WIRELESS MULTI-ACCESS WITH PROJECTION SYSTEM

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INTRODUCTION

The Love of projector is most likely derived from the earliest method of picture projection, weites dates back to prenintary and is performed in the form of primitive shadow play. It was the first phase in the projector's growth.

A video projector is the most common form of projector used today. Slide projectors and overhead projectors have been replaced by video projectors, which are automated versions of the older projectors. In the 1990s and early 2000s, these older projectors were largely replaced with digital video projectors, but old analog projectors are still in use in some areas. Handheld projectors that project images using lasers or LEDs are the most recent forms of projectors. If there is too much ambient light, their estimates are difficult to see.

The use of pictures to Interact and appreciate the world around us has expanded as a result of technological advances. The ase of internet technology has transformed users into active participants who can connect with their audiences using words.

Technology that provides photos, video, and applications gives customers with a range of resources to use to attract and provoke the attention of their audience. The combination of words and pictures has a strong impact on how ideas are communicated.

Setting up the projector and connection ties for a wired connection presentation requires time. Professional workers need a system that is effective, fast, dependable, simple to use, and, most important, thus less expensive. A system that can keep up with the modern or advance and seems to be quick to carry and set up.

As a result, the latest Innovation aims to provide wireless multi-access connectivity to replace old presentation methods with a compact, wireless, and simple-to-use system for presentations, videos, images, lesson plans, and business proposals.

Another aim of this project is to build a wireless visual accessibility system that will enable users to provide an excellent presentation. An android phone, laptop, or tablet can be used to monitor it.

GENERAL OBJECTIVE

This study aimed to develop a WIRELESS MULTI ACCESS WITH PROJECTION SYSTEM.

SPECIFIC OBJECTIVE

- To have a battery-operated projector that can last up to 3-5 hours and can be used in an emergency.
- To connect as the projector's controller using Macs, laptops, 10S/Android phones and tablets.
- To provide users with a wireless microphone having a distance of 5 meters for their presentation.

STATEMENT OF THE PROBLEM

This design project seeks to answer the following questions:

1. What are the characteristics of the device / system in terms of projecting which is currently used?

2. What improvement can be made out of the existing device/system?

3. What new device / system can be derived with the improvement?

4. What is the level of assessment of the group of respondents on the developed device / system with the following criteria? Is there significant difference?

4.1 Functionality

4.2 Usability

4.3 Reliability

4.4 Efficiency

4.5 Maintainability

5. What claims can be made from the developed device / system?

METHODOLOGY

Sampling is a method for selecting a sample from a person or a wide group of people for a specific research purpose. One of the most important factors in determining the accuracy of a sample is sampling. (Pooja Bhardwaj, 2019)

Researchers begin with a presentation of some findings used in sampling since probability is the foundation of sampling theory. This is accompanied by some of the most critical expected value outcomes. Both topics in the sense of sampling are applicable to all forms of populations and parameters, so the classical sampling principle is considered distribution free. Confidence interval claims regarding sample statistics, on the other hand, presuppose that the derived distributions are established. In practice, the central-limit theorem and estimators that approach normality are used. In reality, modern sample surveys are multi-characteristic, making many of the findings available from general estimation theory Lepractical. As a result. the use of complex distributions and the maximum-likelihood approach are seldom considered. Similarly, an estimator that is less expensive or easier to use is often favored over another which requires considerable computations and may have a smaller variance. It is not right, however, to conclude that more efficient estimation theory cannot be used to good effect in surveys where they are necessary and where there is a high degree of expertise and resources available. (Harold F. Huddleston, 1990)

Non-probability sampling is common in experimental or trial studies, and it does not reflect the target population. Non-probability sampling relies on subjective judgment and makes use of the most convenient units from the population. For personal interview surveys, non-probability sampling methods save money, but the resulting samples look a lot like probability sample results. Thus the participants in purposive sampling are chosen subjectively by the researcher. The researcher's judgment is used to make the decision. Respondents are not chosen at random, but rather based on the interviewers' judgment. As a result, the likelihood of inclusion for any given sample is unknown a single unit. (Oztas Ayhan, 2011)

EVALUATION

The project was evaluated based on the following criteria namely:

- Functionality
- Usability
- Reliability
- Efficiency
- Maintainability

STATISTICAL TREATEMENT

The mean was used as the tool for evaluating the project. T

The formula is:

$$X = \frac{\Sigma x}{N}$$

Where,

Σ, represents the summation

X, represents scores

N, represents number of scores

The Likert scale was used of descriptive ratings.

Table 1. The Likert Scale for Descriptive Ratings

Numerical Scale	Average Response	Descriptive Rating	Verbal Interpretation
5	4.51 – 5.00	Excellent	E
4	3.51 – 4.50	Very Good	VG
3	2.51 – 3.50	Good	G
2	1.50 – 2.50	Fair	F
1	1.00 – 1.50	Poor	P

EQUAL VARIANCE NOT ASSUMED

When the two independent samples are assumed to be drawnfrom the populations with equal variances (1.e., 012 ≠ 022), the test statistic t is computed as:

$$t = \frac{x1 - x2}{\sqrt{\frac{s1}{n1} + \frac{s2}{n2}}}$$

Where,

x1 = Mean of the first sample

x2 = Mean of the second sample

n1 = Sample size (i.e., number of observations) offirst sample

n2 = Sample size (i.e., number of observations)of second sample

s1 = Standard deviation of first samples

s2 = Standard deviation of second sample

The calculated t value is then compared to the critical t value from the t distribution table with degree of freedom.

DATA GATHERING PROCEDURE

1. Create questionnaires.

2. Present the questionnaires to the evaluators.

3. Distribute a list of questions to a group of people that the researchers will actually collect data from.

4. Analyze and interpret the data collected.

5. The results are collected in real-time for researchers to decide corrective measures.

6. Collective data came from provided questionnaires are processed in order to become useful information.

SUMMARY OF FINDINGS

This chapter shows the findings resuiting from this study.

SOP 1. Who is the beneficiary of this project?

This device will let users (Professors, Teacher, Students, Missionaries or etc.) to use a projector that have ability to operate with the use of android phone, laptop, macs also have a built-in speaker and battery connected to the device. Moreover, the proposed device will help the users to replace laptops and computers so that the cost is reduced.

SOP 2. How establishments? can it help in schools, offices and other

Many people can benefit to this- benefitting from more applicable and better learning retention as a result. Because of WIMPS, students can focus more on listening rather than only writing down things that are only useful to them. Moreover, it reduces taking down of incorrect and irrelevant notes. The use of WIMPS also makes better use of time as well. There's no need of

manual writing because it can now be projected through the use of mobile phones, laptops, macs. Whether it is making school or business presentations, projector system can add stars to the outcome of the work. The WIMPS helps you to

presentation not just presentation with images but also videos coming to the user's phone. It also has a built-in speaker so amplifiers are not in need anymore.

SOP 3. Is the device can still be used in the places where electricity is not available?

Yes, because this system is battery operated that can last up to 3-4 hours and it is designed to those places that are resided near the mountains where there is a necessity in electricity.

SOP 4. What is the assessment of the three groups of respondents namely; Students, Professors, and Practitioners in terms of the following criteria?

Is there any significant difference? The following criteria weze being assessed by the two students, professors and practitioners. groups of respondents both students, professors and partitioners.

Table 2: Summary of Assessment of on the Wireless Multi-Acccess with Projection System

Criteria	Students		Professor	Community	Composite Mean	VI	RANK
1.Functionality	4.83		4.70	5.00	4.84	E	4.5
2.Usability	4.90		4.85	5.00	4.92	E	2
3.Reliability	4.95		4.85	5.00	4.93	E	1
4.Efficiency	4.83		4.90	4.97	4.90	E	3
5.Maintainability	4.77		4.77	5.00	4.84	E	4.5
Overall Composite					**4.89**	**E**	

Table 2. shows the result of the over all assessment of the three groups of respondents, namely: Students, Professionals and Community. The overall composite mean has a numerical value of 4.89 interpreted as "Excellent".

Rank 1 is" Reliability" with a composite mean of 4.92 and Interpreted as "Excellent ".

Rank 4.5 are" Funnctionality" and "Maintainability" with composite means of 4.84 and interpreted as Excellent ".

Rank 2 is Usability" with a composite mean of 4.92 and interpreted as "Excellent ".

Rank 3 is “Efficiency” with a composite mean of 4.90 and interpreted as “Excellent”.

CONCLUSION

Based on the findings of the study, the following conclusions are drawn;

A. According to the evaluation result of the functionality of the system, the level at which performance determines completeness, accuracy, and appropriateness are defined as "Excellent" by students, professors and in the community. which means that the functionality of Wireless Multi-Access with Projection System provided specific tasks and user goals, accuracy of resulting in the required level of precision, and facilitated the achievements of the specified task and the objectives.

B. According to the evaluation results of the usability of the system, the level at which availability is set and access is defined as "Excellent" by students, professors and in the community, which means that the usability of Wireless Multi-Access Projection System has features that make it easier to operate and control. Can be used by people with the widest range of characteristics and abilities to achieve a specified context of use.

C. According to the evaluation result of the reliability of the system, the degree to which the sets maturity and availability were interpreted as "Excellent" by the students, professors and practitioners, which means that the reliability of Wireless Multi Access with Projection System has met the needs for reliability under normal operation and It was operational and was accessible when required for use.

D. According to the evaluation result of the efficiency of the system, the degree to which the sets time behavior, resource utilization and capacity were interpreted as "Excellent or Highly Accepted" by the students, professors and practitioners, which means that the efficiency of Wireless Multi Access with Projection System met the requirements of performing its functions.

E. According to the evaluation result of the maintainability of the system, the degree to which the aets modularity, reusability and modifiability were interpreted as "Excellent Highly Accepted" by the students, professors and practitioners, which means that the maintainability of Wireless Multi Access with Projection System was composed of discrete components such that a change to one component had minimal impact on other components, an asset can be used in more than one system, or in building other assets and can be effectively and efficiently modified without introducing defects or degrading existing systems quality.