carolina: Academy of Science.

Cuseo, J. (2007), The empirical case against large class size: Adverse effects on the teaching, learning and retention of first year students, Journal of Faculty Development, v21 n1 p5-21 Jan 2007

Dominic Barton and David Court (2012), Making Advanced Analytics Work for You, *Harvard Business Review. (Accessed on June 2016).*

Elliot, K. M. and Shin, D. (2002), Student satisfaction, Journal of Higher Education Policy and Management, 24 (2), 197-247.

Gremeler, D. and McCollough, M. (2002), Student Satisfaction Guarantees: An Empirical Examination of Attitudes, Antecedents, and Consequences, Journal of Marketing Education, 24 (2), 150-60.

Hatzios, M. K. (1996), Effective Models for Measuring Students' Attitude toward the Marketing Education Program. Journal of Vocational Education Research, 13, No 1.

King, M., Morison, I., Reed, G., Stachow, G. (1999), "Student feedback systems in the Business School: a departmental model", Quality Assurance in Education, Vol. 7 Iss: 2, pp.90 – 100

Louis Columbus (2015). Roundup of Analytics, Big Data & Business Intelligence Forecasts And Market Estimates, 2015, Available on http://www.forbes.com/sites/ louiscolumbus/2015/05/25/roundup-of-analytics-big-data-business-intelligence-forecasts-and-market-estimates-2015/ #3ad3d13d4869 (accessed on June, 2016).

Lutz, R. J. (1981), A functional theory framework for designing and pretesting advertising themes. In R. J. Lutz (ed.), *Contemporary Perspectives in Consumer Research*. Boston: Kent Publishing Company.

James Manyika, Michael Chui, Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh, Angela Hung Byers (2011), Big data: The next frontier for innovation, competition, and productivity, Available on *http://www.mckinsey.com/business-functions/ digital-mckinsey/our-insights/big-data-the-next-frontier-for-innovation*, (Accessed on July, 2016).