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Analysis of Accepteance of Work-Based Stasion Models Athropometry Math Model for Embroidery Workers (Case Study : Kecamatan Kawalu Kota Tasikmalaya)

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Abstract

The attitude of the craftsmen and work station models in embroidery companies that are uncomfortable and safe for the body coupled with work organization that is not yet well organized often causes various problems for the body. The results of previous studies note that there are several angles that need attention: (1) the angle formed between the upper leg and buttocks, (2) the angle formed by the upper arm with the shoulder and (3) the angle formed between the upper arm and the forearm . Based on this, we have designed a work station model that measures the dimensions of the three angles above. However, the model still needs to be tested for community acceptance.

The method used in testing the work station model is the acceptance analysis approach using the modified Technology Acceptance Model (TAM) measurement method so that it can be used to determine the level of user acceptance of the work station model created.

This research was conducted in three stages by considering several factors, such as the number of researchers, time and budget of funds. Respondents in this study were embroidery workers who had worked for at least 1 year totaling 100 people from various embroidery industries in the city of Tasikmalaya. Before distributing the questionnaire. Respondents are invited to use the work station model for 45 - 60 minutes to carry out sewing activities in general. Because there is only one work station model, each respondent alternates using the work station model until all respondents use it. The trial process lasted for 20 days, namely per day there were 5 respondents who tested using the work station model.

Keywords: TAM; Stasion Kera; Bordir

1. INTRODUCTION

The design of tables and chairs as well as other work stations must take into account the user's body size or anthropometry. According to Rosewood (2003), anthropometry is the measurement of body dimensions or other physical characteristics of the body that are relevant to the design of something that people wear (1). Furthermore, Baumgartner (2003) explains that non-ergonomic work stations will encourage users to adapt which results in the emergence of the wrong work position. This position will be carried out continuously and become a person's bad habit when doing activities (2).

The results of previous studies have known the relationship between various factors, both general characteristics of craftsmen, anthropometric measurements of craftsmen, models of chairs and tables used and work organization to the emergence of physical complaints due to muscle and joint disorders suffered by embroidery craftsmen (3). Furthermore, the results of the analysis of the linkage of the factors causing muscle complaints have been used as the basis for compiling a more ergonomic work station model that will increase the comfort and

safety of the craftsmen in carrying out their work activities. However, the work station model that has been made has not been tested for public acceptance, where this acceptance test is very important to find out the various factors that may occur when the work station model is used (4). So it is necessary to conduct research on the acceptance test of the work station model that has been made.

2. RESEARCH METODE

This research activity is acceptance analysis using the modified Technology Acceptance Model (TAM) measurement method so that it can be used to determine the level of user acceptance of the work station model created.

In this study, the constructs studied were limited to only four main constructs, namely the user's perception of the ease of using the work station (perceived ease of use), the user's perception of the usefulness of the work station (perceived usefulness), the user's attitude towards the use of the work station (attitude toward the work station). using), and user acceptance of the working station (acceptance of Working Station Model). Meanwhile, external variables such as user characteristics and system characteristics were not studied because their contribution to TAM was considered insignificant, so they could be ignored even though they had an indirect effect on technology acceptance (5). behavioral intention and actual usage are replaced by IT acceptance variables because basically behavioral intention and actual usage variables are indicators to measure IT acceptance (6)(7)

Tabel 2.1 Tahapan Kegiatan Penelitian

No.	Stages	Out put	Location	Indikator Out put
1.	This stage focuses on testing the model in the field in rural areas and city areas. The description of this stage is as follows: 1. Implementation of the model in Tasikmalaya embroidery company 2. Evaluation of Working Station Model 3. Preparation of a work station model acceptance questionnaire 4. Questionnaire distribution 5. acceptance analysis of work station model 6. Data collection survey acceptance analysis of work station models 7. Submission of research results at national or international seminars 8. Annual reporting	**1**. Application products that run in actual conditions 2. Acceptance analysis results 3. Proof of sending scientific proposals	1. UNSIL Tasikmalaya Laboratory 2. Tasikmalaya Embroidery Company	1. A work station model product that can be used by embroidery companies in Tasikmalaya City 2. Scientific journals

3. RESULT AND DISCUSSION

This research was conducted in three stages by considering several factors, such as the number of researchers, time, and budget. Respondents in this study were embroidery workers who had worked for at least 1 year totaling 100 people from various embroidery industries in the city of Tasikmalaya (8). Before distributing the questionnaires. Respondents are welcome to use the work station model for 45-60 minutes to do sewing activities in general. Because there is only one work station model, each respondent takes turns using the work station model until all respondents use it (9). The trial process lasted for 20 days, ie per day there were 5 respondents who tested the use of the work station model.

3.1 Characteristic Responden

3.1.1 Respondents by Gender

Respondents who were selected based on gender consisted of two groups, namely men and women. To know the percentage of gender clearly, it can be seen in the following table:

Table 4.1 Respondents by Gender

Gender	Frequence	Percentage
Man	41	41%
Women	59	59%
Total	100	100%

Source: Primary Data Processed, 2019

Based on the table above, it can be seen that the percentage of respondents who have the highest number based on gender is female as many as 59 respondents or 59% of the total selected respondents. Meanwhile, male respondents were 41 respondents or 41% of the selected respondents.

3.1.1 Respondents by Age

Characteristics of respondents based on age were classified into 5 groups. To find out the percentage of age, it can be seen clearly in the following table:

Table 4.2 Respondents by Age

Age (years)	Frequence	Percentage
Under 20 years old	6	6%
20 - 30	62	62%
31 – 40	21	21%
41 - 50	9	9%
Over 50 Years	2	2%
Total	100	100%

Source: Primary Data Processed, 2019

From the table above, it can be seen that the largest percentage of respondents based on age is those aged between 20 - 30 years with a total of 62 respondents or 62%. Then followed by respondents aged in the range of 31-40 years with a total of 21 respondents or 21%, followed by respondents aged between 41-50 years with a total of 9 respondents or 9% and for respondents aged under 20 years with a total of 6 respondents or 6%. The lowest percentage of respondents are respondents aged more than 50 years with a total of 2 respondents or 2%. 3.1.1 Respondents based on Last Education

Characteristics of respondents based on their latest education are classified into 4 groups. To find out the percentage of the last education can be seen clearly the following table:

Table 4.3 Respondents by Last Education

No Last Education	Frequency	Percentage
SLTP/SMP	099	0%
SLTA/SMA	500	56%
DIPLOMA	10	12%
SARJANA	32	32%
Total	100	100%

Source: Primary Data Processed, 2019

From table 4.3, it can be seen that the percentage of respondents based on the most recent education is high school/high school level as many as 56 respondents or 56%, followed by undergraduate level as many as 32 respondents or 32%, followed by diploma level as many as 12 respondents or 12%. And for respondents based on the last education level SLTP/SMP as many as 0 respondents or no customers with the last education criteria SLTP/SMP level.

3.1.1 Respondents based on Monthly Income

Characteristics of respondents based on monthly income are classified into 5 groups. To find out the percentage of respondents based on monthly income can be seen in the following table:

Table 4.5 Respondents based on Monthly Income

Monthly Income	Frequency	Percenta
0 – 500.000	13	13%
500.001 – 1.000.000	12	12%
1.000.001 – 1.500.000	15	15%
1.500.001 – 2.000.000	24	24%
Lebih dari 2.000.000	36	36%
Total	100	100%

Source: Primary Data Processed, 2019

From table 4.5 it can be seen that the percentage of each respondent based on the characteristics that have a monthly income with the highest percentage is respondents who have a monthly income with a range of more than 2,000,000 as many as 36 respondents or 36%. Then followed by respondents who have a monthly income in the range of 1,500,001 – 2,000,000 as many as 24 respondents or 24%, then followed by respondents who have a monthly income in the range of 1,000,001 – 1,500,000 as many as 15 respondents or 15%, and respondents Those who have a monthly income in the range of 0 – 500,000 are 13 respondents or 13%. The lowest percentage of respondents are respondents with income groups in the range of 500,001 – 1,000,000, as many as 12 respondents or 12%.

3.2 Acceptance Test Results

Table 4.4 Descriptive Statistics

	N	Min.	Max.	Mean	Median	Std. Deviation
ATT	72	15	25	21,21	21	2,455
PEOU	72	18	30	23,19	24	2,47
PU	72	16	30	25,99	26	2,714
ACC	72	6	14	10,85	11	1,285
Valid N (listwise	72					

Source: Primary Data Processed, 2019

Table 4.4 shows that the user's attitude towards use (Attitude Toward Using-ATT) has a range between 15 to 25 with an average value (mean) of 21.21 and a standard deviation of 2.455. With a mean value of 21.21, which is higher than the median (21), it indicates that the auditor views the microcomputer as something positive. The standard deviation value shows a deviation of 2,455 from the mean value of respondents' answers to questions about user attitudes towards use (Attitude Toward Using-ATT) which is 21.21. (10)

User's perception of convenience (Perceived Ease of Use-PEOU) has an empirical range between 18 to 30 with a mean value of 23.19 and a standard deviation of 2.47. With a mean value of 23.19 which is close to the median value of 24, it can be said that the auditors feel that the microcomputer is quite easy for them to use. The standard deviation value indicates a deviation of 2.47 from the mean value of respondents' answers to questions about user perceptions of convenience (Perceived Ease of Use-PEOU) which is 23.19.

User perceptions of usefulness (Perceived Usefulness-PU) have a range between 16 to 30 with a mean value of 25.99 and a standard deviation of 2.714. With a mean value of 25.99 which is close to the median value of 26, it shows that auditors generally feel that microcomputers are quite useful for them. The standard deviation value shows a deviation of 2.714 from the mean value of respondents' answers to questions about user perceptions of usability (Perceived Usefulness-PU) which is 25.99.

Acceptance of work station (ACC) has a range between 6 to 14 with a mean value of 10.85 and a standard deviation of 1.285. With a mean value of 10.85 which is close to the median value of 11, it shows that in general auditors are quite accepting of microcomputers as a tool to support their performance. The standard deviation value indicates a deviation of 1.285 from the mean value of respondents' answers to questions about the acceptance of micro computers (ACC) which is 10.85.

4. CONCLUSION AND RECCOMENDATION

In general, users rate the work station model in the form of an ergonomic work table and chair that is easy and useful for embroidery craftsmen to use and can be accepted by embroidery workers, so it is expected to improve performance and avoid physical complaints that have been accepted by the community (11) .

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4.1 Embroidery craftsmen pay more attention to the level of ergonomics in their work in order to work more productively.

4.2 This work station model is further developed in accordance with existing technological advances in order to adapt the work of embroidery craftsmen.

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