



# Preference For Games and Simulation as A Pedagogical Tool Among Faculties in Management Education with Reference to Coimbatore City

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## Abstract

Innovative pedagogical techniques, such as games and simulations, are widely used by higher education institutions to achieve the objective of fostering the growth of future professionals. This research analyzes the preference for a game and simulation-based teaching in management education. With the assumption that the bulk of learning occurs outside the classroom, the field of digital games and simulations continues to expand in terms of output compared to conventional teaching methods. The major goal was to investigate the preference for games and simulations as a pedagogical tool for accomplishing certain learning goals in the management education industry. Research questions concentrate on the current practices, competency level, and usage of games and simulations in management courses. Overall, the results imply that games and simulations positively influence learning goals because, as a teaching tool, games and Simulations enable students to develop a balanced, diversified approach to solving real-world issues, individually and jointly. Students are more likely to develop into self-reliant employees, critical thinkers, and lifelong learners when exposed to real-world context and technology in the classroom. Finally, the researcher has attempted to assemble data for academics and management education practitioners interested in effectively using games and simulations for instructional purposes.

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## Introduction

For a long time, the Indian educational system has emphasized rote learning in simple terms of memorizing and using predetermined resources. The examination system also favors testing students' memory over their abilities and originality. Even at higher education levels, the pattern stays the same. As a result of the lack of intellectual stimulation provided by games and Simulation, students are missing out on essential knowledge and abilities that are useful not just in their employment but also in other aspects of life. It is widely accepted that children are active learners rather than passive receivers of information, necessitating research as a pedagogical tool in higher education. If given the chance and an ideal

his own, making learning more enjoyable and lasting.

## Games

A game is a rigorous, organized activity with rules, objectives, advancement, and rewards distinct from reality. The most successful learning aids are goal-oriented games with significant social components that imitate real-world events. Game-based learning or gamification refers to incorporating gaming into learning experiences to boost student engagement and motivation. It also refers to a pedagogical system established inside gaming design but used in a non-game setting. Some qualities shared by games may be leveraged to create an effective learning

learning environment, a youngster will explore on

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environment, including complicated scenarios in which players are required to make choices and solve problems in progressively challenging conditions. Experimentation and risk-taking encourage players to try out alternate strategies and encounter a variety of results. The interest in investigating the use of games in higher education, particularly instructional games (Cankaya and Karmate, 2009) and Applied games, continues to increase (Van Roessel and Van Mastigt, 2011).

**Simulations**

In a simulation, the student is immersed in a simulated environment designed by the teacher. They depict a setting in which pupils actively take part. Simulations facilitate experiential learning. It aligns nicely with the ideas of student-centered and constructive learning and instruction. Simulations encourage critical and evaluative reasoning. Simulation gives students a deeper appreciation for managing the environment, politics, community, and culture. Indirectly, simulations may improve abilities such as debate, a process linked with certain large-scale simulations, and research. Simulation enables the teaching of math, science, and technical skills in an integrated and practical way.

Simulation offers students a novel approach to problem-solving; it is cost-effective and lowers human danger. Simulation enables educators to achieve their objectives (Garcia, Garbonell, and Watts, 2012). Through scenario-based instruction, learners develop essential abilities such as communication, collaboration, leadership, decision-making, work prioritisation, and stress management (Flangen, 2004). Individuals or groups can finish the practical scenario (Robertson et al., 2009), which may lead to cooperation and information exchange.

In contrast to simulations, games are both

entertaining and educational, with fixed rules, objectives, and stakes. On the other hand, simulators are living, breathing instruments that can be adjusted to reflect changing conditions and conditions in the actual world, promising realism, accuracy, and authenticity (Sauve, 2007).

**Objectives**

To analyze the preference for games and Simulation as a teaching methodology.

To understand the competency level of management faculty using Games and Simulation as a Pedagogical tool in Coimbatore City.

**Research Hypothesis**

H01: There is no substantial difference between geographic location and the capacity to use games and simulations as teaching tools.

H02: There is no significant difference in Job status, employed sector, and competence level among teachers in Coimbatore who use Games and Simulation as a pedagogical method.

**Research Methodology**

The core data for the study were acquired utilizing a structured questionnaire and a descriptive research approach. Secondary data on games and Simulation in higher education were collected from numerous websites and other sources. 55 samples were chosen for the study was selected using non-probability convenience sampling.

**Findings**

H01: There is no significant difference between the area and capability of handling games and Simulation as a pedagogical tool.

**Table:1**

| Chi-Square Tests      |        |    |                      |               |                     |                     |      |
|-----------------------|--------|----|----------------------|---------------|---------------------|---------------------|------|
|                       | Value  | df | Asymp. Sig. (2sided) | Sig. (2sided) | Exact Sig. (2sided) | Exact Sig. (1sided) | Sig. |
| Pearson Chi-Square    | 1.661a | 1  | .197                 |               |                     |                     |      |
| Continuity Correction | .967   | 1  | .325                 |               |                     |                     |      |
| Likelihood Ratio      | 1.727  | 1  | .189                 |               |                     |                     |      |
| Fisher's Exact Test   |        |    |                      |               | .236                | .163                |      |



|  |       |   |      |  |  |
|--|-------|---|------|--|--|
| Linear-by-Linear Association   | 1.631 | 1 | .202 |  |  |
| N of Valid Cases   | 55    |   |      |  |  |
| a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 6.11. |       |   |      |  |  |
| b. Computed only for a 2x2 table   |       |   |      |  |  |

Source: Primary Data

**Inference**

Indicating that the null hypothesis should be accepted, the Pearson Chi-Square (p-value) is greater than 0.05. Therefore, there are no significant regional differences in the ability to employ games and simulations as teaching tools.

H02: In the city of Coimbatore, there is no substantial difference between the employed sector and the competence level of faculty utilizing Games and Simulation as a pedagogical tool.

**Anova**

|  |                | Sum of Squares | df | Mean Square | F     | Sig. |
|--|----------------|----------------|----|-------------|-------|------|
| Focus On The Linkage Between Topics  | Between Groups | 5.712          | 4  | 1.428       | 3.959 | .007 |
|  | Within Groups  | 18.033         | 50 | .361        |       |      |
|  | Total          | 23.745         | 54 |             |       |      |
| Develop Skills Rather Than Cover Materials Encourage Discussions That Involve The Whole Class  | Between Groups | .946           | 4  | .237        | .430  | .786 |
|  | Within Groups  | 27.490         | 50 | .550        |       |      |
|  | Between Groups | 28.436         | 54 | .277        | .489  | .744 |
|  | Within Groups  | 1.106          | 4  | .566        |       |      |
|  | Between Groups | 28.275         | 50 |             |       |      |
|  | Within Groups  | 29.382         | 54 | .661        |       |      |
|  | Between Groups | 2.645          | 4  | .342        |       |      |
|  | Within Groups  | 17.100         | 50 |             |       |      |
|  | Between Groups |                |    |             | 1.934 | .119 |
|  | Within Groups  |                |    |             |       |      |
| Total  |                |                |    |             |       |      |
| Describe Important Points At The Class End To Allow Students To Review Them. To Recover Materials By Studying In Their Second Language | Between Groups | 19.745         | 54 |             |       |      |
|  | Within Groups  |                |    |             |       |      |
|  | Total          |                |    |             |       |      |
| Discuss Time Management Skills With Students   | Between Groups | 2.096          | 4  | .524        | 1.407 | .245 |
|  | Within Groups  | 18.631         | 50 | .373        |       |      |
|  | Total          | 20.727         | 54 |             |       |      |
| Provide Students With Clear And Comprehensive Feedback On Their Future Learning  | Between Groups | 1.841          | 4  | .460        | 1.019 | .407 |
|  | Within Groups  | 22.595         | 50 | .452        |       |      |
|  | Total          | 24.436         | 54 |             |       |      |

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|   |                                 |                |         |              |       |      |
|---|---------------------------------|----------------|---------|--------------|-------|------|
| Introduce More Active Teaching Methods To The Traditional Teaching System That Focuses On Lectures And Readings | Between Groups<br>Within Groups | .833<br>19.604 | 4<br>50 | .208<br>.392 | .531  | .713 |
|   | Total                           | 20.436         | 54      |              |       |      |
| Transmit Lecture Outlines That Connect Topics And Concepts  | Between Groups                  | .290           | 4       | .073         | .147  | .963 |
|   | Within Groups                   | 24.619         | 50      | .492         |       |      |
|   | Total                           | 24.909         | 54      |              |       |      |
|   | Between Groups                  | 5.476          | 4       | 1.369        | 1.938 | .119 |
|   | Within Groups                   | 35.324         | 50      | .706         |       |      |
| Encourage Students To Include The Publications And Opinions Of Practitioners Into Their Assignments             |                                 |                |         |              |       |      |
|   |                                 |                |         |              |       |      |
| When Possible, Use Guest Speakers To Present Topics   | Total                           | 40.800         | 54      |              |       |      |
|   | Between Groups                  | 1.852          | 4       | .463         | .466  | .760 |
|   | Within Groups                   | 49.675         | 50      | .994         |       |      |
| Total   |                                 | 51.527         | 54      |              |       |      |
| Encourage Discussion Among Peers  | Between Groups                  | 1.499          | 4       | .375         | .883  | .481 |
|   | Within Groups                   | 21.228         | 50      | .425         |       |      |
|   | Total                           | 22.727         | 54      |              |       |      |
| Spend Quality Time On Developing Analytical Skills Required For The Case Analysis                               | Between Groups                  | 2.509          | 4       | .627         | 1.262 | .297 |
|   | Within Groups                   | 24.837         | 50      | .497         |       |      |
|   | Total                           | 27.345         | 54      |              |       |      |
| Use A Wide Array Of Active Learning Methods Highlight The Link Between Related Topics                           | Between Groups                  | 1.645          | 4       | .411         | .866  | .491 |
|   | Within Groups                   | 23.737         | 50      | .475         |       |      |
|   | Total                           | 25.382         | 54      |              |       |      |
|   | Between Groups                  | 3.544          | 4       | .886         | 2.804 | .035 |
|   | Within Groups                   | 15.801         | 50      | .316         |       |      |
|   | Total                           | 19.345         | 54      |              |       |      |
| Use Technology-Based Teaching Tools Whenever Appropriate  | Between Groups                  | 1.928          | 4       | .482         | 1.218 | .315 |
|   | Within Groups                   | 19.781         | 50      | .396         |       |      |
|   | Total                           | 21.709         | 54      |              |       |      |

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Source: Primary Data

### Inference

From the above table, it can be deduced that the focus on the linkage between topics (0.07) and the emphasis on the linkage between related topics (0.035) hold a significant difference between job status and competency level of faculty using Games

and Simulation as a pedagogical tool in Coimbatore city. The other parameters have no significant difference.

H03: There is no significant difference between the employed sector and the competence level of teachers in Coimbatore who use Games and Simulation as a pedagogical tool.



**Anova**

|   |                | Sum of Squares | df | Mean Square | F     | Sig. |
|---|----------------|----------------|----|-------------|-------|------|
| Focus On The Linkage Between Topics Develop Skills Rather Than Cover Materials  | Between Groups | 5.340          | 3  | 1.780       | 4.932 | .004 |
|   | Within Groups  | 18.406         | 51 | .361        |       |      |
|   | Total          | 23.745         | 54 |             |       |      |
|   | Between Groups | 3.868          | 3  | 1.289       | 2.676 | .057 |
|   | Within Groups  | 24.569         | 51 | .482        |       |      |
|   | Total          | 28.436         | 54 |             |       |      |
| Encourage Discussions That Involve The Whole Class  | Between Groups | 3.980          | 3  | 1.327       | 2.663 | .058 |
|   | Within Groups  | 25.402         | 51 | .498        |       |      |
|   | Total          | 29.382         | 54 |             |       |      |
| Summarize Important Points At The End Of The Class To Allow Students To Study In Their Second Language To Recover Materials | Between Groups | 3.188          | 3  | 1.063       | 3.274 | .028 |
|   | Within Groups  | 16.557         | 51 | .325        |       |      |
|   | Total          | 19.745         | 54 |             |       |      |
| Discuss Time Management Skills With Students  | Between Groups | 3.971          | 3  | 1.324       | 4.029 | .012 |
|   | Within Groups  | 16.756         | 51 | .329        |       |      |
|   | Total          | 20.727         | 54 |             |       |      |
|   | Between Groups | 2.031          | 3  | .677        | 1.541 | .215 |
|   | Within Groups  | 22.406         | 51 | .439        |       |      |
|   | Total          | 24.436         | 54 |             |       |      |
| Give Students Clear And Thorough Feedback On Their Further Learning   | Between Groups | 2.031          | 3  | .677        | 1.875 | .145 |
|   | Within Groups  | 18.406         | 51 | .361        |       |      |
|   | Total          | 20.436         | 54 |             |       |      |
| Distribute Lecture Outlines That Link Between Topics And Concepts   | Between Groups | 2.743          | 3  | .914        | 2.104 | .111 |
|   | Within Groups  | 22.166         | 51 | .435        |       |      |
|   | Total          | 24.909         | 54 |             |       |      |
|   | Between Groups | 5.134          | 3  | 1.711       | 2.447 | .074 |
|   | Within Groups  | 35.666         | 51 | .699        |       |      |
|   | Total          | 40.800         | 54 |             |       |      |
| Encourage Students To Incorporate Practitioners' Publications And Views Into Their Assignments                              | Between Groups | 3.502          | 3  | 1.167       | 1.240 | .305 |
|   | Within Groups  |                |    |             |       |      |
|   | Total          |                |    |             |       |      |

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|   |   |        |    |       |       |      |
|---|---|--------|----|-------|-------|------|
| Topics Whenever Possible  | Within Groups<br>Total                                    | 48.025 | 51 | .942  |       |      |
|   |   | 51.527 | 54 |       |       |      |
|   |   |        |    |       |       |      |
|   |   |        |    |       |       |      |
| Encourage Discussion Among Peers  | Between Groups<br>Within Groups                           | 1.658  | 3  | .553  | 1.338 | .272 |
|   |   | 21.069 | 51 | .413  |       |      |
|   | Total   | 22.727 | 54 |       |       |      |
| Spend Quality Time On Developing Analytical Skills Required For Case Analysis | Between Groups<br>Within Groups<br>Total                  | 2.856  | 3  | .952  | 1.983 | .128 |
|   |   | 24.489 | 51 | .480  |       |      |
|   |   | 27.345 | 54 |       |       |      |
|   |   |        |    |       |       |      |
| Use A Wide Array Of Active Learning Methods                                   | Within Groups<br>Total<br>Between Groups<br>Within Groups | 1.414  | 3  | .471  | 1.003 | .399 |
|   |   | 23.967 | 51 | .470  |       |      |
|   |   | 25.382 | 54 |       |       |      |
|   |   | 3.502  | 3  | 1.167 |       |      |
| Highlight The Link Between Related Topics                                     | Between Groups<br>Within Groups                           | 15.843 | 51 | .311  | 3.758 | .016 |
|   |   |        |    |       |       |      |
|   | Total   | 19.345 | 54 |       |       |      |
| Use Technology-Based Teaching Tools Whenever Appropriate                      | Between Groups<br>Within Groups<br>Total                  | 5.170  | 3  | 1.723 | 5.314 | .003 |
|   |   | 16.539 | 51 | .324  |       |      |
|   |   | 21.709 | 54 |       |       |      |

Source: Primary Data

### Inference

Focus on the connection between subjects (0.04), Summarize significant points after class (0.028), Discuss time management skills with students (0.012), emphasize the connection between related topics (0.016), and employ technology-based teaching tools are the most effective teaching strategies (0.003) The city of Coimbatore retains a considerable gap between the employed sector and the competence level of professors employing Games and Simulation as a pedagogical tool. The other parameters do not change significantly.

### Conclusion

Games and Simulation as a pedagogical tool will enhance the level of students, can examine their perceptions, and inspire them to learn in a setting where they would want to be in the future. The teaching fraternity feels fulfillment and pride when they see the tangible results of their labor, increasing their desire to teach and enhance the students. Communication abilities, problem-solving, critical thinking, and learning-to-learn are all brought out by way of games and simulation

usage. Overall, using games and Simulation as a teaching tool in the relevant topics and highlighting the topics allows faculties to build a balanced, diversified approach among the students to tackle real-world problems individually and in groups.

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