Evaluation Use of Interactive Modules Cough And Shortness As Learning Media Independent Station Comprehensive

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Interactive module Cough Congested is a developed medium For facilitate Study independent students at STASE comprehensive , deep framework increase number graduation Faculty UKMPPD participants Riau University of Medicine . Study This aim For know success from something module interactive which _ developed with measure enhancement knowledge user module and level reception user (usability). Study This is study quantitative with using experimental one group pretest post-test design for evaluate enhancement knowledge and descriptive quantitative For see reception user to module interactive cough and tightness use 2 pieces questionnaire namely System Usability Scale (SUS), User Experience Questionnaire (UEQ). Study This held at the Faculty Riau University Medicine in September – November 2022. Research results This showing exists enhancement knowledge where with a different test between average pre-test score of 57.91 and post-test average of 82.83, paired sample T-test showed difference with sig. (2–tailed) of 0.000 (p <0.05). The SUS score of 71 shows that module interactive cough congested the acceptability ranges obtained are developed is "acceptable" which means can accepted . On the grade scale obtained category "C" and on the adjective ratings obtained category "good ". UEQ score by whole own average value of 1.52 with interpretation of "good". Quality pragmatic own the average value is 1.80 with "excellent" interpretation , para quality hedonic own the average value is 1.22 with interpretation of "good". With results study This can concluded that module interactive cough and tightness succeed facilitate user Study in a manner independently , with show good reception _ from user to module developed and interactive _ _ increase knowledge user .

INTRODUCTION

Station comprehensive is station specially organized _ with objective For increase readiness student in take UKMPPD (Competency Test Medical Profession Program Student) (Giri, Lasmawan, & Putra, 2022). UKMPPD is exams administered by students _ education profession doctor after finished undergo secretariat clinics in health services (Guspianto & Ibnu, 2020). Stase comprehensive aim For increase number graduation Faculty UKMPPD participants Riau University of Medicine (Aryanty & Harahap, 2020). Based on observation beginning form interviews conducted , problems at the station comprehensive found _ is less time and learning media (Hebert & Worthy, 2001). For That learning media is needed _ help the learning

process become effective , capable facilitate student Study in a manner independent (Roemintoyo & Budiarto, 2021).

Learning media is tool that can help the learning process teach so that meaning the message conveyed become more clear and purposeful education or learning can achieved with effective and efficient (Winarto, Syahid, & Saguni, 2020). Media learning interactive as possible used student For Study independent like quiz interactive , web based learning, game education, and module interactive (Cook et al., 2010) . Interactive module is a set of compiled non- print digital learning media in a manner systematic and can used in a manner independently by students (Istuningsih, BAEDHOWI, & Sangka, 2018) . Excess from module interactive as a learning medium can displays easy picture , audio, video animation For used , as well be equipped with test or quiz that gives effect mutual interaction _ between student with learning media (Nurhasanah, Maspuroh, & Rizal, 2022). for know success from something module interactive use _ so evaluation (Kauffman, 2015). One evaluation success something module interactive is with measure level reception user (usability) (Nacke, Drachen, & Göbel, 2010). Lots of usability used For evaluate device software and websites.8 Usability is something important _ in the process of developing learning media (Sagar & Saha, 2017). Usability and experience user is determinant main from quality something product in the form of media or system , as well become indicator from success or failure (Van Schaik & Ling, 2011). a product such as learning media with low usability will give experience no use _ ok (Saputra, Abidin, Ansari, & Hidayat, 2018). Product with low usability disturb , confuse , mislead , create stress , frustration and discomfort for users (Khalid & Helander, 2006). Goals study This For evaluate use module interactive developed cough and shortness of breath based on reception users and upgrades knowledge usage (Hickie et al., 2019).

Usability is evaluation the extent to which the system , product or service can used by users certain For reach specified purpose _ with effectiveness , efficiency and satisfaction in context certain uses (Petrie & Bevan, 2009) . The System Usability Scale was developed by John Brooke in 1996 , the system usability scale can used For measure usability levels at various product such as hardware, software, mobile apps, to websites (Brooke, 2013)

User experience is response someone made _ from use or participation in use something product , system , or service. 8 The User Experience Questionnaire consists from 6 aspects evaluation namely attractiveness, Perspicuity, efficiency, dependability, stimulation, novelty. kindly simple evaluation against UEQ is consists from evaluation to quality pragmatic and quality hedonic something product learning developed interactive (Kushendriawan, Santoso, Putra, & Schrepp, 2021).

RESEARCH METHODS

Interactive module Developed cough and shortness of breath use a number of application . Google site is the main platform used For develop module Here , Ispring suite 9 is used For develop the quiz contained in each topic . Interactive module system developed cough and shortness of breath served in 4 navigation

menus main that is Pre test , Material , Post test and Questionnaire . on matter learner there is summaries , videos as well quiz related disease Abscess Lungs , Bronchial Asthma , Bronchiectasis , Bronchitis acute , Influenza, Cancer Lung , Pneumonia, Pneumothorax, Tuberculosis lungs . Interactive module used in research _ This like shown in the picture following ;

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Study This is study quantitative with using experimental one group pretest post-test design for evaluate enhancement knowledge and descriptive quantitative For see reception user to module interactive cough and tightness . Study This held at the Faculty Riau University Medicine in September – November 2022. Samples used in the study This is the total sampling, namely 33 students Faculty Riau University of Medicine who followed station clerkship in the period September – November 2022 .

Pre test and post test done For measure enhancement knowledge student after use module developed interactive . _ For measurement reception user done use 2 pieces questionnaire namely System Usability Scale (SUS), User Experience Questionnaire (UEQ). SUS measurement using SUS questionnaire that has been translated to in Language Indonesia and have validity and reliability tests were carried out by Sharfina and Santoso.16 The measurement results of the System Usability

Scale (SUS) were classified to in 3 aspects evaluation namely Acceptability Ranges, Grades Scale, Adjective Rating, 15

The User Experience Questionnaire consists of from evaluation quality pragmatics , among others evaluation from perspicuity, efficiency, dependability and assessment aspects the hedonic qualities that it consists of from aspect stimulant , as well as novelty. User experience questionnaire used in research This is completed questionnaire _ diverted speak to in Language Indonesia and have tested the validity and reliability by santoso et al.17

RESULTS AND DISCUSSION
Enhancement Knowledge Before and After Using the Interactive Module Cough and Shortness of breath

Measurement results level knowledge in students from activity Study independent use module interactive cough and dyspnoea , as following :

Table 1. Improvement knowledge user before and after use module interactive cough and tightness

	N	Min	Max	Means	std. Deviation
Pre-test	33	33,33	100	57,91	14.09947
Post-test	33	55,56	100	82,83	55,56

table above _ shows data from 33 respondents , the average value of the results the pre-test measurement was 57.91 and the average post-test result was 82.83. The minimum pre-test value is 33.33 and the maximum is 100, meanwhile the minimum value of the post-test is 55.56 and the maximum is 100. Normality Test Results using Shapiro Wilk demonstrated both data (pre-test and post-test) are normally distributed .

Table 2. Difference Test Using Paired Sample T-test

|		Means	N	std. Deviation	Sig. (2-tailed)
Pair 1	Pre-Test	57.9142	33	14.09947	.000
	Post-Test	82.8300	33	13.05452	

Different test results between the pre-test and post-test values using the paired sample T-test show difference with sig. (2–tailed) of 0.000 (p <0.05). this _

means that results Study before and after use module interactive coughing and shortness of breath occur difference or enhancement in a manner mean .

Reception user module interactive cough and tightness based on System Usability Scale (SUS)

Result of SUS questionnaire obtained from 33 respondents , get SUS score was measured use whole SUS questionnaire is 71.

**Figure 2. System Usability Scale (SUS) Measurement Scale**
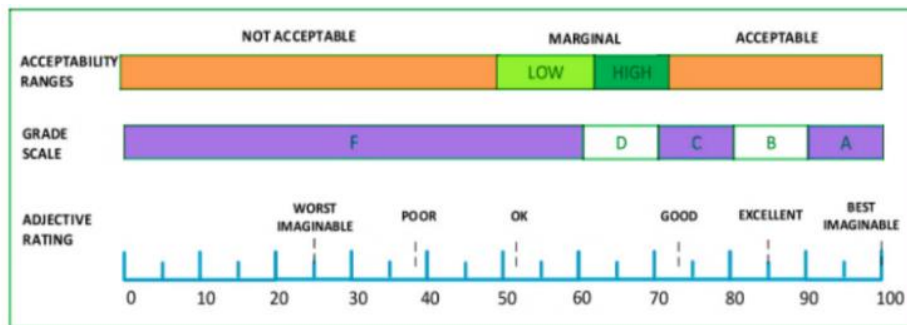
The SUS score of 71 shows that module interactive cough congested the acceptability ranges obtained are developed is "acceptable" which means can accepted . On the grade scale obtained category "C" and on the adjective ratings obtained category "good ".

Reception use module interactive cough and tightness based on User Experience Questionnaire (UEQ) based quality and category

Evaluation reception use module interactive developed cough _ based on the User Experience Questionnaire (UEQ), obtained as following ;

Graph 1. The average value of UEQ
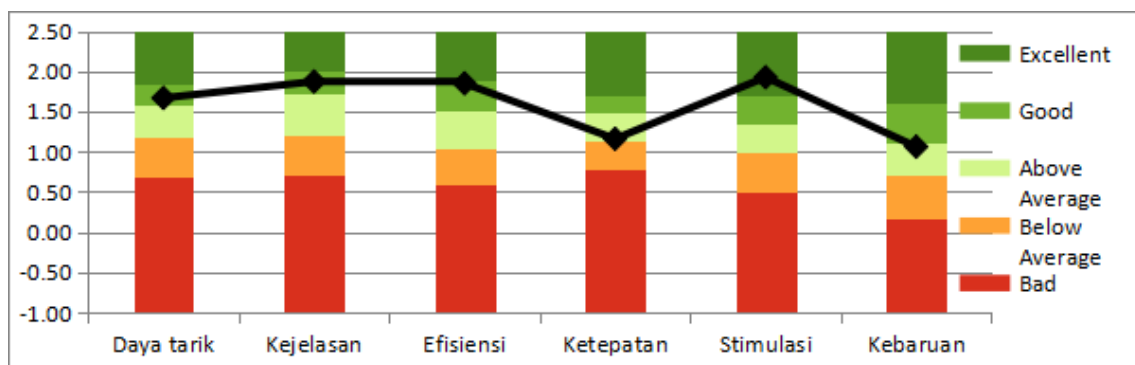
UEQ measurement results get positive value . _ Categories that are in level highest is Aspect which stimulation _ has an average value of 1.67 with interpretation of "excellent". Aspect Power pull own the average value is 1.67, aspect clarity own the average value is 1.87, and Aspect efficiency own the average value is 1.85 with interpretation of "good". On Aspect accuracy own the average value is 1.16 and

aspects novelty own the average value is 1.06 with interpretation of " above average".

Graph 2 The results of the UEQ values are based on quality
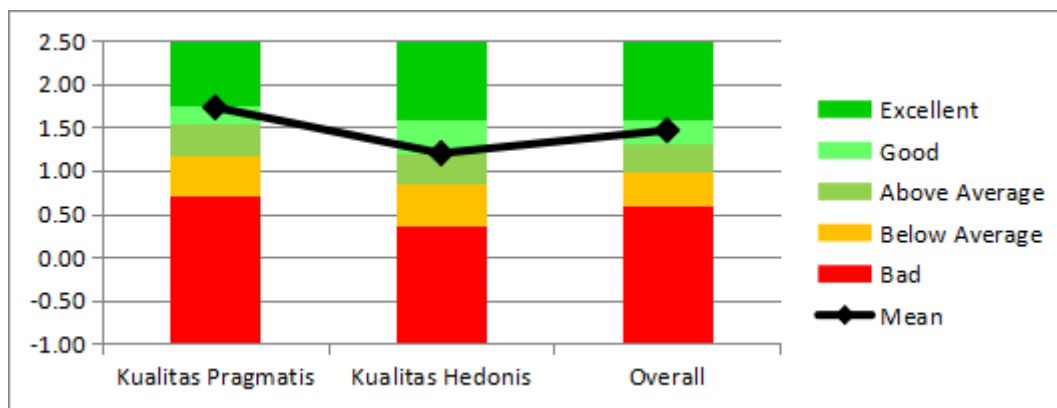
UEQ assessment based quality divided become quality Power attractive , hedonic , and pragmatic . Quality pragmatic own the average value is 1.80 with "excellent" interpretation , para quality hedonic own the average value is 1.22 with interpretation of "good" and in a way whole own average value of 1.52 with interpretation of "good". All category get mark positive with quality pragmatic get mark supreme and quality Power pull get mark lowest .

Second results evaluation (SUS and UEQ) get results good judgment , so _ module interactive cough and tightness own potency as a learning medium independently at the station comprehensive in increase knowledge users and acceptance user .

Discussion

Measurement results mark before and after use module interactive cough and tightness own meaningful difference . _ The average pre-test result was 57.51 and the post-test average result was 82.83, with sig. (2–tailed) of 0.000 (p <0.05). Research results This showing exists enhancement in a manner meaning level knowledge student after use module interactive system developed nerves , that is, the mean value pretest 57.51 and posttest mean 82.83 , paired sample T test showed difference means , with sig. (2–tailed) of 0.000 (p <0.05). this _ signify that module interactive system developed nerves _ is the effectiveness used for learning media. 18-21 p This in accordance with theory cognitive Mayer about multimedia learning , a person Study more Good when combine picture with words on the use of e-learning. Mayer's study of multimedia use , produce results significant learning.22

Measurement Results reception user using SUS is by 71 have meaning lower module interactive use _ get 'acceptable' value on acceptability ranges, 'good' on adjective ratings, and C on grade scale. this _ means module interactive system developed nerves _ rated student own good use _ for activity Study them . Usability a _ module said Good If get acceptability ranges results with acceptable category ,

grade scale in the AC range , and adjective ratings in the best , imaginable, and ok categories.23,24

Interactive module associated with efficiency learn more _ big , ability solving problems and satisfaction. 25,26 SUS measurement results in research This showing interactive module _ system developed nerves _ has good effectiveness and efficiency moment used as learning media . ISO 9241-11 divide usability measurement to be three component that is Effectiveness (Effectiveness), Efficiency (Efficiency), Satisfaction (Satisfaction). Effectiveness is is somebody truly can finish task and achieve targeted goal . _ Efficiency is how far someone emit source Power in reach goal . Satisfaction is level the comfort you experience somebody in reach purpose . 27 Use multimedia application on the module interactive , allows user For arrange speed Study Alone so that raises comfort Study for themselves . 28

Measurement results reception student using the User Experience Questionnaire (UEQ) was obtained results in a manner overall 1.52 with predicate 'good '. The average value (mean) for quality pragmatic obtained value 1.80 with predicate 'excellent', quality hedonic obtained value 1.22 with predicate 'good'. this _ show that after use module interactive , student evaluate module developed interactive _ ok when used as a learning medium independent . Evaluation to quality hedonic something product , that is evaluation quality product to aspects that are not task oriented _ like innovation , originality , and attractiveness . 29, 30 Quality hedonic called aspect pleasure , is related non - technical aspects with emotion or feeling user . kindly quality hedonic , module interactive system nerves developed in research _ This get excellent predicate . this _ means module developed interactive _ own excess from facet Attractiveness, novelty , stimulation. Attractiveness is Impression whole product . is user Like or No Like to product learning developed interactive , Is _ product the attractive , interesting , fun . Novelty is mark novelty from something product , Is something product That rated innovative and creative , Is That interesting attention user . Stimulation is related with is product used _ can motivate its use

Motivation is influential factor _ in situation teaching and learning . Success Study depending on there or nope something to make somebody motivated . Motivation push participant educate in reach objective learning . Learn basically _ is Work hard ; Where push brain reach limit , p thereby only Can happen with motivation . Participant motivated students _ tall tend Study with easy , and make all material pleasant For taught , meanwhile Participant students who don't motivated Possible studied very little and was frustrating.31

Assessment aspect quality pragmatic that is describe quality related interactions _ with task or desired goal _ achieved user moment use the product. 29,30 Assessment results quality pragmatic from module interactive on research This obtained value 1.80 with predicate 'excellent'. this _ means this _ means module developed interactive _ own excess from terms of Perspicuity, Efficiency, and Dependability. Perspicuity is related with clarity from something product , Is easy For know product , Is easy studied , Is product easy understood and not ambiguous .

Efficiency is related with can a user finish task they without effort that is not necessary , Is the interaction efficient and fast , Is product react to input user with fast . Dependability is related with convenience use something product , Is user feel easy use product developed interactive , Is _ user feel believe self moment use with products.15

CONCLUSION

With results study This can concluded that module interactive cough and tightness succeed facilitate user Study in a manner independently , with show good reception _ from user to module developed and interactive _ _ increase knowledge user .

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