

Teaching Pedagogies in Managerial Accounting for Learners with Diverse Intelligence

Dr C. Samuel Joseph and Dr Prema. C

ABSTRACT

In management education, it is important to remember that students, who take up the course Managerial Accounting, come from diverse educational backgrounds ranging from engineering to literature, are of both genders and come from varied cultural and economic backgrounds. Because of these factors, it is important that the curriculum provided meets the needs of the student body. With the varied backgrounds of the students, it is presumptuous to assume that standard teaching methods will accommodate all students. This is an indication that further research on student learning styles and teaching methods is necessary. The mission of any business school is to provide education and training to individuals that allow them to succeed in their chosen profession. This research looks for the connection between a student's preferred learning style and the teaching methods used in the subject Management Accounting.

Keywords:

Introduction

A quantitative subject, particularly accounting is considered a technical subject. With a lot of professional standards and reporting formats, adopted globally, students feel that it is too difficult and hard to digest and reflect. Management Education, as it is positioned today in the country manifests itself in various forms ranging from general management to functional specializations. Training in such a broad spectrum involves academic rigour, astute sensitivity to the contemporary events and the acumen of local relevance and global worth to transcend space and time barriers. All these call for continuous quality and meaningful inputs. In a situation where most business courses are sought after by clientele of diverse base, heterogeneity in terms of competency and the state of the art knowledge in subject is a formidable difficulty to reckon with.

In this challenging learning environment the management accounting teacher has to balance the teaching of the subject to such a diverse group of students and take time to understand their background and learning styles. This will eventually help them to use appropriate strategies which will not only make accounting education livelier but also create an ambience for an active teaching learning process, thus

preparing the students for a dynamic work environment and for taking on corporate responsibilities.

Problem Statement

For decades, Managerial Accounting has been taught just by dictating the rules and standards developed giving little understanding to the students as to why certain transactions are treated the way they are. Times have changed now and faculty are trying hard to involve students by engaging them in lively activities, the reliance on lecture, notes and problem solving has not diminished although pedagogies differ from teacher to teacher. These days diverse pedagogies like case discussions, live projects, term papers, technology based learning, group learning etc., are used as tools of teaching. Hence it becomes imperative to identify the intelligences of learners and adapt the appropriate teaching pedagogy that is relevant to teach management accounting. Hence the study is undertaken.

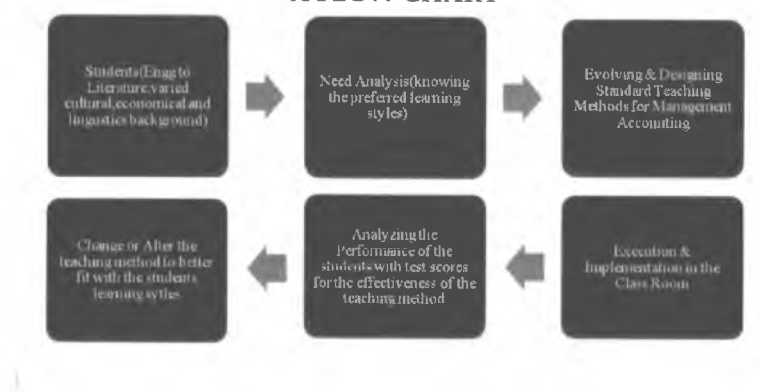
Multiple Intelligence Theory

According to the theory of Multiple Intelligence (MI) developed by Howard (1983), there are nine intelligences that reflect different ways of interaction. Each intelligence has its own unique characteristics, tools, and processes, meaning that each represents a different way of thinking, solving problems, and learning. So students' intellectual strengths are demonstrated through their unique combination of intelligences. Howard's (1983) multiple intelligences theory says that people may have any one of the intelligences as dominant and therefore not all students will have the same intelligence.

Each student has a unique combination, or profile. Although there are nine intelligences, no two learners have exactly the same configuration of intelligences. The multiple intelligences theory has been widely accepted and implemented in the primary education in the United States, Australia, Taiwan, Hong Kong and other parts of Asia (Barrington, 2004). The nine multiple intelligences proposed by Gardner are Linguistic Intelligence, Logical/ Mathematical Intelligence, Musical Rhythmic Intelligence, Bodily/ Kinaesthetic Intelligence, Spatial Intelligence, Naturalist Intelligence, Intrapersonal Intelligence, Interpersonal Intelligence and Existential Intelligence. These intelligences are presented below:

CONCEPTUAL FRAMEWORK

A FLOW CHART



Review of Literature

There are different approaches to understanding intelligence. The psychometric view is the most traditional one. According to this approach, there is a single intelligence, which is often called general intelligence. Every individual is born with a certain intelligence or potential intelligence, which is difficult to change. Psychologists can assess one's intelligence (IQ) by means of short-answer tests and other purer measures such as the time it takes to react to a flashing light or the presence of a certain pattern of brain waves (Gardner, 2004). But the traditional IQ tests did not satisfy the researchers, so they developed a number of alternative theories, all of which suggest that intelligence is the result of a number of independent abilities that uniquely contribute to human performance. These theories suggest that rather than being fixed, unitary, and predetermined, intelligence is modifiable, multi-faceted, and capable of development (Gardner, 1993; Sternberg, 1986; Vygotsky, 1978; Yekovich, 1994; cited in Campbell, 2000, p. 8).

Robert Sternberg (1988) in his view of intelligence proposed three types of intelligence: 1) Componential Intelligence (analytical thinking): academic abilities to compare, evaluate and solve problems. 2) Experiential Intelligence (creativity and insight): the ability to invent, discover and theorize. 3) Practical Intelligence (street smarts): contextual abilities to adapt to the environment (Brown, 2000; Chastain, 1988). This theory of intelligence claims that intelligent behaviour stems from a balance between analytical, creative and practical abilities and that these abilities function collectively to allow individuals to achieve success within particular socio-cultural contexts (Sternberg, 1988).

Gardner, in his MI theory, proposes that human intelligence has multiple dimensions that must be acknowledged and developed in education. He notes that traditional IQ or intelligence tests (such as Stanford-Binet test) measure only logic and language, but there are other equally important types of intelligence (Richrads & Rodgers, 2001). According to Gardner (1993), intelligence is a bio-psychological potential. Intelligences cannot be seen or counted. They are used to process information and can be activated in a cultural setting to solve problems or create products that are of value in a culture. The potentials' activation depends upon the values of a particular culture, the opportunities available in that culture, and the personal decisions made by individuals and/or their families, schoolmasters, and others.

Extensive amount of research has been conducted on learning styles and multiple intelligences. Dunn (Rochford, 2003) defined a person's learning style as the way he/she concentrates on, process, internalizes, and remembers new information. Felder's definition of a learning style is described as the preference in which a person perceives information (Felder, 1993; Moallem, 2007). Intelligence as defined by Gardner (Rose and Nicholl, 1997) is the ability to solve a problem or fashion a product that is valued in one or more cultural settings. Gardner believed that intelligence varied by context.

A study conducted by Felder in 1987 (Felder, Silverman, & Soloman, 1991), suggested that individuals have preferences on how they perceive and retain

information. Research conducted by Tonay Grasha in 1996 categorized student into the following categories: Avoidant, Dependant, Participant, Independent Competitive, and Collaborative. Another study conducted in 1997 at the University of Central Florida looked at personality, learning style, gender, and ethnic characteristics in terms of preferred delivery methods. Based on the findings of this study, students of different gender and culture showed inclinations of different learning styles and personality types and traits.

Proposition - 1

Students' Intellectual Strengths are demonstrated through their unique combination of intelligences and they vary by context

Authors	Inference
Howard (1983)	MI theory says that people may have any one of the intelligences as dominant and therefore not all students will have the same intelligence
Gardner(1993), Sternberg(1986), Vygotsky(1978) Yekovics (1994) cited in Campbell 2000, p.8	Intelligence is the result of a number of independent abilities that uniquely contribute to human performance. These theories suggest that rather being fixed, unitary and predetermined, intelligence is modifiable, multifaceted and capable of development
Stenberg(1988)	Intelligent behaviour stems from a balance between analytical, creative and practical abilities that function collectively to allow individuals to achieve success within particular socio-economic contexts.

Proposition II

Number smart students are more receptive to accounting knowledge as compared to students with other Intelligences.

Authors	Inference
Chang Chee Fai (2008)	The author discusses the practicality of alternative pedagogies in the teaching of accounting courses following the distinct intelligences and concludes that number smart are more receptive to accounting knowledge as compared to students with other intelligences
Melissa Waters and Teresa (2009)	The authors stress that case method of teaching helps working understanding of fundamental concepts for Managerial analysis. They conclude that the set of questions designed at the end of the case stimulates critical thinking (logical Intelligence)

Proposition III***Gender Influences different learning styles of students in Management Accounting***

Authors	Inference
Richard Felder et-al (1987)	Individuals have preferences for how they perceive and retain information
University of Central Florida(1997)	The Study looked at personal ity learning style, gender and ethnic consideration. Based on the findings of the study students of different gender and culture showed inclination for different learning styles and personality types and traits.

Objectives of the Study

The purpose of this study is to provide directions to management accounting educators for the development of curriculum and appropriate teaching pedagogies. The objectives of the study are as follows:

1. To identify the multiple intelligences of students.
2. To find the relationship between multiple intelligence score and management accounting test scores.
3. To find out if there is any significant gender difference in test scores obtained in management accounting by learners
4. To develop better pedagogies to deliver managerial accounting to learners of diverse intelligence.

Methodology

For this study a survey was conducted to quantify the multiple intelligence of students. Students of MBA who have registered for the course Managerial Accounting were considered as participants for the survey. The authors were able to obtain a filled in response of 195 out of 224 students, with a response rate of 88 per cent. These students were asked to complete a survey from Mc Kenzie (1999), consisting of nine sections in order to identify their multiple intelligence profile. The multiple intelligence test scores of the nine sections collected from individual students were aggregated. Information on gender, UG specialization was also collected among other things. Descriptive statistics was used to identify the diversity of intelligences among the respondents. One way ANOVA was used to find out if there is any significant difference in the managerial accounting exam score across different groups of multiple intelligences and independent t-test was performed to find out if there is a significant gender difference in the mean managerial accounting exam scores.

Results and Discussions

The demographic profiles of the respondents were summarized in table 1, which include

Gender, UG Qualification and UG Marks. The table shows that out of 195 samples 62 per cent are male and 38 are female students. Among the UG qualifications the majority of the students had passed B.Com degree examination (35 per cent), which is followed by BBA students (25 per cent) and Engineering Students (18 per cent). Regarding the respondents' marks, students who have secured first class number 63 per cent followed by students with second class 20 per cent. The students who have secured first class with distinction number 17 per cent.

Table 1
Descriptive Statistics

Students' Profile	Percentage
Gender	
Male	62
Female	38
Total	100
UG Qualifications	
B.Tech/BE	18
B.Com	35
B.B.A/B.B.M	25
B.Sc/B.C.A	13
B.A	07
Others	02
Total	100
UG Marks	
First Class with Distinction	17
First Class	63
Second Class	20
Total	100

Source: Computed

Multiple Intelligence of Students

To find out the multiple intelligence of students, descriptive statistics was used. Table 2 presented below shows details of the number of students possessing a particular dominant intelligence. Students having more than one dominant intelligence, were grouped separately. Of the 195 respondents, 62 have more than one dominant intelligence and form the largest portion of students. This is followed by 'Kinesthetic' and 'visual' intelligences, with 27 students in both the categories. Twenty students are found to have 'Existential intelligence' as their dominant intelligence and 19 (9.7%) students have 'Logical Intelligence'. From the table it is very clear that students who register for the course "Managerial Accounting" come from diverse intelligence groups.

Table 2
Multiple Intelligence of Students

Intelligence Type	Number of students	Mean	Standard Deviation
Logical Intelligence	19	54.20	19.24
Naturalist Intelligence	1	50.00	17.44
Musical Intelligence	5	54.10	20.67
Existential Intelligence	20	63.06	19.45
Interpersonal Intelligence	11	57.35	20.32
Kinaesthetic	27	65.06	21.26
Verbal	1	52.53	19.42
Intrapersonal	22	64.15	21.66
Visual	27	63.06	21.99
One or more dominant intelligence	62	-	-
Total	195		

Source: Computed

Test Scores and Multiple Intelligence Scores

To find out if there is any significant difference in the mean managerial accounting test scores among the different multiple intelligence groups, one way ANOVA was used. As can be seen from table two, there is a significant difference with F value of 1.945 ($p=0.05$ level) in the mean exam scores of the nine categories of multiple intelligences. For grouping of intelligences, students with more than one dominant intelligence were grouped as one category.

Table 2 : One Way ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.471	9	1.719	1.945	.048
Within Groups	163.523	185	.884		
Total	178.995	194			

Source: Computed Significant at 0.05 level

Gender Difference in Test Scores

Nearly 62 percent of the respondents were male and the remaining 38 percent were female students. The female students had a higher mean test score, signifying better performance in the exam than their male counterparts. To find out if there is any significant difference in managerial accounting test scores by gender, the independent samples t-test was performed. As can be seen from Table three (a & b), there is a significant difference between male and female students' scores in Managerial Accounting, with female students having a higher mean than male students thereby performing better in Managerial accounting

Table 3 a : Group Statistics

GENDER	N	Mean	Std. Deviation	Std. Error Mean
EXAM 1	116	.84	.809	.075
0	75	1.45	1.069	.123

Table 3 b : Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EXAM	Equal variances assumed	15.429	.000	-4.466	189	.000	.609	.136	-.877	-.340
	Equal variances not assumed			-4.211	127.634	.000	.609	.144	-.894	-.323

Source: Computed

Implications for Designing Suitable Pedagogy

Teachers who teach managerial accounting course mostly follow the lecture or 'chalk and talk' method of teaching, because of the ease with which a large number of students can be catered to. It has become the sole job of the teachers to decide the method used for teaching and students are more often passive listeners and takers of instructions. For those with good listening skills this method may be appropriate, but as revealed by Gardner (1983), students have diverse intelligences. In order to be more effective in handling the course on managerial accounting, methods like case discussions, group learning, simulations, live examples, assignments, research work, use of technology etc., can be made use of. Selecting the appropriate pedagogy will add variety to the classroom and will help the teacher to cater to a diverse group of students.

Teaching and learning managerial accounting will be more effective only when the teacher learns to identify the learners' diversity in terms of their intelligence. Traditional higher education institutions tend to focus essentially on content pedagogy, assessing and rewarding the number smart and word smart intelligences (Barrington, 2004). The conventional chalk and talk method of teaching is certainly insufficient, particularly when the course demands higher ability and complicated concepts (Becker and Watts, 2001). Students can process information more effectively when the relevant material is presented in a format that matches their learning preference (Denig, 2004).

Conclusions

This study focused on the multiple intelligences profiling of students and their performance in 'Managerial Accounting'. Teachers in business schools need to

explore for alternative pedagogies to teach managerial accounting to learners with diverse intelligences. For this the teachers who teach management accounting will appreciate the importance of finding out the abilities and background of their students before the session begins, for choosing an appropriate pedagogy to teach the subject. It may not be possible to cater to all categories of students, but it may at least be possible to group them into four or five major categories and fulfil the diverse needs of students. When this awareness among the faculty is enhanced, it would make Managerial Accounting a better subject for the budding managers. To accomplish this mission the teacher has to develop a passion for teaching the subject managerial accounting and they should remember that their goal is to make good learners.

Acknowledgements :

We sincerely acknowledge and thank the Management of Karunya Univeristy, Coimbatore, Tamil Nadu for the financial support to undertake this study.

REFERENCES

- Barrington,E (2004). Teaching to students diversity in higher education: How multiple intelligence theory can help, *Teaching in Higher Education*, Vol.9, No.4, October 2004.
- Bitner,L.N (1991). A Framework for teaching Management Accounting, *Issues in Accounting Education* ,Vol.6,No.1, pp. 112-119.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*, 1st edn, New York: Basic Books
- Gardner, H. (1999). *Intelligence Reframed. Multiple Intelligences for the 21st Century*, New York: Basic Books
- Knechel, W. R. (1992). Using the Case Method in Accounting Instruction, *Issues in Accounting Education*, Vol. 7, no.2; Fall 1992
- Maas, J. D. and Leaby, B. A. (2005). Concept Mapping – Exploring Its Value as a Meaningful Learning Tool In *Accounting Education*, *Global Perspectives on Accounting Education*, Vol.2, 2005, 75-98
- Nelson, K. (1998). *Developing students' multiple intelligences*. New York:
- Scholastic Ravenscroft, S. P., Buckless F. A., McCombs G. B. and Zuckerman G. J. (1995). Incentives in student team learning: An experiment in cooperative group learning. *Issues in Accounting Education*, Spring 1995, Vol. 10, Issue 1, pp 97-109.
- Ravenscroft, S. P. (1997). In support of cooperative learning, *Issues in Accounting Education*; Spring 1997; Vol. 12, no. 1, Academic Research Library, pg. 187
- Simkins, B. J. (2001). *An Innovative Approach to Teaching Finance: Using Live Cases in the Case Course* (May 30, 2001). Oklahoma State University Working Paper
- Springer, C. W. and Borthick, A. F. (2004). Business Simulation to Stage Critical Thinking in Introductory Accounting: Rationale, Design, and Implementation, *Issues in Accounting Education* Aug 2004, Vol. 19, Issue 3, pg 277
- Walters,L.M. and Pergola,T M.(2009). An Instructional Case: Cost Concepts and Managerial Analysis. *Issues in Accounting Education*, Vol 24, No.4, pp.531-538.

DR C.SAMUEL JOSEPH, Associate Professor, Karunya School of Management, Karunya University, Coimbatore

Dr Prema.C, Assistant Professor (SG), Karunya School of Management, Coimbatore

13th International Conference
On
Emerging Trends, Challenges & Opportunities
in Global Business, Management, Tourism & Information Technology
September 28 & 29, 2013 (Saturday & Sunday)

Venue : **THE INTERNATIONAL CENTRE GOA (INDIA)**

ORGANIZED BY
RESEARCH DEVELOPMENT ASSOCIATION &
RAJASTHAN CHAMBER OF COMMERCE & INDUSTRY, JAIPUR
IN ASSOCIATION WITH
DEPARTMENT OF COMMERCE, GOA UNIVERSITY, GOA

Research Development Association & Rajasthan Chamber of commerce & Industry in association with Department of Commerce, Goa University, Goa will hold its 13th International Conference at The International Centre Goa, Goa University Road, Dona Paula, Goa on Saturday and Sunday, the 28th & 29th September, 2013 on "Emerging Trends, Challenges & Opportunities in Global Business, Management, Tourism & Information Technology

Papers are invited on the Four Tracks :-

TRACK 1 - EMERGING ISSUES IN ACCOUNTING & FINANCE

TRACK 2 - EMERGING ISSUES IN GLOBAL ECONOMY

TRACK 3 - EMERGING ISSUES IN BUSINESS MANAGEMENT

TRACK 4 - EMERGING ISSUES IN TOURISM, COMMUNICATION & IT

The participants are requested to forward the abstract and full papers (mentioning the relevant Track) via soft copy at the following email IDs drjain.rda@gmail.com and drjain2001@rediffmail.com

Some of the selected papers will be published in the following journals :

(i) **Journal of Accounting & Finance (ISSN No. 0970-9029)**, (ii) **Journal of Banking, IT and Management. (ISSN No.0972-902X)**, (iii) **Journal of Management Outlook. (ISSN No. 2231-1769)**, (iv) **Indian Journal of Research (ISSN No. 2231-6655)**, (v) **Indian Journal of Management (ISSN No. 2277-3304)**, (vi) **Journal of Research in Management (2320-8615)**.

Important Dates :

Abstract Submission	:	August 20,2013
Paper Submission	:	August 25,2013
Registration Deadline	:	September 05 ,2013

Contact Persons for sending queries related with paper submission and Registration for this International Conference :

Dr Praveen Jain
Conference Coordinator
Research Development Association
4-Ma-22, Jawahar Nagar,
Jaipur 302 004 (India)
Mobile: 09799201212,
E-mail: drjain.rda@gmail.com,
drjain2001@rediffmail.com
Web site: www.rdaindia.net

Professor Sugan C. Jain
Chief Patron & Honorary Secretary
Research Development Association
4-Ma-22, Jawahar Nagar,
Jaipur 302 004 (India)
Mobile :09799201212
E-mail: drjain.rda@gmail.com,
drjain2001@rediffmail.com
Web site: www.rdaindia.net