



Evaluation of Information Technology Based Online Learning Needs Assessment in Polytechnic in the Era of Covid-19

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Abstract: This research is a needs assessment evaluation which aims to determine the effectiveness of the information technology-based learning program, namely online or online learning to emphasize the difference between the desired or should be or expected conditions (what is) or real / real conditions. in the Covid-19 era with truth and validity data, facts, or information. The research was conducted using mixed methods research or a combination of qualitative and quantitative research in one study with evaluation of "needs assessment", data analysis with descriptive statistics. Collecting data using observation instruments, documentation and questionnaires, distributing questionnaires by means of random or random techniques, data processing refers to the Likert scale with the SPSS program computer The research results from the data on the achievement of class based learning process performance and information technology in 2020 15.78%, while from the research results; the highest score was 88, the lowest score was 50, the mean 66.47, the standard deviation was 11,780, the score scale ranges from 50 to 88, meaning that The effectiveness of online informatics technology-based learning methods in the Covid-19 era can be categorized as unsuccessful according to predetermined learning outcomes

Keywords: Evaluation, Need Assessment, On line IT Based Learning at Polytechnic, Covid-19

1. INTRODUCTION

Polytechnic as college tall besides have character as college tall generally, Also oriented towards the industrial world with a competency-based curriculum design that provides education diploma/vocational, namely education that prepares students to have jobs with applied skills certain, with a Diploma III program level with an AMD or Associate Expert degree and a D-IV program level with title Bachelor Saint Applied or SST, Magistri S2 Applied And Doctor S3 Applied

The learning system at the Polytechnic uses a lot of face-to-face systems with a learning composition of; 40% theory And 60% practice on emphasis relatedness And compatibility (Link and match).

In implementing the concept of link and match, various policies and programs are required. program education. There is a number of principle main from draft the that is:

- a. System education must related And worth it with need Which Keep going develop from various sector industry will power Work Which control skills And skill professional in various branch SCIENCE AND TECHNOLOGY
- b. System education must related And worth it with mark, attitude, behavior, And ethos Work public Which Already start leading on era industry And technology
- c. System education must related And worth it with time front Which will marked with

change Anddevelopment Which Keep going in progress

In this era of globalization which is full of challenges and competition, it demands professionalism in human resources. in all aspects of life, both individually and in an organization, the existence of resources man Which professional And reliable own role Which more strategic compared to source Power Which other.

To build a quality Indonesian education system, support from all components is required. in a way comprehensive And continuous Good government, institution education tall, lecturer, power functional certain, power education, source Power, means infrastructure, infrastructure, source funds And public

In the Covid-19 pandemic era, there has been a change in the orientation of society from being industry-based to being technology-based. information demand the occurrence change paradigm public in achievement effectiveness And efficiency aactivities, especially by improving the quality of human resources who specifically manage learning needs starting from media, teaching materials, strategies, methods, models, learning environments and effective use of information technology. Taskslecturer/teacher Already Enough heavy namely do teaching, study And devotion to public naturally AlreadyIt's time to abandon the ego of the profession. Empowerment of the profession of Learning Technology Developers (PTP) and technology information through system information, No just will increase quality learning as well as speed information WhichThe results will be able to increase integration in the information and operational fields between various parties or stockholder Which There is in a organization education various level/level

On implementation plan performance annual or RKT covers target plan strategic (strategic plan), as following:

- a. Increase superiority And quality graduate of through develop method, techniques/strategies, media learning, material teach And environment learning in accordance need interest And talent student
- b. The existence of guidelines implementation method And technique/strategy learning based on technology information Forlearning distance Far or online
- c. Do education And exercise ability lecturer/teacher compile instructional learning; PlanLearning Semester (RPS), Lesson Plan (plan program learning) The question is, is
- d. Whether implementation learning based on technology information method online Already fulfil need?
- e. Whether means infrastructure learning based on technology information method

online Already managed functional PTP?

Polytechnic For can implement program learning based on Technology Informatics method online on time pandemic covid-19 must capable facilitate means infrastructure device network computer capacity bandwidth as big as 100 Mbps And infrastructure connection network Internet capacity Gigabit, existence availability power experts in the field of Learning Technology Developers, information technology, adequate work environment, the existence of a professional work culture, the existence of a new paradigm of learning that prioritizes creativity, innovation in Study become producer, publisher, audience And peers reviewer knowledge

The problem is that our students, including university students, have been receiving too much knowledge. with all-round verbalism or Study look at face/offline, especially before time pandemic covid-19 in process Many learning activities do not use media where the students are not ready, which means increasing the chances the occurrence of verbalism, one of the facilities to support competence and reduce verbalistic learning, student need technology information Which functioning as tool help Study online.

Utilization functional PTP And technology information can Motivate improvement quality learning And material teaching, quality of activities and performance and interaction between lecturers and students and between students in environment Study.

Internet No only functioning For access or look for information, but with network wide contents information in a certain time very quickly can be used as an online learning medium that is able to overcome limitations distance, room, And time Study.

Technology information on at first is based on by theories Which develop in knowledge communication, Communication is a process in which participants create and share information with others to reach each other understanding. ,,

Core from communication is information, whereas tool Which used in convey information is technology, with information man can changed his behavior Good past creativity, innovation, will, commitment, vision, mission, objective, And his aspirations

The very rapid development during the Covid-19 pandemic and the existence of information technology which directly... impact on the education system. The computerization process used at every level of the education system makes technology information as part integral from system management education in various country including in Indonesia, in the day to day activities of the Polytechnic has a strong impact on every aspect of the management process. college or campus to collect data, computer process data And mobilize data as well as can support for

practitioners/lecturers/functionalist in daily activities, improving effectiveness and efficiency, and assisting in achievement of educational goals, especially when Indonesia was exposed to Covid-19, the education bell was suddenly stopped, but learning started beating after innovation. And creation learning based on technology information become the best choice with method blended learning, online or on line or learning loot Far (PJJ)

On field education, development technology information naturally can give dimensions new in the ability to obtain literacy or reference learning materials for lecturers and students. Education humanists emphasize the importance of preserving human existence, in the sense of helping humans become more humane. And professional Which believe, behave glorious, cultured. [11]

The formation of a student's personality depends on talent and environment, or talent means basic, environment means... The use of information technology can help developers of learning technology in preparing themselves to work with the environment within educational institutions, between institutions, or at the regional or national level. continuously, actual, timely and reliable. In addition, the use of PTP and information technology can assist in making and distributing decisions to be taken within the framework of interests and goals institutional. Contributions to the use of information technology are in the improvement and refinement of systems education, increase professionalism PTP For strengthen leadership institution education.

Polytechnic with the concept of industrial link and match in the current era of the Covid-19 pandemic This is very difficult because the Polytechnic emphasizes learning 40% theory and 60% practice, until now it has not been... in a way comprehensive or comprehensive do evaluation analysis need For know whether objective learning online based on technology information Which has set Already achieved or No.

Evaluations that are often carried out are only in the aspect of assessing learning outcomes and evaluating project work, analytical evaluation. need is process Which systematic And sustainable For gather, describe, interpret And serve information data, Which can used as base make decision, compile policy and also compile program furthermore.

Evaluation of needs assessments can also be used to see whether the effectiveness of the learning program objectives has been achieved. achieved or not, also looking at the big picture of the needs, urgency and flexibility of learning implementation based on technology information in Polytechnic

From the problems above, it is necessary to conduct in-depth evaluation research through research. with the title "Evaluation Needs Assessment Implementation Learning Online Based Technology Information in Polytechnic on Era Covid-19"

Objective And Benefit Study

There are two objectives that we want to achieve in this research, namely, first, to get an overview about understanding circles lecturer, functional PTP in environment Polytechnic about draft learning online time pandemic covid-19 based on technology information.

Second, know description the magnitude need, urgency, And facility application technology information in learning online And loot Far.

Thus, the results of this research are expected to be useful initial information for lecturers, functional developer technology learning, leader or program studies in environment Polytechnic in development of online learning models based on information technology, especially in efforts to enrich knowledge science And media learning.on era covid-19 Now This

2. FOUNDATION THEORETICAL

There are many types of evaluation known in the field of scientific studies, one of which is needs assessment evaluation. Lots used in study education. The amount study evaluation bring implications different method And presentation, if traced, all evaluation models lead to one goal, namely to provide information in "decision" framework or decision making to evaluate the success of the learning program is not It is enough to just assess based on student learning outcomes, but it includes all components of education, including performance. lecturers/teachers, functional learning technology, leaders, education staff, learning media, teaching materials, facilities infrastructure learning, facility infrastructure And factors other Which related with design program And implementation learning

Assessment of learning design includes aspects of competencies developed, learning strategies used selected, and the content of the program, while the assessment of the implementation of the learning program is to assess how much tall quality And effectiveness success in accordance objective Which has set as achievement learning in competence graduate of

There is 2 (two) benefit from implementation evaluation that is ; For get information, And see effectiveness implementation of learning so that it can be used as a consideration in making a decision. Evaluation can used For see level success program in taking decision, as following:

- a. Whether program That forwarded,
- b. Whether program That postponed,
- c. Whether program That improved,
- d. Whether program That developed,
- e. Whether program That replaced or rather stopped.

Use media based on technology Good hardware or software started from process planning objective, need, election material, material, method And model activity, evaluation, so that can reach objective in a way effective And efficient, Evaluation aiming For know effectiveness program learning so far where success program the,

3. METHOD STUDY

This research is categorized as program evaluation research which is seen as part of the research model. Which based on on objective or Goal oriented Approah, in study This use mixed methods research or a research approach that combines quantitative and qualitative research in one study, the process evaluation will obtained a number of data Good Which nature quantitative and also qualitative

In context learning based on technology information in Polytechnic, needs assessment directed on three domainnamely on competence, relevance And motivation. Competence referring to on ability individual on performance skills in online learning based on information technology. Relevance refers to the usefulness personal skills to accept the presence of other people's professions or functional learning technology developersindicates its relevance. Whereas motivation depends on How desire big they For repair ability in skills learning online based on IT on time pandemic covid-19

Evaluation Which used is evaluation "needs assessment" It means a method or method evaluation For knowing the difference between a desired or expected condition and an actual condition there is (what is). The desired condition is often called the ideal condition, while the existing condition is often called with condition real or condition real. Analysis need as a process formal For determine distance or gap between output And impact Which real with output And impact Which wanted

The position of needs assessment in program evaluation research as stated by Isaac and Michael, that there are 3 (three) basic steps, program planning, needs assessment, implementation evaluation, progressEvaluation, Outcomes Evaluation. Needs are defined as a description between what is and what ought to be, or needs are placed in priority and/or used as a basis for planning program objectives Assessmentneeds can be used objectively and subjectively, regarding the gaps that indicate the needs That Alone Which can relate with 2 (two) matter that is:

- f. Size objective that is compare between level appearance results measurement with level appearance Which under consideration For accepted
- g. Size subjective that is compare level appearance results measurement with consideration need
- h. Size objective in need assessment usually through steps:
 - 1) Identifying region objective in system education
 - 2) Choose or determine size or indicator
 - 3) Determine level size
 - 4) Compare the level obtained with the level accepted according to the standard provisions. Whereas For size subjective in need assessment usually There is a number of step as following:
 - 1. Identifying objective in system education
 - 2. Consider choice : choose or develop size For region objective
 - 3. Compile branch scale For consider levels appearance Which There is from every objective Whichdetermined

Collection data emphasized on two group information, namely about:

- 1. Understanding lecturer about draft And position technology information in learning online,
- 2. Needs, urgency And flexibility functional ptp And application technology information in learning onlinebased on technology information

Technique analysis data use statistics descriptive, with technique percentage. Whereas For see the tendency of the results of measuring variables, using the ideal average as a comparative norm which is divided into five category Determination distance 1.5 SD For category This based on on curve distribution normal Which in a way theory at a distance 6 deviation standard (6SD). For count the magnitude average ideal (M) And deviation standard ideal (SD) used formula : $M= 1/2$ (mark ideal highest + mark ideal lowest), $SD= 1/6$ (mark ideal highest - mark ideal lowest), Look table 1

To carry out an evaluation, the evaluator at the initial stage must determine the focus to be evaluated and determined design, evaluation objectives, evaluation planning, data collection, data analysis, data interpretation and make report evaluation,:

Triangulation means collecting data or analyzing data using more than one research method. as means For For get data empirical Which can answer formulation problem study

The number of questionnaires distributed as a trial was 30 questionnaires with 35 statements, the results of the validity of the instrument regarding the statement, it can be seen that in item 2, 16 is an invalid instrument item, data analysis with using the SPSS program, the criteria used for the validity test of $r_{table} \alpha=0.05$. This means that if $r_{count} < r_{table} = 0.3$

Objective validity is For know whether questionnaire can measure Which investigated in a way appropriate, a instrument is said to be reliable if it has a reliability coefficient of 0.6 or more and to determine criteria index reliability Look table 2

The testing technique is with a real level of 5%, reliability testing using the SPSS computer formula Spearman Brown;

$$r_i = \frac{2 - r_b}{1 + r_b}$$

When calculation total score done, so will got mark Good instrument need And effectiveness program in accordance mark in r table

Mark score obtained from multiplication between score Which given by Respondent with mark score in criteria scale Likert with formula ;

$$\text{Range Scale Likert} = n (m - 1)$$

—————
m

Where n = amount respondents, m = mark highest from scale Likert

For look for mark average, deviation standard And count each statement score total withuse formula Products Moment from Person program computer SPSS or statistical program and social science, Processing data quantitative with use statistics descriptive or analysis descriptive quantitative, the calculationas following

1. Score Total

$$\sum X = X_1 + X_2 + X_3 + \dots + X_n$$

$$X_1 = \frac{\text{Total answer respondent}}{N} = \frac{\text{Amount Respondent}}{N}$$

2. Score Minimum

Score lowest Which obtained Respondent

3. Score Maximum

4. Range Score

5. Median

6. Mode

Score Which own mark frequency the most/largest

7. Deviation Baku

$$s = \sqrt{\frac{\sum X^2 - n\bar{X}^2}{n}}$$

$$s = \sqrt{\frac{\sum X^2 - \frac{(\sum X)^2}{n}}{n-1}}$$

8. Table Distribution Frequency Score Calculation class (K) = 1 + 3,332 log N

Calculation long class (P) P= Range Score : Amount Class

From description in on, so measurement need And effectiveness implementation program learning based on technology information can be adjusted to an indicator to obtain a comprehensive picture of the evaluation. program learning the.

4. RESULTS STUDY

For answer question in study This as following:

- a. Whether implementation learning online based on technology information Already fulfil need?
- b. Whether means infrastructure learning online based on technology information Already managed functional ptp?

The subjects in this study were the entire population of lecturers at the Polytechnic who were conducting lectures in the year academic 2019-2020

Hadari Nawawi: Social Research Instruments (Yogyakarta, UGM Press) that the population is distributed normal uses a formula that emphasizes that the larger the percentage of the population, the greater the possibility wrong, the more small percentage population, the more small also his mistake.

This research uses random techniques, the samples are quite large in number and are drawn correctly. from population Which the amount big, tend follow distribution normal And can represent population.

Data collection tools or instruments use observation, documents and questionnaires, questionnaire instruments that... structured and distributed to respondents using random techniques, including; competencies, relevance, motivation through online

Findings study Which produced in analysis need (needs assessment) made into as base in designplanning, implementation and evaluation of learning programs related to the use of online methods based on technology information as A resources And functional Developer Technology Learning.

Based on data Which collected, obtained data about understanding draft online And position functional PTPmanager learning online based on IT in education Polytechnic as following : score lowest 5 And highest

13 with average as big as 9.45, And deviation standard as big as 1.33. For know trend used calculation percentage trend And criteria the comparison with use score average ideal And deviationstandard ideal.

The calculation results show that respondents' understanding of the online concept and functional position of PTPmanager learning online based on IT, namely on category very understand 20.45%, category understand 27.27%, category Enough understand 31.82%, category not enough understand 18.18%, And category No understand 2.28%. When seen from mean or average, that respondents' understanding of the concept and position of IT in education is in the fairly understood category. more to explain description percentage trend understanding Can seen on table 3

Criteria Which used For validity grain is $r_{table} = 0.05$. It means If $r_{hitung} < r_{table} = 0.3$ so grain considered No valid The results of data analysis using the SPSS program were significant at both the 0.01 and 0.05 levels or level trust 99% And 95%, mark correlation 0.387 And coefficient correlation 0.306 means Enough significant For processed, when mark correlation < 0.3 , so Items instrument the No valid

The results of the instrument reliability test are intended to determine the extent to which the measurement results remain consistent when... can be used to measure repeatedly and can produce the same information or data or varies or the instrument is able to demonstrate accuracy, stability and consistency in measuring variable Which want to investigated

Testing techniques using interval consistency or split-half techniques with the SPSS program Spearman Brown formula; then the group data scores for each item are added up to form a total score to be calculated. coefficient correlation need And effectiveness program

A instrument it is said reliable or reliable when own coefficient reliability reliability as big as 0.6 or more And For determine criteria index reliability Results testing reliability to instrument covering statement 1 until with 35, based on guidelines interpretation on mark score refer to on Scale Likert

Data on the need to use IT in online learning based on information technology, the lowest score is 142 And highest 95 with average as big as 116.29, And deviation standard as big as 7.83. Results calculation show that the need to use IT in online learning based on information technology, namely in the category of very knowledgeable 25%, understand 13.65%, Enough understand 20.45%, not enough understand 20.45%, And No understand 20.45%.

a) Domain Competence

Competency domain data emphasizes individual abilities in performing online learning skills. IT-based where; the highest score is 125, the lowest score is 69, mean

108.80, standard deviation 17.606 from the value range between 69 s/d 125 = 29.76.
(thick 5)

b) Domain Relevance

Data on relevance shows the usefulness of personal skills for PTP functional professions. which indicates its relevance, as follows; the highest score is 82 with an average of 66.10, and a deviation of standard as big as 8,724 (tabel 6)

c) Domain Motivation

The lowest score data is 53 and the highest score is 94 with an average of 78, a standard deviation of 17.335, an average of 17.335. Which state very understand 23%, understand 33%, not enough understand 25%, No understand 19%, (table 7)

5. CONCLUSION AND SUGGESTION

Findings study Which produced in analysis need (needs assessment) made into as base in designplanning, implementation and evaluation of learning programs related to the use of online methods based on technology information as A resources And functional Developer Technology Learning ideal, covid-19 as condition real or fact

Conclusion

Statement lecturers And functional Developer Technology Learning (PTP) Polytechnic in domain competence, relevance And motivation learning online based on IT in a way objective from levels Which very understand tolevel of lack of understanding, showing the diversity of knowledge possessed about the concept of online learning and position functional PTP with learning online based on IT matter the influenced by various factor, Whereone of which is related to the field of study or area of expertise that is his responsibility, another factor is motivation And attitude positive or negative to use IT show understanding lecturers And functional PTP related The use of IT in IT-based online learning is still a public concern due to the Covid-19 pandemic.moment This.

Suggestions

Program education college tall should empower functional PTP in management learning And Information Technology is useful for; 1) a positive attitude towards the development of the learning environment and certain situational conditions 2) understanding the functional potential of PTP and Information Technology, 3) ability to use profession PTP And Technology Information in a way effective in curriculum, 4)

ability manage, evaluate, differentiation And progress IT, 5) capability technique use source Power IT And skills profession PTP Which always updated, IT Empowerment as a resource related to several elements of the PTP profession that need to be noted by lecturers, certain functionalities and Polytechnic leaders to always be updated (up-date) regarding competence, relevance and motivation of technology development profession in technology-based online learning Information

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