

# A STUDY ON THE EFFECTIVENESS LEARNING MANAGEMENT SYSTEM (LMS) PRACTICES WITH REFERENCE TO JUPITER ACADAMY

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#### ABSTRACT

The study focuses on measuring LMS practices in JUPITER ACADAMY PVT LTD, CHENNAI. The basic understanding of this educational academy and the practices which the provide in the academy are discussed. In this research exploration, a descriptive study was conducted to examine the shift work towards comprehensive employee wellbeing, employing simple random sampling with a population size of 600. Data was collected through both primary and secondary sources, utilizing a well-structured questionnaire distributed among 161 respondents. Secondary data was gathered from various sources such as the internet, journals, and published records. Convenience sampling was employed to select participants from Jupiter Academy Pvt Ltd. The study spanned four months from January to April 2024. Analysis tools including SPSS 16.0 Version, H test, correlation, normality, and percentage were utilized to analyze the collected data. Through percentages and diagrams like tree maps, funnels, and column and bar diagrams, the study aimed to provide a comprehensive understanding of respondents' perceptions towards electronic payments, thus contributing to the broader discourse on research methodology and its application in academia and beyond.

Keywords: LMS Practices, Employee Wellbeing, Data Analysis.

# **INTRODUCTION:**

In the rapidly evolving landscape of education, the integration of technology has become indispensable, with Learning Management Systems (LMS) emerging as pivotal platforms reshaping educational paradigms. As such, this study embarks on a comprehensive investigation into the efficacy of LMS practices, focusing specifically on Jupiter Academy. Situated at the intersection of pedagogy and technology, Jupiter Academy stands as an exemplar institution, pioneering innovative approaches to teaching and learning. Through an in-depth exploration of its LMS strategies, this research endeavors to unearth critical insights into enhancing educational outcomes and mitigating potential threats in the digital learning domain.

The first objective of this study delves into the identification of core threat scenarios prevalent within Jupiter Academy's LMS infrastructure. In an era marked by cybersecurity vulnerabilities and data breaches, understanding these threats is paramount to safeguarding the integrity and confidentiality of educational resources. By meticulously analyzing potential vulnerabilities, this research aims to propose robust countermeasures, thereby fortifying Jupiter Academy's digital ecosystem against malicious actors and ensuring uninterrupted access to educational materials.

Moving forward, the study shifts its focus towards examining the impact of LMS practices on teaching and assessment methodologies within Jupiter Academy's educational framework. With the convergence of on-campus and online modalities, educators are tasked with navigating a dynamic learning landscape characterized by diverse student needs and technological exigencies. By scrutinizing the efficacy of LMS tools in facilitating teaching delivery and assessment

procedures, this research seeks to illuminate strategies for optimizing educational practices and fostering equitable learning experiences across disparate settings.

Furthermore, the study endeavors to gauge the effects of virtual classrooms embedded within Jupiter Academy's LMS on student satisfaction levels. As virtual learning environments increasingly supplant traditional classroom settings, it becomes imperative to evaluate their efficacy in engendering student engagement, collaboration, and satisfaction. Through rigorous empirical analysis and qualitative feedback mechanisms, this research aims to elucidate the nuanced interplay between LMS-mediated instruction and student perceptions of educational quality, thereby informing strategies for enhancing overall satisfaction and retention rates.

Finally, the study endeavors to juxtapose the effectiveness of blended learning modalities against traditional face-toface education within Jupiter Academy's pedagogical framework.

With blended learning models gaining traction as viable alternatives to conventional teaching methodologies, it becomes imperative to discern their comparative advantages and limitations. Through comprehensive assessment protocols and comparative analyses, this research seeks to delineate the unique affordances of blended learning environments vis-à-vis traditional classroom settings, thereby offering insights into optimizing educational delivery formats and maximizing student learning outcomes.

In summation, this study aspires to unravel the intricate nexus between LMS practices, pedagogical efficacy, and student satisfaction within the context of Jupiter Academy. By interrogating prevailing threat landscapes, assessing pedagogical impacts, gauging student satisfaction levels, and juxtaposing learning modalities, this research endeavors to furnish actionable recommendations for optimizing educational practices and fortifying institutional resilience in an eCra defined by technological disruption and educational innovation.

# NEED OF THE STUDY

The study on the effectiveness of Learning Management System (LMS) practices at Jupiter Academy addresses critical areas of concern within educational institutions. Firstly, identifying core threat scenarios and proposing countermeasures is essential for safeguarding sensitive data and ensuring the security of the learning environment. Secondly, analyzing the impact on teaching and assessment practices in both on-campus and online settings is crucial for maintaining educational standards and adapting to the evolving landscape of education. Furthermore, understanding the effects of virtual classrooms within LMS on student satisfaction is vital for enhancing the overall learning experience and engagement. Lastly, examining the effectiveness of blended learning compared to traditional face-to-face education is necessary for optimizing instructional methods and meeting the diverse needs of learners. This study addresses these needs, providing valuable insights for improving educational practices and enhancing the effectiveness of LMS implementation at Jupiter Academy.

#### **OBJECTIVES OF THE STUDY**

- > To identify the core threat scenarios and propose countermeasures used in the firm.
- > To analysis the impact on teaching and assessment practices in both on-campus and online settings of the firm.
- > To examine the effects of virtual classrooms within learning management systems on student satisfaction.
- > To understand the effectiveness of blended learning compared to traditional face-to- face education.



# SCOPE OF THE STUDY

This study investigate the enduring impacts of emerging technologies like AI-driven adaptive learning on Learning Management System (LMS) effectiveness and student outcomes. Additionally, it seeks to explore how immersive technologies such as virtual and augmented reality can be integrated into LMS platforms to heighten engagement and enrich learning experiences. The study also aims to examine the evolving significance of data analytics and predictive modeling in refining LMS functionalities and tailoring personalized learning pathways. Furthermore, it will assess the scalability and sustainability of LMS practices in meeting varied learner needs and aligning with global educational trends, with a focus on fostering inclusivity and accessibility. This research endeavors to provide insights into harnessing technological advancements to optimize educational platforms for diverse learners worldwide.

### **RESEARCH METHODOLOGY**

This study uses a methodical research approach to the effectiveness of Learning Management System (LMS) practices. It involves designing surveys, ensuring representativeness through sampling techniques, and analyzing the data using statistical methods. The research aims to understand how employees perceive workplace diversity and its impact on corporate success. Secondary sources include books and journals, while primary data collection is through surveys. A sample size of 600 is specified by the Morgan table, and statistical power is guaranteed through probability sampling and stratified random sampling.

#### LITERATURE REVIEW

# Mr. Wan Zulkifli Wan Kassim (2024) in his study the Malaysian University Students' attitudes towards its use as learning management system.

Education in the 21st century relies heavily on information technology, with online learning facilitated by platforms like Google Classroom. While global studies praise its effectiveness, research on Malaysian learners is lacking. A study conducted with 89 university students in Terengganu, Malaysia, revealed overwhelmingly positive attitudes towards Google Classroom. Participants, mostly female and aged 20-23, transitioned from face-to-face to online learning due to the Covid-19 pandemic, finding Google Classroom easy to use, useful, and intending to continue its use.

# Mr. Christos A. Fidas and Marios belk (2023) in his study the ensuring academic integrity and trust in online learning management system.

This paper presents findings from an eighteen-month longitudinal study across three European Higher Education Institutions (HEIs) on the credibility of online examinations. Stakeholders participated to identify core threat scenarios and propose countermeasures for HEI learning management systems. A feasibility study of an open-source identity management system, TRUSTID, was conducted, showing resilience against impersonation attacks and positive usability feedback from 133 HEI students. Privacy preservation of sensitive personal data in TRUSTID is also addressed.

# Mr. Amir Ashrafi and Ahad Zareravasan (2022) in his study the exploring factor influencing students' continuance intention to use the learning management system.

This study addresses the gap in research by investigating factors influencing students' continuance intention to use Learning Management Systems (LMS). Integrating ECM, TAM, subjective norm, and hedonic value, it tests a model using data from 153 students at Mehral borz University in Tehran, Iran. Perceived usefulness emerges as the strongest predictor of continuance intention, while attitudes towards LMS and satisfaction levels surprisingly show no significant influence. The study's implications and limitations are also discussed, providing insights for future research and educational practices.



# Jame Kite and Timothy E Schlub (2020) in his study of exploring lecturer and student perceptions and use of a learning management system in a postgraduate public health environment.

Learning management systems (LMS) are integral to higher education, yet their impact on learning remains underexplored. Interviews at Sydney School of Public Health revealed Canvas primarily serves as an information repository.

#### DATA ANALYSIS AND INTERPRETATION

#### NON PARAMETRIC TEST

1. U TEST

#### Ranks

|                             | Gender | N   | Mean Rank | Sum of Ranks |
|-----------------------------|--------|-----|-----------|--------------|
| LMS Security Awareness Male |        | 99  | 84.74     | 8389.00      |
| and Confidence              | Female | 62  | 75.03     | 4652.00      |
| Assessment                  | Total  | 161 |           |              |
| LMS Integration and         | Male   | 99  | 82.63     | 8180.00      |
| Impact Factor               | Female | 62  | 78.40     | 4861.00      |
|                             | Total  | 161 |           |              |
| Virtual Classroom           | Male   | 99  | 81.50     | 8068.50      |
| Satisfaction Index          | Female | 62  | 80.20     | 4972.50      |
|                             | Total  | 161 |           |              |
| Blended Learning            |        | 99  | 85.23     | 8438.00      |
| Effectiveness Assessmen     | Female | 62  | 74.24     | 4603.00      |
| Factor                      | Total  | 161 |           |              |

#### **Test Statistics**<sup>a</sup>

|                        |          | LMS<br>Integration and | Virtual<br>Classroom<br>Satisfaction<br>Index | Blended<br>Learning<br>Effectiveness<br>Assessment<br>Factor |
|------------------------|----------|------------------------|---|--|
| Mann-Whitney U         | 2699.000 | 2908.000               | 3019.500                                      | 2650.000   |
| Wilcoxon W             | 4652.000 | 4861.000               | 4972.500                                      | 4603.000   |
| Z                      | -1.292   | 562                    | 173   | -1.462   |
| Asymp. Sig. (2-tailed) | .196     | .574                   | .863  | .144   |

a. Grouping Variable: Gender



### Inference:

The P-value for user satisfaction is greater than 0.05, indicating no significant difference between men and women in terms of user satisfaction, data accuracy and integrity, efficiency and productivity, data analytics and reporting, and compliance and security. However, for data accuracy and integrity, efficiency and productivity, data analytics and reporting, and compliance and security, the P-value is less than 0.05. This suggests a significant difference between men and women regarding these factors. Therefore, the null hypothesis is rejected for these variables.

### 2. H Test

#### Ranks

|                              | Ā            | Age     | N   | Mean Rank |
|------------------------------|--------------|---------|-----|-----------|
| LMS Security Awareness       |              |         | 80  | 79.82     |
| and Confidence<br>Assessment | Confidence 2 | 21 - 25 | 74  | 84.85     |
|                              | 2            | 26 - 30 | 7   | 53.79     |
|                              | Т            | Total   | 161 |           |

| LMS Integration and      | 15 - 20 | 80  | 78.34 |
|--------------------------|---------|-----|-------|
| Impact Factor            | 21 - 25 | 74  | 87.61 |
|                          | 26 - 30 | 7   | 41.57 |
|                          | Total   | 161 |       |
| Virtual Classroom        | 15 - 20 | 80  | 77.88 |
| Satisfaction Index       | 21 - 25 | 74  | 87.34 |
|                          | 26 - 30 | 7   | 49.64 |
|                          | Total   | 161 |       |
| Blended Learning         |         | 80  | 73.63 |
| Effectiveness Assessment | 21 - 25 | 74  | 89.93 |
| Factor                   | 26 - 30 | 7   | 70.79 |
|                          | Total   | 161 |       |



# Test Statistics<sup>a,b</sup>

|             |       | LMS<br>Integration and | Virtual<br>Classroom<br>Satisfaction | Blended<br>Learning<br>Effectiveness<br>Assessment<br>Factor |
|-------------|-------|------------------------|--------------------------------------|--|
| Chi-Square  | 2.974 | 6.825                  | 4.946                                | 5.093  |
| df          | 2     | 2                      | 2                                    | 2  |
| Asymp. Sig. | .226  | .033                   | .084                                 | .078   |

a. Kruskal Wallis Test

# **INFERENCE:**

The data suggests that among different age groups, those aged 21-25 exhibit the highest mean ranks across all assessed factors, indicating their comparatively stronger performance and satisfaction levels. Furthermore, significant differences exist between age groups, with the 21-25 age range consistently outperforming the others, particularly evident in LMS Integration and Impact Factor and Blended Learning Effectiveness Assessment.

3. Correlation



|                   | relations  |                            |                                  |        |                       |                                      |
|-------------------|--|----------------------------|----------------------------------|--------|-----------------------|--------------------------------------|
|                   |  |                            | LMS Security<br>Awareness<br>and | LMS    | Virtual<br>Classroom  | Blended<br>Learning<br>Effectiveness |
|                   |  |                            | Confidence<br>Assessment         | -      | Satisfaction<br>Index | Assessment<br>Factor                 |
| Spearman's<br>rho | •  | Correlation<br>Coefficient | 1.000                            | .505** | .458**                | .543**                               |
|                   | Assessment   | Sig. (2-tailed)            | •                                | .000   | .000                  | .000                                 |
|                   |  | Ν                          | 161                              | 161    | 161                   | 161                                  |
|                   | LMS Integration and<br>Impact Factor                   | Correlation<br>Coefficient | .505**                           | 1.000  | .570**                | .554**                               |
|                   |  | Sig. (2-tailed)            | .000                             |        | .000                  | .000                                 |
|                   |  | Ν                          | 161                              | 161    | 161                   | 161                                  |
|                   | Virtual Classroom<br>Satisfaction Index                | Correlation<br>Coefficient | .458**                           | .570** | 1.000                 | .552**                               |
|                   |  | Sig. (2-tailed)            | .000                             | .000   | •                     | .000                                 |
|                   |  | Ν                          | 161                              | 161    | 161                   | 161                                  |
|                   | Blended Learning<br>Effectiveness<br>Assessment Factor | Correlation<br>Coefficient | .543**                           | .554** | .552**                | 1.000                                |
|                   |  | Sig. (2-tailed)            | .000                             | .000   | .000                  |                                      |
|                   |  | Ν                          | 161                              | 161    | 161                   | 161                                  |

# Correlations

\*\*. Correlation is significant at the 0.01 level (2-tailed).

#### Inference :

Since, the sample data follows non parametric test, Spearman rank correlation is used. Its is observed that the variables are positively correlated, since the correlation coefficient is more than 0.05. Therefore, null hypothesis is rejected. Alternative hypothesis is accepted.

# SUMMARY OF FINDINGS

In a recent survey, 61% of respondents identified as male, with 49.7% falling into the 15-20 age group and 49% having completed undergraduate education. A notable 58.8% perceive potential security threats to Learning Management Systems (LMS), with 38.5% highlighting cybersecurity attacks as a significant concern. Regarding mitigating threats,



30 respondents ranked this as a priority. When evaluating current security measures, 44.4% remain neutral. Teaching methods in LMS received a 56.3% approval, and 38.1% noted enhanced accessibility to assessment materials as influential. Interestingly, 32.2% did not see a change in teaching practices post-LMS implementation, while 39.8% were neutral on its impact on teaching and assessment. Virtual classrooms positively influenced student satisfaction for 55.9%, with 40.4% noting improved collaboration and networking. Yet, 30.6% felt no significant influence on satisfaction from virtual classrooms, and 42.2% remained neutral on the virtual classroom experience. Blended learning saw 35.4% favor personalized learning experiences, but 30.133% felt no impact on its effectiveness. Finally, 37.3% agreed on the value of traditional face-to-face education.

# SUGGESTION

The potential security threats and cybersecurity attacks, it's crucial to prioritize enhancing security measures within the Learning Management System (LMS). Implementing robust encryption protocols, multi-factor authentication, and regular security audits can bolster the defense against cyber threats. Educate users about best practices for online security to mitigate potential threats. Regular training sessions can empower both educators and students to recognize and respond to security risks effectively. Since a majority rank mitigating threats as a top priority, consider streamlining mitigation strategies. This could involve establishing a dedicated security team, creating response protocols for various threat scenarios, and ensuring prompt communication during security incidents.

#### CONCLUSION

In conclusion, the primary objective of studying the effectiveness of Learning Management System (LMS) practices within Jupiter Academy is crucial for enhancing the educational experience of its students. By thoroughly examining how LMS is utilized within the institution, valuable insights can be gained into optimizing teaching methodologies, resource allocation, and overall student engagement.

This research serves as a foundation for continuous improvement, allowing Jupiter Academy to adapt to evolving educational landscapes and meet the diverse needs of its learners effectively.

# **BOOKS REFERRED**

- 1. Learning Management Systems and Instructional Design: Best Practices in Online Education" by Linda V. Knight
- 2. "The Design of Learning Management Systems" by Anne L. Scott
- 3. "Handbook of Research on Educational Communications and Technology"edited by J. Michael Spector

#### JOURNAL REFFERED

- 1. Journal of Computer Assisted Learning
  - Website: <u>https://onlinelibrary.wiley.com/journal/13652729</u>
- 2. British Journal of Educational Technology
  - Website: <u>https://onlinelibrary.wiley.com/journal/14678535</u>
- 3. Educational Technology Research and Development
  - Website: https://www.springer.com/journal/11423
- 4. Journal of Educational Multimedia and Hypermedia
  - Website: <u>https://www.aace.org/pubs/jemh/</u>