



**STRENGTH OF DISTRIBUTED WEB PAGE MANAGEMENT SYSTEM
WITHIN THE SPACE OF ONLINE E-LEARNING ADMINISTRATION IN
A CONTEXTUALIZED GROUP OF SCIENCE TEACHERS**

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ABSTRACT

Without using random assignment, an empirical, experimental study was conducted on the group to determine the causal effects related to intervention on the target population considering Science Teachers by distributing the web page management system within the space of online e-learning administration and development. Three factors, like an explosion of unstructured knowledge, the requirement to manage content during a higher method, and internet networking and collaboration, were desired interventions through this quasi-experimental group.

Research Design: The study was conducted on the Science Teachers of Selangor district; Petaling Jaya Malaysia has been selected via the Solomon four-group design where participants are randomly

assigned to 1 of 4 groups that vary in the number of times the result of interest is examined in each group and whether they get the test or not.

Sample: The present sample has been divided into three groups based on the Below Average, Average, and Above Average groups. Scaled on the Normal Probability Curve and Aided by the Extreme Group Approach (EGA) as the sampling technique, only the extreme groups have been selected for conducting research on NPC. The samples drawn below average and above average were assigned to both experimental and control groups, forming two control groups and two experimental groups.

Methodology: As per the Solomon Four group design, two groups were subjected to Pre-test only but the Four groups were subjected to Pre-test and Post-test. The objective is to assess the efficacy of CMS and E-learning using the dependent and independent tests to determine the significant differences within and beyond groups.

Result: By determining all the experiments groups of Below average and above average, It was found that Distributed web page Management System within the space of online e-learning administration is strong, and as a comparison between the two extreme groups further, the above average experiment group posted a more easy learning gain as compared to the second extreme group.

Keywords: Solomon Four Group Design, Distributed Web Page Management System, e-Learning.

1. INTRODUCTION

The processing system of CMS's knowledge Administration (DA) helps the reader in various ways. It helps in the creation, utilization, and maintenance of the resources. Stepwise methodology, pointers, and CMS learning benchmark square measure gave information investigator's performing expressions information demonstrating errands for fresh out of the plastic new computer code advancement comes to that square measure creating new at CMS learning and reusing existing about CMS information.[4]

This is noted that while there square measure several website content management systems offered, all of them fall into two main types:

- **Custom Content Management Systems**
- **Premade Content Management Systems**

The most standard website content management systems square measure premade or open supply CMS. A number of the additional renowned open supply content management systems include Drupal, Joomla, and Word Press. Simply because premade CMS square measure the foremost ordinarily used doesn't build them the simplest sort of CMS. Open supply CMS square measure is usually heaps cheaper than custom CMS for a couple of reasons: the code is usually free, and therefore the choices offered square measure are restricted. [8,9]

Open supply CMS square measure places along by several developers everywhere the globe. Having been designed by several developers conjointly implies that there's heaps of additional code to create the CMS operation. Other code on a website's front will hurt your website's computer program ranking. You would like your website pages to own as very little code as attainable, and premade CMS doesn't yield that.

Custom content management systems don't seem to be used nearly as usually as premade CMS; however, they're the sole CMS utilized by Web Duck styles. Custom CMS square measure doubtless to value quite premade CMS, however associate with heaps of advantages like being ascendable, providing unlimited choices and performance exploitation as very little code as attainable.

2.THEORETICAL FRAMEWORK

The present study performs a scientific and exploratory analysis approach to analyze the impact of techniques on education. A hunting style is the specification of strategies & procedures for exploiting the data required. The general operation pattern or framework stipulates what data is to be collected from those sources by what procedure. [6,7]

The analysis methodology of this study depends on Primary and secondary knowledge. A quantitative approach isan accustomed change the researchers to gather knowledge. Permission is taken from the authorities involved when explaining the study's aim. It'sa study-supported algorithm and tables. The Secondary knowledge contains knowledge collected from varied sources like journals, books, and websites from the net.

Many business websites use content management systems, allowing site owners to update and add material as needed. Text, graphics, promotions, offers, landing pages, and other things could be included in the content. These tools are identical to those found in word processing software, and neither requires sophisticated HTML or programming knowledge. It aids in organizing the information on a standard website in this way.

We provide tailored CMS benefits that accommodate the evolving needs and usage patterns of the current e-business. We have developed a wider range of CMS setups for our clients worldwide utilizing various technologies (.NET & PHP etc.). Before developing a CMS solution for you, we will consult with you to determine your CMS requirements. After that, we will present a CMS arrangement that is specifically tailored to your unique business requirements. From selecting a CMS solution for the fundamental CMS arrangement, our skilled and knowledgeable designers will endeavour to construct the greatest CMS for you to take advantage of the benefits that are most beneficial to your website and business.

Our goal at I-CTC is to eliminate the need for ongoing, expensive site support in addition to properly creating, sending, and maintaining rich sites. You can be confident in our ability to recognize and express even the most complex projects by learning about our CMS experience and previous successful CMS implementations.

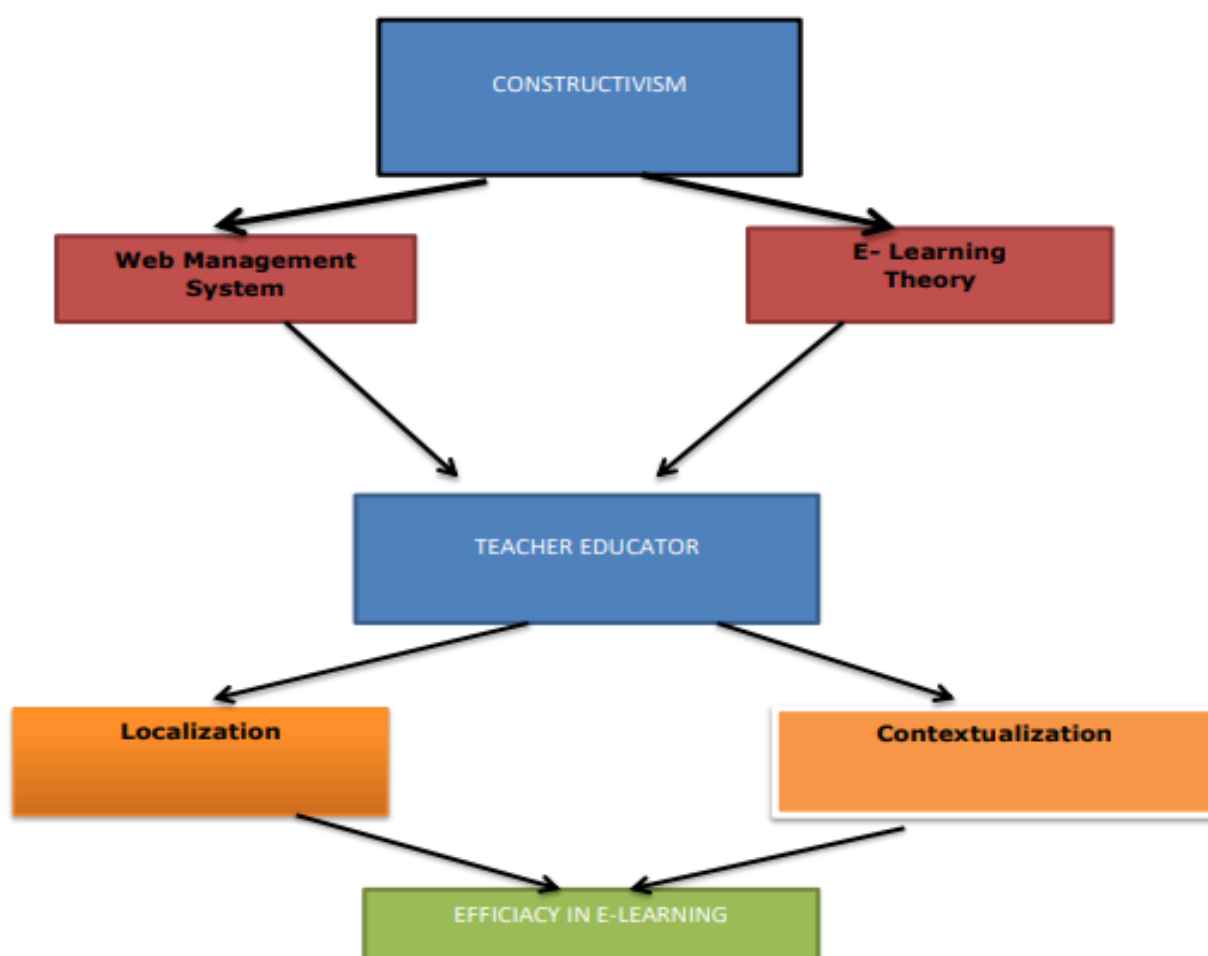
2.1 WEB CMS CONSIDERING DIVERSE INDUSTRIES

We provide clients from a variety of industries with CMS solutions, including:

- Business, community,
- social networking,
- blog, and forum sites;
- e-commerce sites;
- intranets and client extranets;
- government and nonprofit organizations; and
- interactive web applications.

Ansorge and Bendus (2003) of CMSs for dynamic approach out of date courses, it misuses the shows up educators in these courses zone unit simply starting to utilize these structures, dynamic approach addressed over as beforehand indicated, instructors mainly in abuse CMS use a CMS to transmit data despite the affirmation to understudies, like information or allotted examining. The unidentified financial backers within Ukraine for effective arrangement are described as terrible by Agarwal, N. (2022). The following methods were used to prepare this article: analysis of coherent Ukrainian & European writing, correlation, and speculation of present reality regarding the military effort in Ukraine. The study's primary focus was evaluating the study orientation activity as the foundation for an action plan for improvement. Researchers emphasized the necessity of reconceptualizing, transitioning, transforming, innovating& exploring ways and means to create and optimistically identify the challenging problem of the present times, along with the holding of instruction and webinars, including a Research Orientation. In order to develop a proposed regulation plan for improvement, the researchers intended to evaluate the research direction evaluation activity.

Figure 1: The Theoretical Framework and The Research Variables



3. RESEARCH PROBLEM

The research problem is, what is the use of web management systems in e-learning basically for Science Teachers when they teach online? Does the web management system increase Science Teachers' efficacy during e-learning?

4. OBJECTIVES

1. To measure the impact of web page management systems within the space of online e-learning.
2. To assess the efficacy of Web page Management Systems and E-learning.
3. To compare the learning gain between two Extreme groups.

5. RESEARCH DESIGN

A quasi-experiment research design has been used in which the independent variable cannot be randomly assigned because it is an innate difference of the participants themselves. The Solomon four-group design, where participants are randomly assigned to 1 of 4 groups that vary in whether or not they receive the test as well as if the output of significance is evaluated once or repeatedly within every category, has been used in research.[3]

5.1 HYPOTHESIS

1. There is no significant difference between control group efficacy as well as experimental group efficacy in e-learning for average Science Teachers.
2. No significant difference exists between the control and experimental group efficacy in e-learning for above average Science Teachers.

5.2 Sample

Science Teachers of Petaling Jaya, Selangor Malaysia, were subjected to a purposive sampling technique by using their academic performance as the inclusion criterion and is interpreted through Normal Probability Curve and Aided by the Extreme Group Approach.

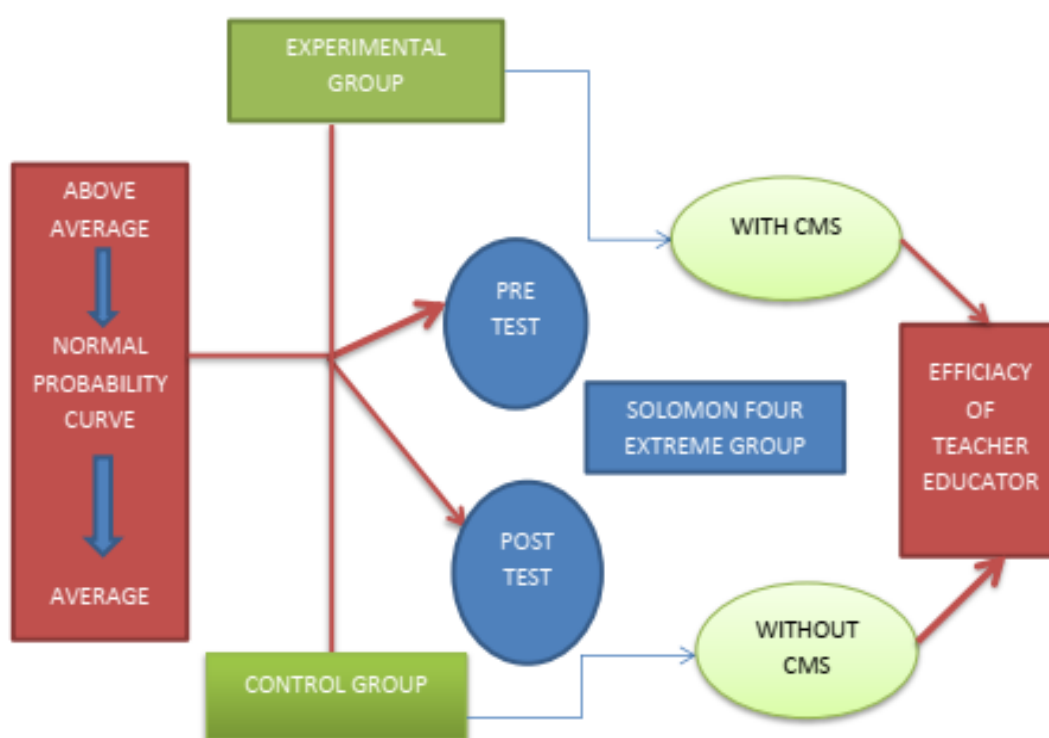
The four groups in this design are:

1. An Experimental group with both pretest as well as posttest measurements;
2. Control group along with measurements taken both before and after the test;
3. A test group that exclusively includes posttest measurements;
4. A control group that receives only posttest results.

5.3 CONCEPTUAL FRAMEWORK

The succeeding figure, on the other end, showcases the research's conceptual framework featuring the IPO Model:

Figure 2: Conceptual Framework



Normal Probability Curve was used to categorize the subjects' academic performance as revealed by a diagnostic assessment between Science Teachers. This served as the INPUT data. As per the Extreme Group Approach (EGA) requirement, only the "extreme groups," in this context, the above-

average and below-average students, were chosen to participate in the quasi-experiment. Using the Solomon four-group design, two sub-groups were formed for each categorical group, thereby composing two experimental as well as two control considering groups along with WMS regarding the e-learning of Science Teachers being the treatment or the independent variable and with the efficacy of Science Teachers in the teaching-learning process as the predictor or dependent variable. [3,5]

The immersion or the non-immersion of the Science Teachers group to the CMS or Web Management system as the treatment served as the PROCESS data.

Finally, the anticipated improved efficacy of the Science Teachers in the teaching-learning process with the web management system in e-learning served as the OUTPUT data.

6. RESULT AND DISCUSSION

To find if a significant difference existed amid the pretest and post-test considering performances of the below average experimental group and control group, the dependent t-test was used as a statistic.

Below Ave Experimental Group	N	Mean	SD σ	t- compute d	t-critical	p- value	Interpreta tion	Decision
Pretest	25	27.27	4.17	-9.11	± 2.09	0.00	Significant	Reject
Posttest	25	55.73	9.48					Ho

Table 1: Dependent t-Test Result Between the Pretest and Posttest Performances of the Below Average Experimental Group

Upon subjecting these results to a statistical analysis via a dependent T-test, a significant difference is found to exist between the pretest and posttest mean scores, which will mean rejecting the null hypothesis and acknowledging that the immersion of the below-average experimental group to the WEB management system improved their efficacy for e-learning.

Table 2 below presents the dependent T-test result between the pretest and posttest performances of the other “extreme group,” the above-average control and extreme group.

Above Ave Control Group	N	Mean	SD σ	t-computed	t-critical	p-value	Interpretation	Decision
Pretest	25	21.1	5.78	-4.74	± 2.10	0.00	Significant	Reject Ho
Posttest	25	39.6	10.91					

Table 2: Dependent t-Test Result Amid Pretest as well as Posttest Performances Related to Above Average Considering Control Group

Science Teachers comprise the above-average control group. The group's pretest and posttest mean scores are 21.1 and 39.6, respectively.

With a posttest mean higher than the pretest and a standard deviation revealing a distribution that is more spread out in the posttest as compared to its pretest, and with the t-value computed to be -4.74, the null hypothesis is rejected.

Therefore, it could be said that there was a considerable significant difference amid pretest as well as posttest means considering scores related to above average in the control group. This indicates that in the absence of the web management system, there was still significant efficacy of e-learning.[7]

7. CONCLUSION

The data gathered and interpreted in this quasi-experiment affirm the following: The significant difference existing between posttest performances related to below-average considering experimental as well as below-average type control groups; and between the above-average experimental as well as above-average considering control groups manifested the effectiveness of web management system in e-learning for Science Teachers. As the web management system or CMS is anchored to the contextual learning theory and constructivism, it could therefore be affirmed that this system can increase Science Teachers' efficacy during e-learning.

By determining all the experiments groups of Below average and above average, It was found that Distributed web page Management System within the space of online e-learning administration is strong. As a further comparison between the two extreme groups, the above average experiment group posted a more easy learning gain than the second extreme group.

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