Synopsis of the Thesis

INFLUENCE OF TEACHING METHODS ON LEARNING OUTCOMES: A STUDY OF PG STUDENTS OF MANAGEMENT

Doctoral Thesis Submitted

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By

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Under the Guidance of

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1. INTRODUCTION

In academics, we have designed different curriculum plan for teaching and evaluation and each one has its own specific features that can effectively communicate the lesson plan to students. However, it has often been argued that students usually forget much of what they have learnt and even will not develop a self-critical awareness of the various subjects they studied. Hence, it becomes a big challenge for the teachers in transforming the course descriptions into learning outcomes. Indian educational system itself is very diverse with public as well as private funded institutions and hence the instructional tools used to disseminate course descriptions are also differs in those institutions. This in effect creates wide differences in the learning outcome and the students will come out with varied levels of knowledge. Thus the learning process can be seen as an important change from the teacher's teaching perspective to students learning perspective. Therefore, in the present study we argue that student learning outcomes largely depend on teaching strategies or instructional strategies. However, the students arrive at generative learning when they learn concepts, views and academic process knowledge very early in their academic studies. Student learning outcomes also depend on other factors such as learning environment, social background, fellow students and other factors.

There are different teaching methods of which case study method, Socratic Method and project based learning are important. Many believed that no one method is suitable for all subjects or all contexts. However, it is important for teachers to develop a repertoire of teaching and learning approaches to cater for the diverse nature of subjects and learners. Therefore, the selection of particular teaching methods primarily based on the subject that they taught. However, prominent institutes like the Harvard Business School follow the case study method, but the Stanford University and London School of Economics follow Socratic Method and project based methods respectively.

Various research studies found that the three methods have been very successfully used internationally in higher education to facilitate effective learning across a variety of subjects and learning contexts. McKeachie (1999) opined that cases are often actual descriptions of problem situations in the field in which the case is being used; sometimes, they are syntheses constructed to represent a particular principle or type of problem. Case method of teaching

immerses students into realistic business situations and that will help in developing their analytical and decision making skills (Gragg, 1953 and Erskine, Michiel, and Leenders, 1981). Cases provide the reality of managerial decision making – which includes incomplete information, time constraints, and conflicting goals – as students learn how to analyse business situations [The HBS Case Method, 2003].

Conversely, the Socratic Method of teaching is a shared dialogue between the teacher and the students in which both are responsible for pushing the dialogue through questioning. The "teacher," or leader of the dialogue, asks probing questions in an effort to expose the values and beliefs which frame and support the thoughts and statements of the participants in the inquiry (Rob 2003). Fundamentally, it is not a teaching method, in conventional sense, where the teacher is a bundle of knowledge and transferred to students when required. In this method, teacher is not a mentor, guide, or a trainer, instead he/she is a person to initiate the thought process of a student. "Every knowledge is already available within a person, it only needs to be brought to action." As the famous saying goes, "Watch your thoughts, they become your words and actions, watch your action, they become your habits, watch your habits, they become your character, watch your character, they become your destiny."

Project-based learning is generating a great deal of buzz in the world of education, and is often portrayed as an alternative to passive learning and rote memorization. It is a Business Situation given to a group to complete the task with optimum solutions and implementation. It is a type of group based experiential learning where the responsibility of achieving the target is allocated to each member of the team. Unlike the other classroom-bound styles of curriculum, experiential learning attempts to apply theories to real-world situations. This is not to say that all experiential learning occurs outside the classroom, but rather that its method is to use real experiences, even if those are examples or simulations used to educate business students. Unlike the lecture and discussion methods, which focus on theory, experiential learning examines these theories in a more practical context, encouraging students to learn by doing. Examples of experiential learning include team challenges, simulations, field work and extracurricular activities. The ability to work in a team is essential in today's workplace.

The present study reflects on the ever present educational question of surface and deep approaches to learning (Marton, 1975). Generative learning theory is introduced (Wittrock,

1974; 1990) as a way to reflect on how surface learning might be used to achieve deep learning. Our interest is not on psychological quantitative phenomenografic studies (Entwistle, 1981; Biggs and Collis, 1982) since the research interest is educational not psychological.

Wiske (1998), opined a good learning outcome depends basically on four pillars consisting of first organising a curriculum around generative topics that are central to the subject matter. Secondly clarify explicit learning goals, which in the course plans are called learning outcomes. These should be focused on fundamental ideas and questions in the discipline. Third, engage students in performances of learning that require them to extend, synthesize, and apply what they know. This is called instructional strategies. Fourth, measure students' learning outcomes by conducting ongoing assessments of their performances. The present study will reflect on these issues and examines the relationship between teaching methods and learning outcome.

2. RESEARCH MOTIVATION

As a Teacher dealing with Post Graduate Management students, I always take concern for the purpose of education and the life's dream each of my student comes with. My interaction with these students for the last 27 years has given me an insight that there are three purposes for education, that is employability, entrepreneurship and enhanced life. The study analysis the influence of three basic teaching methods, viz. case study, Socratic Method and project based method and the effectiveness of learning are measured through Blooms taxonomy.

Every teacher sincerely wishes for his or her students to learn and apply what they have learned in the classroom to better their lives. This research is being conducted to determine the effectiveness of teaching and learning outcomes for students.

The way teachers offer subjects to students by employing specific approaches that correlate to the characteristics of pupils encountered is referred to as teaching method. Each pupil possesses unique traits, ranging from the extremely bright to the somewhat intelligent, as well as the inability to receive lessons rapidly. As a result, a teacher must be able to adapt the teaching style to the peculiarities of the students. Protégés (learners), aim, situation, facilities, and teachers are all aspects that influence the teaching approach. In terms of teaching methods, they should be able to transform the atmosphere of teaching interaction into one that is instructive or educative,

encouraging learners to engage in active learning, as well as foster and develop an interest in learning and increase learning spirit. This will improve learning outcomes and prolong the ongoing teaching processes (Hospitality et al., n.d.)

According to Djamarah (2010), a teaching approach is a plan for achieving the desired outcomes. The teacher will attain the goal of seamless instruction by using an exact method. When goals are set in order for pupils to learn specific skills, the techniques used must be adjusted.

3. REVIEW OF LITERATURE

The various literature reviewed comes under majorly into 4 categories

1) Measuring learning outcomes especially the higher learning outcomes under Bloom's Taxonomy and how effective is our evaluation system.
2) What are the various Teaching and Learning methodologies used by the teachers of higher education to achieve these learning outcomes?
3) To find out the effectiveness of the three prominent teaching methodologies, Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Methodologies for the higher learning outcomes.
4) Is there a combination of Teaching Methodologies used for better learning outcomes of the students?

Following is the gist of few of the key literature review done on the concept of Teaching Methodologies and their influence on the learning outcome of the students.

1. Bloom's Taxonomy

Bloom's Taxonomy of learning domain has a role to play in understanding the 'Learning Effectiveness'. Dr. Benjamin Bloom created 'Bloom's Taxonomy' in 1956 in order to promote higher forms of thinking in education such as evaluation and analysis rather than just remembering facts and figures. Bloom's Taxonomy is a standardized categorization of learning objectives in an educational context. It is a set of three hierarchical model used to classify educational learning objectives into levels of complexity and specificity. The three lists cover the learning objectives into Cognitive, Affective and Sensory domains.

2. William's taxonomy of divergent thinking and feeling

William speaks of eight skills divided into two groups of four, the cognitive and affective domains. Namely cognitive skills (fluency, flexibility, originality, and elaboration) and affective skills (risk taking, complexity, curiosity, imagination).

3. Teaching Methods

The 'Teaching Method' comprises the principles and methods used by a teacher to enable students learning. The primary responsibility of a teacher is to engage the students in a learning atmosphere where understanding is more important than listening, knowledge is more important than opinions and practical application is more important than theories. Therefore, engaging students in activities of learning and understanding from teamwork brings the classroom effectively. (What Is Teaching? Journal of Curriculum Studies: Vol 3, No 1, n.d.)

3.1 Lecturing

traditionally Lecturing belongs to nomological teaching methods where the knowledge is transmitted from the teacher to students. Though this method is cost-effective, especially for a large group of students, it has its demerits. Due to its demerits of one-way communication and non-involvement of students make it is less interactive and has minimum learning. The success of this method depends on the teacher's knowledge, language, and ability to present. (Effective Teaching Methods - Google Books, n.d.)

3.2 Demonstrating

Demonstrating is also known as the coaching style, Lecture-cum-demonstration is the process of teaching with examples. This style is also known as the experimental method using the lab or computers. The advantage of this method is the active participation of the students using instructional materials. Experimental learning is good for internalizing the subject matter. However, it may have the disadvantage of lack of interaction with individual students when a large number of students are present in the classroom.

3.3 Collaboration

Collaboration allows students to actively participate in the learning process because they talk to each other about the topic. This method helps students to show their skills like leadership, presentation, and listening skills. The demerits of this method are sometimes the students deviate from the topic and involve in arguments instead of constructive discussions. It would be important for teachers to provide students with instructions on how to collaborate.

3.4 Classroom discussion

The most common type of collaborative method in a class is classroom discussion. It is a democratic process by which each student gets an opportunity to talk and involve in the discussion. A discussion taking place in a classroom can be either facilitated by a teacher or by a student. A discussion could also follow a presentation or a demonstration. Class discussions can enhance student understanding, add context to academic content, broaden student perspectives, highlight opposing viewpoints, reinforce knowledge, build confidence, and support community in learning. The classroom discussions can be used for identifying and clarifying the values of students. Different models or events can be presented in the classroom and based on those events discussions can be held. (Using Teaching Methods for Development Student Competencies | Usarov | International Journal of Progressive Sciences and Technologies, n.d.)

3.5 Outbound training

Teaching students with lecturing and activities is known as outbound training. This method is used more as a training method than a teaching method. Debriefing is a key term used in outbound training. The term "debriefing" refers to conversational sessions that revolve around the sharing and examining of information after a specific event has taken place. Depending on the situation, debriefing can serve a variety of purposes. It takes into consideration the experiences and facilitates reflection and feedback. The debriefing may involve feedback to the students or among the students. (Havnes & Prøitz, 2016)

3.6 Spaced Learning

To reinforce a particular lesson, a teacher will repeat the lesson multiple times, at 10-minute intervals. This is done to allow the brain to refresh, usually through physical activity or mindfulness techniques.

3.7 Flipped Classroom

In this technique, students are asked to do the preliminary work of a particular lesson at home, such as watching a video tutorial or conducting an online search. The homework (traditionally done at home) is then completed in class to optimize the time and learning experience of the students.

3.8 Case Study method

Case Studies are like stories. It is a representation of a business event to the classroom. McKeachie has explained in his book "McKeachie's Teaching Tips" while using a Case Study approach, the teachers have to explain students the methods and skills required for using it successfully. Initially it must start off with the everyday examples as cases so that the students learn the art of solving the cases from basics. (Wilbert McKeachie, Marilla Svinicki 2013). Better decision making happens because the students are not under pressure, not emotional and no time constraints. Case method of teaching immerses students into realistic business situations. Cases provide the reality of managerial decision making – which includes incomplete information, time constraints, and conflicting goals as students learn how to analyze business situations (Kunselman et al., n.d.) The case method packs more experience into each hour of learning than any other instructional approach. It stimulates students' thinking and encourages discussion. Not only is it the most relevant and practical way to learn managerial skills, but it's also exciting and fun.

3.9 The Socratic method

The Socratic Method of teaching is a shared dialogue between the teacher and the students in which both are responsible for pushing the dialogue through questioning. The "teacher," or leader of the dialogue, asks probing questions to expose the values and beliefs which frame and support the thoughts and statements of the participants in the inquiry (Lam,

2011) Fundamentally, it is not a teaching method, in conventional sense, where the teacher is a bundle of knowledge and transferred to students when required. In this method, teacher is not a mentor, guide, or a trainer, instead he/she is a person to initiate the thought process of a student (The Stanford University 2020). "Every knowledge is already available within a person; it only needs to be brought to action." As the famous saying goes, "Watch your thoughts, they become your words and actions, watch your action, they become your habits, watch your habits, they become your character, watch your character, they become your destiny.

3.10   Project-based learning - PBL

Project is a Business Situation given to a group to complete the task with optimum solutions and implementation. It is a type of group based experiential learning where the responsibility of achieving the target is allocated to each member of the team. Unlike the other classroom-bound styles of curriculum, experiential learning attempts to apply theories to real-world situations. This is not to say that all experiential learning occurs outside the classroom, but rather that its method is to use real experiences, even if those are examples or simulations used to educate business students. Unlike the lecture and discussion methods, which focus on theory, experiential learning examines these theories in a more practical context, encouraging students to learn by doing. Examples of experiential learning include team challenges, simulations, field work and extracurricular activities. The ability to work in a team is essential in today's workplace. When students do their project, they need to identify the objectives, finding the difficulties and arranging resources become important. Therefore, learning happens in multi-faced manner (Blumenfeld et al., n.d.)

4. RESEARCH GAP

Sl. No	Literature Reviewed	Literature Type and Author/s with year of Publishing	The gist of Points gained	Research Gap	Linkage to own research
1	"Effective Teaching Methods" A Book written based on research-based practice. Ch.1- The effective teacher, Ch. 2 Understanding your students, Ch. 9 and 10 – Teaching Strategies.	A Book written by the Author Garry D. Borrich, 2017, Pearson Publication. (Saleh, n.d.)	This book explains about the various teaching methods which can be effective by understanding the students' background and learning style. Type 1: Facts, rules and action sequences. Type 2: Concepts, patterns and relationships.	Socratic method, Case Method and Project based learning are not mentioned specifically for instructional strategies.	Various Teaching methods are explained with major learning outcomes by the students.
2	Survey of 12 strategies to measure teaching effectiveness	A Research paper written by the Author Ronald A. Berk, John Hopkins University, USA (*The Journal of Economic Education: Vol 28, No 2*, n.d.)	Twelve potential sources of evidence to measure teaching effectiveness are critically reviewed in this paper like student ratings, peer ratings, self-evaluation, alumni ratings etc.	Though learning outcome is measured in this paper, Teaching methods are not explained and also learning outcomes measured not based on Bloom's Taxonomy.	The learning outcome is measured by 360 degrees of evaluation.

3	Aligning Blooms Taxonomy with scaffolding collaborative teaching to improve learner outcomes	A research article published by the Authors Dr. Tanya Herring and Omotalani Somoye, July, 2019	The teaching and Learning process has equally involved in Bloom's Taxonomy and this paper captured the evidence-based practitioners teaching experiences and illustrates how to apply andragogic principles to adult learners.	This paper shows the influence of teaching method on learning outcome, but does not specify the teaching method used.	Experience based teaching and its impact on learning outcome is mentioned.
4	Bloom's Taxonomy and Rules-Based Question Analysis Approach for Measuring the Quality of Examination papers	A research article published by the Authors T. G. S Kumara, A. Brahmana and Incheon Paik, July, 2019	The examination is treated to be the most effective measure of learning outcomes. This paper examined the effectiveness of the question papers used to measure the different levels of cognitive learning that are classified as high order questions, intermediate order questions, and lower order questions.	This paper examined the effectiveness of learning outcomes using examination. However, it is not mentioning the teaching method.	The measurement of learning outcome using examination process.
5	Teaching in the medical setting: balancing	A research paper written by the Authors Lisa Vaughn	Successful medical teaching also requires that teachers are	This paper talks about the teaching methods and learning outcome.	This paper shows the different teaching styles

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	teaching styles, learning styles and teaching methods	and Raymond Baker, Children's Hospital, OH, USA.	able to address learners' needs and understand the variations in learners' styles and approaches. If teachers use a variety of teaching methods and styles, learners are exposed to both familiar and unfamiliar ways of learning that provide both comfort and tension during the process, ultimately giving learners' multiple ways to excel.	However, it explains about medical teaching and learning outcome based on students' learning style. Various teaching methods are not explored and learning outcomes measured not based on Bloom's Taxonomy.	and learning styles. Teaching methods depend on the ability of the teacher.
6	Innovative methods of teaching	A research paper written by the Authors Dr. Damodharan V. S and Mr. Rangarajan V.	In this paper, an evaluation is made between the traditional methods of teaching as well as multimedia teaching and suggests other useful teaching methods that can be attempted in imparting knowledge to the students.	The use of innovative methods in educational institutions has the potential not only to improve education, but also to empower people. No mention about the specific teaching	Innovating teaching methods and its impact on the effectiveness of imparting knowledge is explained.

			methods and the learning outcomes	
7	Critical thinking in the management of classroom: Blooms taxonomy as a learning tool.	A research article written by Athanassiou N, Mcnett J and Harvey C. Published in Journal of Management Education (2003) (Athanassiou et al., 2003)	This paper explains the concept of classroom management and students learning based on Blooms taxonomy.	Though it explains the learning outcome based on Bloom's Taxonomy, it doesn't say about the teaching methods and its influence on Learning outcome.	Teaching and learning outcome in the classroom is mentioned.
8	A case study approach for evaluation of Employee Training effectiveness and Development program	A research article written by Neeraj S. Borate, Gopala Krishna and Sanjay L. Borate in 2014	This article explains about the Case study method evaluating the effectiveness of the continuous quality improvement.	Though this paper explains the case study method and evaluation, this only mention the continuous quality of the training, but does not say about Learning outcome.	This paper mention the case study method of teaching/training and evaluate the outcome as continuous quality.
9	Teaching with Case Studies, the research article explaining the	A research article published in Stanford University	This articles explains in detail about the use and type of Case Studies. This articles give different type of	This paper though discusses about the case study and the learning outcomes, it does	This research article is closely connected with this study

	types and process of using case studies in the classroom.	News Letter on Teaching.	cases, writing and using of cases, how to prepare lectures using case study etc.	not mention on how this method give outcome based on Blooms Taxonomy.	because it studied the type of cases and learning outcomes.
10	Teaching Methods and Students' Academic Performance	Journal article (Munyaradzi G Ganyaupfu E)	The article studies the differential effectiveness between three teaching methods: the teacher-student interactive method, the student-centered method, and the teacher-centered method.	The methods tested are methods based on student and teacher interactions and do not evaluate specific teaching methods for a deeper understanding of learning outcomes and effectiveness.	Shows the relevance of teacher-student interactive methods and hence all the methods that fall under this category like the Socratic Method.
11	Use of teaching methods within the lecture format JENNIFER A. BUTLER, Dorset House School of Occupational Therapy, 58 London Road,	Research Article (https://doi.org/10.3109/0142159920904010)	The article studies the perceived effectiveness of different teaching methods used within the lecture format. Results showed that the traditional lecture method was perceived as the least effective method yet the implementation of teaching tools	The research article studies the perceived effectiveness of the traditional lecture method and the slight increase in effectiveness when combined with other methods, whereas it does not include	Shows how traditional lectures can be enhanced to improve learning outcomes.

			alongside the lecture was seen to improve the effectiveness of the original didactic teaching method.	a comparison of various teaching methods and the most effective method to be implemented.	
12	Effective Teaching Methods in Higher Education: Requirements and Barriers Nahid shirani	Journal article (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5065908)	This study found that a mixed method that combines student- and teacher-centered instruction with educational planning and prior preparedness is the most effective teaching strategy.	The information collected is teacher-oriented and does not include data collected from students.	Shows teachers' ability to implement a mixed method of teaching, educational planning and previous readiness.

5. CONCEPTUAL FRAMEWORK

Conceptual Framework of the Thesis
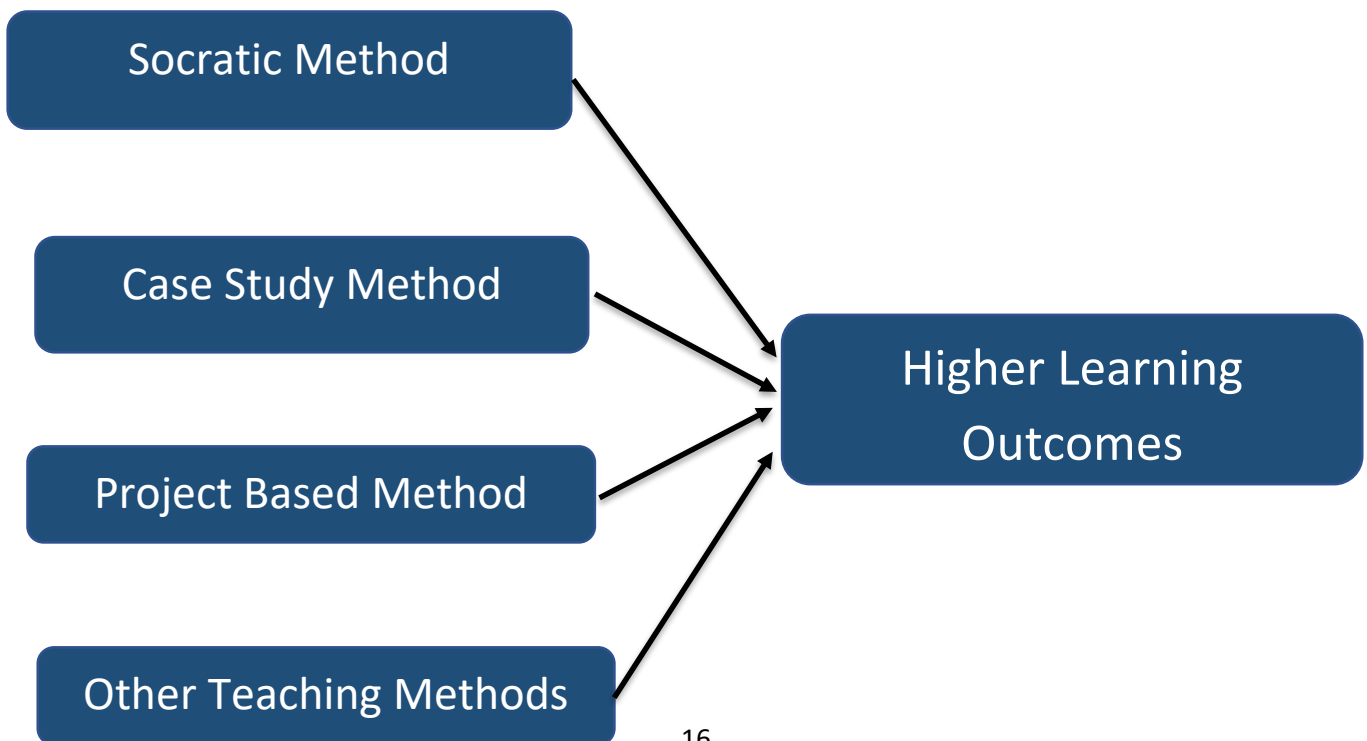
6. RESEARCH OBJECTIVES

i. To find out the impact of Socratic teaching method for learning outcomes like analytical ability, evaluation and creativity with control group of post graduate management students in Bengaluru.

ii. To find out the impact of Case study teaching method for learning outcomes like analytical ability, evaluation and creativity with control group of post graduate management students in Bengaluru.

iii. To find out the impact of Problem-based teaching method for learning outcomes like analytical ability, evaluation and creativity with control group of post graduate management students in Bengaluru.

iv. To find out the impact of Any Other Teaching method for learning outcomes like analytical ability, evaluation and creativity with control group of post graduate management students in Bengaluru.

v. To find out the relationship between Socratic teaching method and Case study teaching method.

vi. To find out the relationship between Socratic teaching method and Problem based teaching method.

vii. To find out the relationship between Case study teaching method Problem based teaching method.

viii. To find out the relationship of number of respondents with different courses and learning outcomes.

ix. To find out the relationship of number of respondents with different specialization and learning outcomes.

x. To find out the relationship of number of respondents with age distribution and learning outcomes.

7. RESEARCH HYPOTHESIS

$H_0 1$ There is no significant influence of Socratic teaching method on the analytical ability of the of post graduate management students.

$H_0 2$ There is no significant influence of Socratic teaching method on the evaluation ability of the of post graduate management students

$H_0 3$ There is no significant influence of Socratic teaching method on the creativity of the post graduate management students

$H_0 4$ There is no significant influence of Case Study method on the analytical ability of the post graduate management students

$H_0 5$ There is no significant influence of Case Study method on the evaluation ability of the post graduate management students

$H_0 6$ There is no significant influence of Case Study method on the creativity of the post graduate management students

$H_0 7$ There is no significant influence of Project Based Learning method on the analytical ability of the post graduate management students

$H_0 8$ There is no significant influence of Project Based Learning method on the evaluation ability of the post graduate management students

$H_0 9$ There is no significant influence of Project Based Learning method on creativity of the post graduate management students

$H_0 10$ There is no significant influence of Any Other Teaching method on the analytical ability of the post graduate management students

$H_0 11$ There is no significant influence of Any Other Teaching method on the evaluation ability of the post graduate management students

$H_0 12$ There is no significant influence of Any Other Teaching method on the creativity of the post graduate management students

The researcher mainly focusses on three dimensions in the questionnaire based on teachers teaching methods that is Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Method.

8. RESEARCH METHODOLOGY

8.1 Sample Design

The research design in this study was a true experimental design. Hence two equivalent groups namely one experimental and control groups are involved in this study. The experimental group was taught by Socrates, Case study and Project based teaching method.

The investigator constructed and administered above teaching method to the 397 post graduate management students in autonomous and affiliated institutes.

Step 3: Identifying the students is primarily based on their performance. But for teachers, we adopt a technique on the basis of the predominant teaching methods that they use to deliver the lecture.

Sample Size = (0.5 x (1-0.5)) / ((0.05/1.96) Squared)

Sample Size = 0.25 / ((0.02551…) Squared)

Sample Size = 0.25 / 0.00065077…

Sample Size = 384.16

True Sample = 384.16x 23200/384.16 + (23200 – 1)

True Sample = 8912512/23583.16

True Sample = 377.918

Table showing the sample design for the study

Sample Design for the study			
Institutes		**Number of samples**	
Autonomous institutes		**Students**	**Teachers**
1	Christ Institute of Management	67	10
2	XIME Bengaluru	43	10
3	Kristu Jayanti Institute of Management	58	10
4	Amity B School	46	10
Affiliated institutes			
5	PES Institute of Management	38	10
6	M S Ramaiah Institute of Management	37	10

7	Jain University	45	10
8	T. John College	63	10
	Total Sample	**397**	**80**

8.2 The logic for the sample selection

The sample size 397 has been arrived by using the formula to get stratified sampling. There are four affiliated Institutes or colleges and four autonomous institutions selected for the study. The reason being Teaching methodologies depend on the curriculum and evaluation patterns. Affiliated colleges have syllabus given from the University including the evaluation criteria, whereas the autonomous institutes create their own curriculum and pattern of evaluation like continuous evaluation. Why these institutes and colleges are selected? These colleges and institutes are Institutions of high ranking. We have taken colleges of A grade or A+ grade as per all India ranking of Institutions. The advantages for high ranking institutions are the faculty member's freedom to choose their own teaching method depends on the effectiveness.

8.3 The Research Flow Chart
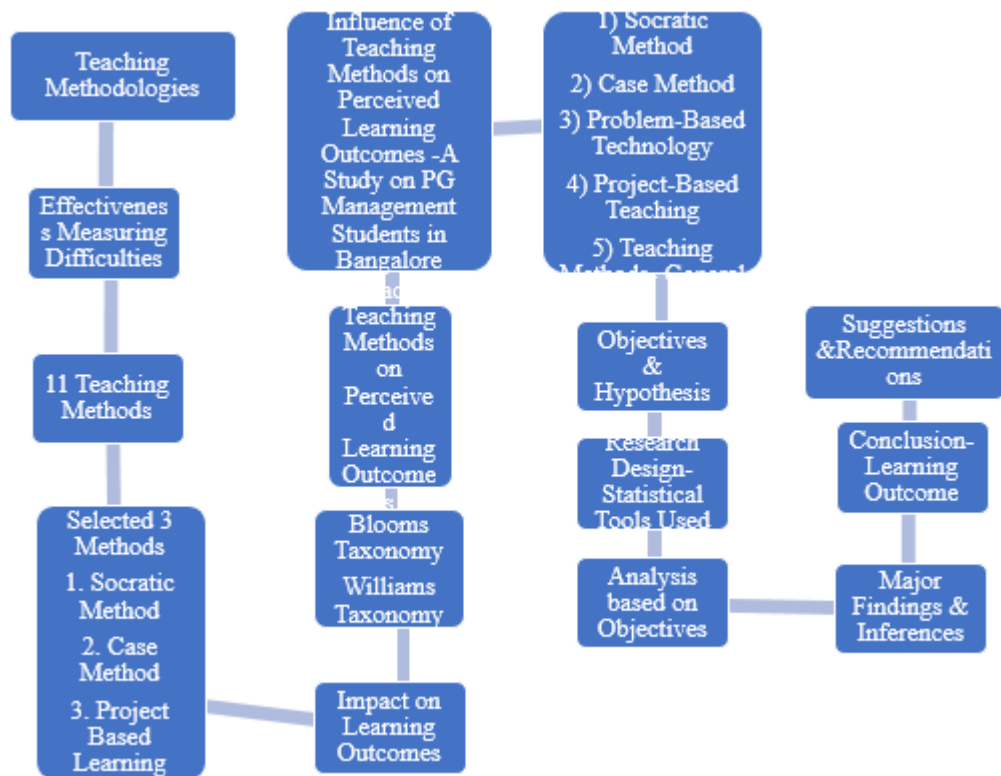
9. RESEARCH DATA ANALYSIS

The statistical analysis done for this research is Factor Analysis, ANOVA, t-test, Hypothesis testing and the Descriptive statistical analysis. From all these analysis, it is found that the any teaching method can bring learning outcomes measured through Bloom's Taxonomy. There are three levels of learning outcomes, Cognitive, Affective and Psychomotor. Out of these learning outcomes, what is possible to measure is the Cognitive Learning. Cognitive learning is learning through your brains or intelligent. There are 6 levels of Cognitive learning they are 1. Memorizing, 2. Understanding, 3. Application, 4. Analysis, 5. Evaluation, and 6. Creativity. Usually the first three learning outcomes are possible by any teaching methods. Students, generally learn these first three outcomes starting from their school studies.

This research tries to find out the possibility higher learning outcomes, Analysis, Evaluation, and Creativity through the teaching methods Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Method. It is found that the ability to analyse is best possible by Socratic Method (SM), the ability to evaluate is best possible by Case Study Method (CM) and the ability of Creativity is best possible by Project Based Learning (PBL)

In all these analysis, it is found that the any teaching method can bring learning outcomes measured through Bloom's Taxonomy. There are three levels of learning outcomes, Cognitive, Affective and Psychomotor. Out of these learning outcomes, what is possible to measure is the Cognitive Learning. Cognitive learning is learning through your brains or intelligent. There are 6 levels of Cognitive learning they are 1. Memorizing, 2. Understanding, 3. Application, 4. Analysis, 5. Evaluation, and 6. Creativity. Usually the first three learning outcomes are possible by any teaching methods. Students, generally learn these first three outcomes starting from their school studies.

The descriptive statistical analysis, the ANOVA test and the regression analysis shows that there is a positive correlation between the dependant variables like analytical ability, evaluation and the creativity and the independent variables like Socratic Teaching Method, Case Study Method and Project Based Learning. These positive correlation is more than 0.500 in majority of the cases of these three methods, however, it is less than 0.500 in other teaching methods.

Graduation	Number of students	%
B.Com	76	18
B.E/B.Tech	41	10
BBA/BBM	204	53
BA	21	5
B.Sc	27	6
LLB	13	3
Any other Degree	15	5
	397	100

9.1 Factor analysis – Socratic method

Table: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.552
Bartlett's Test of Sphericity	Approx. Chi-Square	886.335
	df	129
	Sig.	.000

Source: As per the Researcher's Analysis

Variable	Description	Values as per SPSS Output	Components
V8	Do you agree that the activity based classes are motivated by the questions from the teacher and students?	.586	Application and Analytical Ability
V11	Do you think questioning drive your thoughts to deal with complexity and breaking into components for finding solutions?	.966	
V12	Do you agree teachers' questions forces you to find answers of what, when, who, where, why and how?	.966	

Variable	Description	Components
V1	Does Socratic Method exhibit memory of previously learned material by recalling fundamental facts, terms, basic concepts and answers about the selection?	Memorizing (C1)
V2	Does Socratic Method demonstrate the recollection of facts and ideas by organizing, comparing, translating, interpreting, giving descriptors and stating main ideas?	
V3	Are you able to recollect the knowledge you gained from school studies by listening to your teachers' questions?	
V4	Does Socratic Method give you the understanding of facts, concepts and theories?	Understanding (C2)
V5	Do you agree that you understand the lessons better by listening to right questions and doing it practically?	
V6	Do you agree that the quality questions by the teachers make you understand the facts and figures connected together to form information?	
V7	Do you think right questions generate right thoughts, right words and right actions?	Application (C3)
V8	Do you agree that the activity based classes are motivated by the questions from the teacher and students?	
V9	Does Socratic Method create positive attitude towards learning, developing skills and applying in live situations?	

V10	Do you agree questions with interpretation organize the way in you for analysing the concepts, theories and problems?	Analysis (C4)
V11	Do you think questioning drive your thoughts to deal with complexity and breaking into components for finding solutions?	
V12	Do you agree teachers' questions forces you to find answers of what, when, who, where, why and how?	
V13	Do you agree that questions define tasks, express problems and initiate solutions?	Evaluation (C5)
V14	Do you agree that right questions improve curiosity to learn better by evaluating the alternative solutions?	
V15	Do you agree that the right questioning by teachers make you able to make better decision making power?	
V16	Does Socratic Method make your creativity in developing solutions and learning by self?	Creativity (C6)
V17	Do you agree that quality of the questions students ask in the class determines the quality of the thinking as well as learning?	
V18	Do you agree that the questions by the teachers make the students able to create their own models?	

List of variables and components for Socratic Method

Variable	Description	Values as per SPSS Output	Components
V10	Do you agree questions with interpretation organize the way in	.799	

Variable	Description	Values as per SPSS Output	Components
	you for analysing the concepts, theories and problems?		Analysis and Evaluation
V4	Does Socratic Method give you the understanding of facts, concepts and theories?	.611	
V15	Do you agree that the right questioning by teachers make you able to make better decision making power?	.591	

Project Based Learning - List of variables and components

Variable	Description	Values as per SPSS Output	Components
V9	Do you agree that by solving Project Based teaching in the class the students will be able to apply formulae and models for arriving at optimum solutions?	.735	Application and Evaluation
V7	Do you agree that the Project Based Learning is effectively used in Problem solving and Decision making?	.721	
V13	Do you agree that Project based method of teaching immerses the students into realistic business situations and able to draw connections?	.624	

Source: As per Researcher's Analysis

MBA/PGDM Specialization of the courses

Specialization	Number of students	%
Marketing	117	30
Finance	147	36

HRM	79	20
Production	40	10
International Business	14	4
	397	100

Source: Primary Data

Teaching Methodology used for Economics

Frequency	Socratic Method	Case Method	Project Based Method	Any other method
Never Used	3	10	35	197
Rarely used	7	20	30	50
Sometimes used	75	95	50	80
Usually used	192	80	95	30
Used in every class	120	192	187	40
Total	**397**	**397**	**397**	**397**

Source: Primary Data

Teaching Methodology for Teaching International Business

Frequency	Socratic Method	Case Method	Project Based Method	Any other method
Never Used	4	10	38	272
Rarely used	7	22	23	41
Sometimes used	89	170	88	60
Usually used	75	67	70	12
Used in every class	225	131	181	15
Total	**397**	**397**	**397**	**397**

Source: Primary Data

Statistical Analysis for Teaching Methods

Variables	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Socratic Method	66.9368	5.1017	13.1204	0.0000	56.9069	76.9667
Project based method	-0.0576	0.0417	-1.3818	0.1678	-0.1396	0.0244
Case Method	0.0697	0.0603	1.1553	0.2487	-0.0489	0.1882
Any Other Method	-0.0054	0.0493	-0.1101	0.9124	-0.1023	0.0915

Source: As per Calculation

9.2 Influence of Socratic Method teaching pedagogy on Higher Levels of learning outcome of the students

This section explains the impact of Socratic method on the various levels of learning outcomes according to Bloom's Taxonomy. The Cognitive learning outcomes are 1. Memorizing, 2. Understanding, 3. Application, 4. Analytical Ability, 5. Evaluation, and 6. Creativity. Out of these levels, Memorizing, Understanding, and Application are considered to be the lower levels and Analytical ability, Evaluation and Creativity are the higher learning outcomes. Though the post-graduate students of management understand the level of higher learning outcomes, they are not able to draw line between the differences in higher learning outcomes.

Analytical ability through Socratic Method Teaching Pedagogy

The first variable tested in this case is the analytical ability of the students through one-way ANOVA test to find out the Socratic questioning and teaching method will give the ability or not. There are sixteen predictor variables identified and considered on which the data collected from the respondents to test this are the following.

ANOVAᵇ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.830	15	.122	1.477	.130ᵃ
	Residual	7.514	91	.083		
	Total	9.344	106			

a. Predictors: (Constant), V16, V15, V12, V4, V9, V5, V8, V7, V13, V10, V14, V1, V2, V3, V6

b. Dependent Variable: V17

Source: SPSS Output

ANOVA output for Evaluation through Socratic Method

ANOVAᵇ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.544	15	1.970	38.000	.000ᵃ
	Residual	4.717	91	.052		
	Total	34.261	106			

a. Predictors: (Constant), V16, V15, V12, V4, V9, V5, V8, V7, V13, V10, V14, V1, V2, V3, V6

b. Dependent Variable: V17

ANOVA output for Creativity through Socratic Method

Model Summaryᵇ

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.871ᵃ	.759	.720	.17038	.759	19.155	15	91	.000	1.831

a. Predictors: (Constant), V16, V15, V12, V4, V9, V5, V8, V7, V13, V10, V14, V1, V2, V3, V6

b. Dependent Variable: V17

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.341	15	.556	19.155	.000[a]
	Residual	2.642	91	.029		
	Total	10.982	106			

a. Predictors: (Constant), V16, V15, V12, V4, V9, V5, V8, V7, V13, V10, V14, V1, V2, V3, V6

b. Dependent Variable: V17

ANOVA output for Evaluation through Case Method

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.632	16	1.977	3.135E5	.000[a]
	Residual	.002	374	.000		
	Total	31.635	390			

a. Predictors: (Constant), V18, V10, V17, V15, V5, V1, V2, V4, V12, V3, V6, V11, V9, V13, V8, V14

b. Dependent Variable: V19

ANOVA output for Analytical Ability through Project Based Learning

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.118	17	2.595	3.443E5	.000[a]
	Residual	.003	378	.000		
	Total	44.121	395			

a. Predictors: (Constant), V17, V2, V1, V4, V12, V10, V13, V16, V14, V9, V3, V15, V11, V6, V8, V5, V7

b. Dependent Variable: V18

Source: SPSS Output

ANOVA output for Evaluation through Any Other Teaching Method

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.292	18	3.072	3.873E5	.000[a]
	Residual	.003	378	.000		
	Total	55.295	396			

a. Predictors: (Constant), V18, V3, V12, V11, V4, V1, V8, V13, V6, V16, V5, V10, V2, V14, V17, V7, V15, V9

b. Dependent Variable: V19

9.3 Descriptive table showing the learning outcome 'Analytical Ability' through Project Based Learning and Case Study Method of Teaching

Analytical Ability Project Based Learning		Analytical Ability CASE METHOD	
Column1		*Column1*	
Mean	3.770780856	Mean	3.666666667
Standard Error	0.016798441	Standard Error	0.011889152
Median	3.666666667	Median	3.666666667
Mode	3.666666667	Mode	3.666666667
Standard Deviation	0.334706566	Standard Deviation	0.236889685
Sample Variance	0.112028485	Sample Variance	0.056116723
Kurtosis	-0.177134102	Kurtosis	-0.04772356
Skewness	0.305284144	Skewness	-0.339419858
Range	1.666666667	Range	1
Minimum	3	Minimum	3
Maximum	4.666666667	Maximum	4
Sum	1497	Sum	1455.666667
Count	397	Count	397

Source: Table prepared for this study

Descriptive Statistical table showing the learning outcome 'Analytical Ability' through Socratic Method and Any Other Teaching Method.

Analytical Ability		Analytical Ability	
SOCRATIC METHOD		ANY OTHER METHOD	
Column1		*Column1*	
Mean	3.892107473	Mean	3.505457599
Standard Error	0.022971883	Standard Error	0.015482023
Median	4	Median	3.666666667
Mode	4	Mode	3.333333333
Standard Deviation	0.457711525	Standard Deviation	0.308477115
Sample Variance	0.20949984	Sample Variance	0.09515813
Kurtosis	-0.340149332	Kurtosis	-0.841420714
Skewness	0.531436599	Skewness	0.009495128
Range	2	Range	1
Minimum	3	Minimum	3
Maximum	5	Maximum	4
Sum	1545.166667	Sum	1391.666667
Count	397	Count	397

Source: Table prepared for this study through Excel Sheet

Descriptive Statistical table showing Mean Score of the learning outcome 'Analytical Ability' through Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Method.

Teaching Method	Mean Score	Teaching Method	Mean Score
Socratic Method	3.892107473	Project Based Teaching and Learning	3.770780856
Case Study Method	3.666666667	Any Other Teaching Method	3.505457599

Source: Table prepared for this research from Excel sheet

Descriptive Statistical table showing Mean Score of the learning outcome 'Evaluation' through Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Method.

Teaching Method	Mean Score	Teaching Method	Mean Score
Socratic Method	3.68625	Project Based Teaching and Learning	3.79833333
Case Study Method	3.81083333	Any Other Teaching Method	3.4075

Source: Table prepared for this research from Excel sheet

Table showing learning outcome 'creativity' through different teaching methods

Teaching Method	Mean Score	Teaching Method	Mean Score
Socratic Method	3.7707809	Project Based Teaching and Learning	3.8950462
Case Study Method	3.5054576	Any Other Teaching Method	2.97397145

Source: Table prepared for this research from Excel sheet

Teaching Methodology and the Cognitive Learning Outcome

The descriptive analysis done for the data collected from 397 respondents, it can be concluded the following results.

S N	TEACHING METHODOLOGY	LEARNING OUTCOME RANK 1	LEARNING OUTCOME RANK 2	LEARNING OUTCOME RANK 3
1	Socratic Method	Analysis	Creativity	Evaluation
2	Case Study Method	Evaluation	Analysis	Creativity

3	Project Based Learning	Creativity	Evaluation	Analysis
4	Any Other Teaching Method	Memory	Understanding	Application

Source: Table prepared for this research from Excel sheet

9.4 Regression Analysis of Case Study Method for the learning outcome Analytical Ability

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.003	.005		-.650	.516
	V1	.000	.000	.000	-1.708	.088
	V2	.000	.000	.000	-.778	.437
	V3	.000	.000	.000	-.883	.378
	V4	-1.808E-5	.000	.000	-.090	.928
	V5	-4.909E-6	.000	.000	-.020	.984
	V6	.000	.000	.001	.939	.348
	V8	.000	.000	-.001	-1.470	.142
	V9	.000	.000	-.002	-1.906	.057
	V10	.335	.000	.689	1.150E3	.000
	V11	.334	.000	.712	1.203E3	.000
	V12	.334	.000	.375	676.784	.000
	V13	.000	.000	.001	1.332	.184
	V14	.000	.000	-.002	-1.754	.080
	V15	.000	.000	.001	1.602	.110
	V17	4.765E-5	.000	.000	.262	.793
	V18	-2.083E-5	.000	.000	-.085	.933

a. Dependent Variable: V19
Source: SPSS output

Regression Analysis of Project Based Method for the learning outcome Analytical Ability

Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.002	.004		-.550	.582
	V1	.000	.000	.000	-.667	.505
	V2	9.616E-6	.000	.000	.049	.961
	V3	.000	.000	.001	1.446	.149
	V4	.000	.000	.000	-1.767	.078
	V5	.001	.000	.002	3.149	.002
	V6	.000	.000	.000	-.598	.550
	V7	.000	.000	.000	.851	.395
	V8	.000	.000	.001	1.215	.225
	V9	.333	.000	.592	1.219E3	.000
	V10	.333	.000	.665	1.431E3	.000
	V11	.333	.000	.608	1.305E3	.000
	V12	.000	.000	.000	.547	.585
	V13	.000	.000	.001	1.353	.177
	V14	2.977E-5	.000	.000	.134	.893
	V15	.000	.000	.001	1.856	.064
	V16	.000	.000	.000	-.737	.462
	V17	.000	.000	.000	-1.522	.129

Dependent Variable: V18
Source: SPSS output

9.5 Summary of Analysis

The statistical analysis done for this research is Factor Analysis, ANOVA, t-test, Hypothesis testing and the Descriptive statistical analysis. From all these analysis, it is found that the any teaching method can bring learning outcomes measured through Bloom's Taxonomy. There are three levels of learning outcomes, Cognitive, Affective and Psychomotor. Out of these learning outcomes, what is possible to measure is the Cognitive Learning. Cognitive learning is learning through your brains or intelligent. There are 6 levels of Cognitive learning they are 1.

Memorizing, 2. Understanding, 3. Application, 4. Analysis, 5. Evaluation, and 6. Creativity. Usually the first three learning outcomes are possible by any teaching methods. Students, generally learn these first three outcomes starting from their school studies.

This research tries to find out the possibility higher learning outcomes, Analysis, Evaluation, and Creativity through the teaching methods Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Method. It is found that the ability to analyse is best possible by Socratic Method (SM), the ability to evaluate is best possible by Case Study Method (CM) and the ability of Creativity is best possible by Project Based Learning (PBL)

In all these analysis, it is found that the any teaching method can bring learning outcomes measured through Bloom's Taxonomy. There are three levels of learning outcomes, Cognitive, Affective and Psychomotor. Out of these learning outcomes, what is possible to measure is the Cognitive Learning. Cognitive learning is learning through your brains or intelligent. There are 6 levels of Cognitive learning they are 1. Memorizing, 2. Understanding, 3. Application, 4. Analysis, 5. Evaluation, and 6. Creativity. Usually the first three learning outcomes are possible by any teaching methods. Students, generally learn these first three outcomes starting from their school studies.

The descriptive statistical analysis, the ANOVA test and the regression analysis shows that there is a positive correlation between the dependant variables like analytical ability, evaluation and the creativity and the independent variables like Socratic Teaching Method, Case Study Method and Project Based Learning. These positive correlation is more than 0.500 in majority of the cases of these three methods, however, it is less than 0.500 in other teaching methods.

10. MAJOR FINDINGS AND RESULTS

This research has followed the major analytical tools like Factor Analysis, ANOVA, t-test, Correlation and regression analysis. Major objectives of the study like the Teaching Methodologies and their impact on the learning outcomes

Factor Analysis shows that Socratic Method of Teaching have the learning outcome of Recollecting facts, understanding theories, Application of formulae and models, Analysing the problems, evaluating concepts and models and Ability to create new models, ideas and products, however, more prominently with evaluating concepts, ideas and models.

Factor Analysis shows that Case study method of Teaching give the result of Memorizing, understanding theories, Application of formulae and models, Analysing the problems, evaluating concepts and models and Ability to create new models, ideas and products, however, more prominently with the analytical ability of the students.

Factor Analysis shows that Project Based Teaching and Learning give the result of Memorizing, understanding theories, Application of formulae and models, Analysing the problems, evaluating concepts and models and Ability to create new models, ideas and products, however, more prominently with creativity.

Hypothesis test using ANOVA shows that Socratic Method does not influence the learning outcome Analytical ability where as it influences the evaluation ability of the students.

Hypothesis test using ANOVA shows that Socratic Method of teaching influences the creativity of the students.

Hypothesis test using ANOVA shows that Case Study Method of Teaching influences the learning outcome Analytical ability and also it influences the evaluation ability of the students.

Hypothesis test using ANOVA shows that Case Study method of teaching initiate the student's ability to create their own models and ideas.

Hypothesis test using ANOVA shows that Project Based Teaching and Learning will influence the learning outcome Analytical ability.

Project Based Study method of teaching initiate the student's ability to evaluate and clarify the concepts and models.

Project Based Learning method of teaching initiate the student's ability to create their own models and ideas.

Any other Teaching method has more influence on the learning outcomes memorizing, understanding, and application.

Hypothesis test using ANOVA shows that Any Teaching Method influences the learning outcome Analytical ability.

Hypothesis test using ANOVA shows that Any method of teaching initiate the student's ability to create their own models and ideas.

11. Teachers' Interview Result Analysis

The primary data collected for this research is of two types 1) Students' response collected through questionnaire and 2) Teachers' response collected through personal interview. The important questions asked to the teachers and information tabulated were the following.

Table 4.15.1 Teaching Faculty members' experience and use of teaching methods

Number of years of Teaching Experience	Socratic Method	Case Study Method	Project Based Learning	Any Other Teaching method	**Total**
Less than 1 year	0	1	0	3	**4**
1 to 2 years	2	8	3	4	**17**
2 to 5 years	7	11	6	3	**27**
5 to 10 years	9	12	7	1	**29**
10 years and above	1	1	1	0	**3**
Total	**19**	**33**	**17**	**11**	**80**

Table 4.15.1 showing Teaching Faculty members' experience and use of teaching methods clearly explains that the teachers having experience use the methods like Socratic method, Case Study method, and Project Based learning whereas the teachers having less experience or no experience are using any other teaching method. Majority of the teachers use Case Study Method for teaching their subject and secondly use the Socratic Method.

Table 4.15.3 Teaching Faculty members' responds on Learning Outcomes

Teaching Method	Memory	Understanding	Application	Analysis	Evaluation	Creativity
Socratic Method	17	20	8	37	8	12

Case Study Method	12	9	36	29	38	28
Project Based Learning	23	21	26	9	32	31
Any Other Teaching method	28	30	10	5	2	9
Total	**80**	**80**	**80**	**80**	**80**	**80**

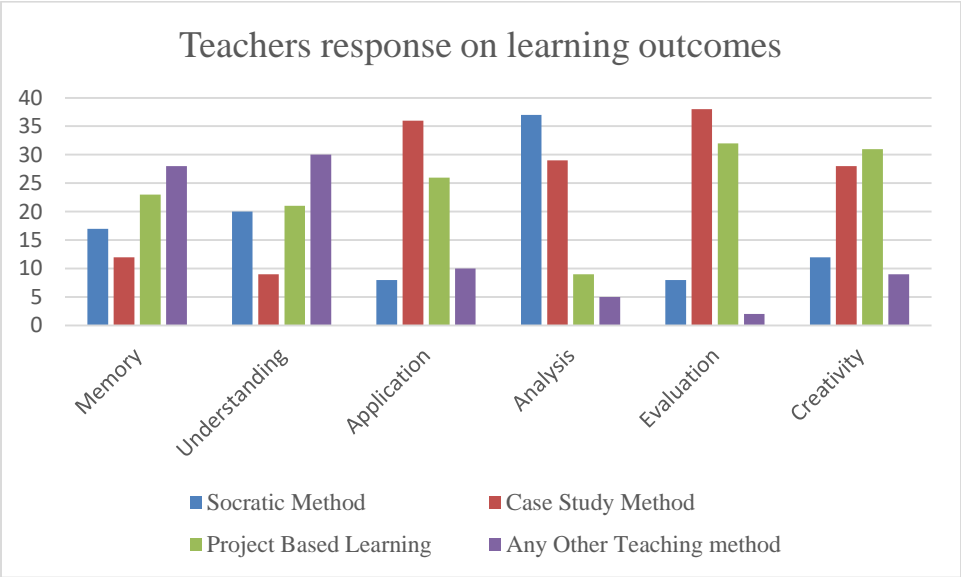**Figure 4.15.4 Teaching Faculty members' responds on Learning Outcomes**

Table 4.15.3 showing Teaching Faculty members' responds on Learning Outcomes describes 6 stages of cognitive learning outcomes. The lower level of learning outcomes like Memory, Understanding, and application are achieved more by any other teaching method, whereas the learning outcomes like analysis, evaluation, and creativity are achieved by the teaching methods like Case Study method, Socratic Method and Project Based Learning. Teaching staff members are of the opinion that out of the higher learning outcomes like analysis is more achieved by Socratic Method, and evaluation is more influenced by Case Study method. In case of creativity, it is understood that innovative ideas and practices are more achieved by the Project Based Teaching and Learning Process.

12. COMPARISON OF THE RESEARCH FINDINGS WITH THE AVAILABLE LITERATURE

N	Hypothesis	Findings from Literature	Research findings	Remarks on deviation
1	There is no significant influence of Socratic teaching method and the analytical ability of the control group of post graduate management students	Socratic Method, an approach to teaching [Haris, Senad, 2016] explains and found Socratic Method of Teaching will help students to achieve their dreams (goals)	This research has sought to find that the Socratic Method of Teaching brings students ability to analyse and find solutions. There is a positive correlation between the Socratic Method and the Analytical ability of the students.	Students' goal achievement is possible with a combination of their core competency and smart working. This research finds specific relationship between analytical ability and the Socratic Method of Teaching.

2	There is no significant influence of Socratic teaching method and the evaluation ability of the control group of post graduate management students	Socratic Circles for the Evaluation [Heather, 2010] This article tries to find the learning ability of evaluation by creating Socratic Circles in students group for effective learning.	This research studies the relationship between the ability of Evaluation and the Socratic Method of Teaching. There is a positive correlation between the evaluation and the Socratic Method of Teaching.	This study found that the students ability to evaluate by Socratic Questions even without making a Socratic Circles (Group)
3	There is no significant influence of Socratic teaching method and the creativity of the control group of post graduate management students	The study of Socratic Method of teaching on critical thinking skills of the students is used for finding the ability of the students in English language learning [Roger, D 2015]	This research found that there is a strong direct relationship between Socratic Method of Teaching and the Learning Outcome Creativity among the students in many subjects. It proves the ability of the students been initiated by Socratic Questions.	This study has used for all management subjects taught for Post Graduate Management Program.

4	There is no significant influence of Case Study method and the analytical ability of the control group of post graduate management students	Promotion of Critical Thinking by using Case Studies as Teaching Method [Inna, 2010] Found that using Case Studies in Teaching will assist Nursing Educators to promote active learning and develop critical thinking skills.	According to this study, management courses, especially those that focus on non-practical theory, have high critical thinking and analytical skills compared to those that focus on memory, understanding, and application.	Students' analytical skills will advance by participating in practical subject activities. This study discovered that case studies in theory classes also helped students' analytical thinking.
5	There is no significant influence of Case Study method and the evaluation ability of the control group of post graduate management students	Question posing capability as an alternative evaluation method: Analysis of an environmental case study [Yehudit, 1999] This study found that by doing case studies on environmental matters, students used evaluation ability.	This study discovered that when case studies are used in the classroom for any subject, students use assessment first, followed by creativity and analysis.	The usage of case studies across a range of subjects and its impact on learning outcomes—not just evaluation but all higher learning outcomes—are the divergence in this instance.
6	There is no significant	Auditing a case study: Enhancing case-based	According to this study, audit-based learning	The research deviates by discussing cognitive,

	influence of Case Study method and the creativity of the control group of post graduate management students	learning in education for sustainability [Emblen, 2022] Journal of Cleaner Production, volume 381, December 2022.	makes it easier to analyse interconnected, diverse sustainability practises and job skills, including sustainability knowledge, skills, and capacities.	employability, and sustainability abilities but not in detail the higher learning objectives like analysis, assessment, and creativity.
7	There is no significant influence of Project Based Learning method and the analytical ability of the control group of post graduate management students	Learning Outcomes of Project-Based and Inquiry-Based Learning Activities [Panasan et al, 2010] Journal of Social Sciences, Vol 6, 2010.	Students can better grasp scientific concepts by participating in project-based learning activities and inquiry-based learning activities, which are both effective teaching strategies. It'd be more effective. In this study, fifth grade children who learnt through the structuring of project-based and inquiry-based learning activities were compared in terms of their academic accomplishment, science	The study deviates from the literature in that we assessed higher-order learning outcomes such as analysis, assessment, and creativity, while the literature demonstrates the analytical skills of students who were tested in science classes.

		process abilities, and analytical thinking.	
8	There is no significant influence of Project Based Learning method and the evaluation ability of the control group of post graduate management students	Quantity versus quality in Project Based Learning Practices [Keegan and Turner, 2016] Sage Journals, Vol 32, Issue 1, 2016	This study involved 19 companies from across Europe and a variety of different industries. They used concepts of variation, selection, and retention in organisational learning to analyse their findings and report the challenges faced by project-based firms. The study found that time constraints, centralization, and deferral are the main characteristics of learning in project-based firms.	This study deviates in that it links organisational learning to employability skills like variation, selection, and retention; yet, we discovered that project-based learning produces greater learning outcomes like analytical prowess, evaluation, and originality.
9	There is no significant influence of Project Based Learning method and creativity of the control group of	Enhancing Students' Creativity through STEM Project-Based Learning [Hanif et al, 2019] Journal of Science Learning, Vol 2, Page 50-57.	If pupils are actively participating in educational activities, they will learn more effectively. One of the alternative teaching methods that involved pupils in worthwhile learning is STEM project-based learning.	This work deviates from the research since it only looked at students' inventiveness in the field of light and optics. However, we discovered that project-based learning is helpful for several

	post graduate management students		Investigating the effects of STEM project-based learning on students' creativity in the areas of light and optics is the goal of this study.	management-related topics in our study.
10	There is no significant influence of Any Other Teaching method and the analytical ability of the control group of post graduate management students	Problem Solving, Reasoning, and Analytical Thinking in a Classroom Environment [Robbins,2011, The Behavior Analyst Today, 12(1), page 41–48. https://doi.org/10.1037/h0100710]	In the past 15 years, specialised processes have been developed as a result of the work done at Morningside Academy, a school for children with exceptional needs. These steps entail adapting "Think Aloud Pair Problem Solving" (after Whimbey & Lochhead, 1991) techniques created for college students so that they may be taught to young learners and by introducing a set of "Fluent Thinking Skills" to the pupils.	This work discusses analytical ability and clear thinking, which is different from our research because it found that all teaching strategies have an impact on analytical ability.
11	There is no significant influence of Any Other Teaching method and	Student Evaluation of Teaching: Methodological Critique [Sproule, 2000]	The research work has two distinct goals. The first step is to lay out two objections to those who would continue to support the sole use of	The difference between our study and this one is that we examined the higher learning result evaluation for all subjects, whereas they

			raw SET data to assess "teaching efficacy" in the "summative" function. The second goal is to provide an explanation for why university officials still only consider these data when determining "teaching effectiveness" in the face of such difficulties.	employed statistical tools to test teaching effectiveness.
12	There is no significant influence of Any Other Teaching method and the creativity of the control group of post graduate management students	An analysis of research and literature on CREATIVITY IN EDUCATION [Craft, 2001, Report prepared for the Qualifications and Curriculum Authority]	It is evident that if students' creativity is to be encouraged, a variety of various issues need to be clarified. These elements include the student, the process, the teacher's tactics, the activity's social setting, and the outcome. For instance, it has been asserted that early family experiences for independent action boost creative achievement and that teacher involvement in creativity training programmes in schools	This study demonstrates that two factors, early family experiences and teacher involvement in creativity training, contribute to creativity. However, our research shows that only changing the teaching approach does not determine whether or not the creativity in teaching management subjects may be increased.

			makes them more successful. Even very tiny elements of the immediate social environment can have an impact on an individual's creativity.	

Source: Table created by the Researcher

13. LIMITATIONS OF THE STUDY

- This study is conducted only in Bangalore based post-graduate management colleges and universities, therefore, the culture, background and the demographic variables affecting the data are restricted to Bangalore region.

- The Indian students continue their studies in post-graduation immediately after their graduation, therefore, the expected learning outcome of these students are limited to the extent of employability.

- This study is limited to three teaching methodologies; Socratic Method, Case Study Method and Project Based Teaching and Learning. However, various new methods of teaching could be studied for finding their influence on the learning outcome.

- The pilot study of this research is done for two Business Management Colleges in Bangalore to test the reliability of the data, it could be possible to make a pilot study to other business schools especially in other states of India.

- The primary data collected during the COVID-19 period was through Google forms where the researcher could not give an awareness of various teaching methodologies to the respondents.

14. SUGGESTIONS AND RECOMMENDATIONS

1. This study on teaching methodologies are based on the understanding that students are aware of the different teaching methodologies, however, it may not be true for most of the students in management. Therefore, a detailed pilot study creating awareness about the

teaching methodologies are important.

2. Students must have the seriousness of their studies and must be aware of the learning outcomes expected for achieving their goals and dreams, especially while attending the classroom lectures and various activities.

3. Many students are not aware about the learning outcomes and measurement of cognitive learning according to Bloom's Taxonomy, therefore, it would be better that the teachers give an introduction about the learning outcome, especially the higher learning outcomes like analysis, evaluation and creativity.

4. Indian Students are not having the work-experience before joining the master's program in management, therefore, not able to decide on their career objectives. Career guidance is advisable for the students in Post Graduate management studies.

5. Most of the Business Schools conducting MBA program are constraint with a vast syllabus for each subject and teachers usually try to complete the portions instead of teaching with quality for achieving students' goals.

6. The purpose of education is still uncertain or education for a job is the understanding of many students who responded for this research. Therefore, it is suggested that these students must be guided for the purpose of education like education for employment, education for entrepreneurship, and education for enhanced life.

15. CONCLUSION

- The Socratic Method of teaching is basically used by the teachers for subjects like Principles of management, Business Ethics, Organizational Behaviour, Human Resource Management and Marketing.
- The higher learning outcomes of analytical ability, evaluation and creativity are highly influenced by Socratic Method.
- The most influenced learning outcome of Socratic Method is the analytical ability, and then the creativity and evaluation.
- The Case Study Method of teaching is basically used by the teachers for subjects like International Business, Marketing Management, Organizational Behaviour, Human

Resource Management and Business Ethics.

- The higher learning outcomes of analytical ability, evaluation and creativity are highly influenced by Case Study Method.

- The most influenced learning outcome of Case Study Method is the evaluation, and then the analytical ability and creativity.

- The Project Based Learning is basically used by the teachers for subjects like Economics, Production and Operations management, International Business, International Finance, Business Analytics, Operations Research and Research Methodology.

- The higher learning outcomes of analytical ability, evaluation and creativity are highly influenced by Project Based Learning.

- The most influenced learning outcome of Project Based Learning is the Creativity, and then the evaluation, and then the analytical ability.

- Any other teaching method is generally having the learning outcomes understanding, memorizing and application.

- A comparative analysis of Socratic Method and Case Study Method shows that there is a high positive correlation between Socratic Method and Analytical ability whereas the high positive correlation between Case study method and evaluation exists.

- A comparative analysis of Socratic Method and Project Based Learning shows that there is a high positive correlation between Socratic Method and Analytical ability whereas the high positive correlation between Project Based Learning and creativity exists.

- A comparative analysis of Project Based Learning and Case Study shows that there is a high positive correlation between Project Based Learning and Creativity whereas the high positive correlation between Case Study method and evaluation exists.

- This study has revealed that there is not much impact of the respondents graduate studies and the learning outcomes.

- This study also found that there is no influence of the respondents' selection of specialization like Finance, Human Resource Management, Marketing, International Business and Operations Management on the learning outcomes.

- Business Schools in India and different countries have differences in their approach in their studies and research. Therefore, the study of this type discussing about the teaching methodologies and its impact on the learning outcomes are considered differently by the

students.

- This study can be conducted in various universities in developed countries so that the maturity of the students in understanding the learning outcomes are much varied, therefore, the possibility of getting different result is high.

- Education in India, including Post-Graduate studies are majorly sponsored by Parents and the students take it as education for a degree rather than education for life. In such cases, the learning outcome and approach to the methodologies are also different.

- This research tries to find out the possibility higher learning outcomes, Analysis, Evaluation, and Creativity through the teaching methods Socratic Method, Case Study Method, Project Based Learning and Any Other Teaching Method. It is found that the ability to analyse is best possible by Socratic Method (SM), the ability to evaluate is best possible by Case Study Method (CM) and the ability of Creativity is best possible by Project Based Learning (PBL)

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