SYSTEMATIC LITERATURE REVIEW: QUALITY ASSURANCE MODEL IN ORGANIZING E-LEARNING-BASED TRAINING

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Article history:		Abstract:
Received:	7th September 2022	This study is a Systematic Literature Review by applying the Prisma 2009 flow diagram review flow as an identification-screening-eligibility-included/excluded control for the journals and papers being reviewed. The activity begins by pre-determining several keyword phrases for the title or content search from the discussion of a research in the form of theses, dissertations, journal studies, and scientific reviews from search engines electronic databases: Google Schoolar, [Research], and Proquest. Obtained many titles for analysis. The author uses the Mendeley Reference Manager for Desktop as a literature collection application to facilitate journal searches in the analysis and synthesis process. The product of this study is an Quality Assurance (QA) System instrument document in the form of a self-assessment instrument for training activities organized by training based e-learning . The author succeeded in developing the study by proposing a QA development model, namely the Development of Internal QA Training through the Adaptation of the Quality Function Deployment (QFD) Model. Furthermore, the author calls this adaptation of QFD development as Quality Assurance Corner (QACorner), which is an adaptation of the term "house of quality" which was developed for quality assurance of the QFD model in higher education. This QA Corner is a quality corner for every training institution that organizes e-learning-based training. The training manager can take advantage of the examples and illustrations of the instruments presented by the authors in this study without closing the possibility to develop and modify them according to the needs of e-learning-based training.
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INTRODUCTION

Training institute is one institutions that play a role as organizer development competence source power human. For make institution effective training, necessary managed professionally. Related with demands maintenance effective, efficient and quality training, learning in training is a process for reach enhancement competence source power human. Activity development competence through training, experience change paradigm learning from method learning traditional or which is classic toward method based learning technology information with method learning distance far away, one the concept is e -learning.

E-learning is a form of learning method that is perceived to be student centered. The use of e-learning is expected to motivate the improvement of the quality of learning and teaching materials, the quality of activities and participants' independence, as well as communication between widyaiswara and participants as well as between training participants. With various advantages In the e-learning process , there are also weaknesses as problem , between others : 1) Service network or slow internet connection and not reliable cause problem main in activity learning. 2) Limitations facility computer that has not adequate good in terms of quality nor quantity. 3) Still weak human resources good power teacher nor participants and also manager / organizer mastery training knowledge and skills in technology information by internet special. 4) Not optimal yet Management e-learning or Learning Management system. 5) Various problem related method and didactic learning, as well as problem interaction social.

With see the problem above then e - learning- based training organized by training institutions in order to walk by effective and efficient need to do a good quality assurance system. Quality assurance is a system that determines policies, plans, controls, and develops the quality of a product or service (Bhat & Cozzolino, 1993) . Quality assurance is one of the efforts in controlling the quality of the implementation of e-learning training in the training institution environment. In order for the training program held to be achieved in accordance with the objectives and quality targets

that have been determined by the training institution, a quality assurance unit/unit is needed to assist the organizers so that all activities can be well controlled according to the expectations of all interested parties. The purpose of quality assurance is as a material for quality improvement / quality in conducting training on an ongoing basis. Meanwhile, the goal is that the implementation of the training can achieve the quality goals and objectives that are expected to run effectively, efficiently and achieve optimal results.

With see problem above , then need there is research and development more carry on on Quality Assurance of E-Learning-based training . With hope there is repair maintenance program training that refers to regulations latest Republic State Administration Institute Indonesia as well as more quality in the future come .

CONCEPT FRAMEWORK
Draft e-Learning

Horton suggests that (in Sembel, 2004) e-learning is a learning activity web-based (which can be accessed from the internet). Not much different with that brown, 2000 and Feasey, 2001 (in damn, 2002) by simple say that e-learning is activity learning that utilizes networks (internet, LAN, WAN) as method delivery, interaction, and facility which supported by various form service study other.

At least there is three function e-learning learning electronic to learning activities in the classroom, namely: (in damn, 2002) :

a. Supplement (additional)

It says working as supplement, if participant educate have freedom choose, is will utilise Theory learning electronic or no. In Thing this, no there is obligation/requirement for students to access the material learning electronic. Even though nature optional, participant educate which make use of it of course will have addition knowledge or outlook.

b. Complement (complement)

It says working as complement, if Theory e- learning programmed for complete dead learning which accepted by participants in the classroom (Lewis, 2002). As a complement means e-learning materials programmed for Becomes Theory enrichment (enrichment) or remedial for students in following activity learning conventional. As enrichment, if students can quickly master / understand Theory student which be delivered teacher by stare advance given opportunity for access Theory e-learning which of course by special developed for they. The goal is to further strengthen the level of mastery of students to Theory lesson which served teacher in class.

c. Substitution (substitute)

The purpose of e-learning as a substitute for conventional classes is so that participant educate could by flexible manage activity study in accordance with time and activity other daily.

According to Newsletter of ODLQC, 2001 (in damn) condition-condition activity learning electronic (e-learning) is :

1. Activity learning conducted through utilization network in Thing this Internet.
2. Availability Support service study which could utilized by participant study , for example CD-ROM or ingredient print
3. Availability Support service tutor which could help participant study if experience difficulty .
4. Existence institution which organize / manage activity e-learning
5. Existence attitude positive educator and power education to technology computer and Internet
6. Existence design system learning that can studied   is known by every participant study
7. Existence system evaluation to progress or development study participant educate
8. Existence mechanism bait come back which developed by institution organizer .

In implementation learning, there is model application e-learning which can used, that is :

a. Selective Model

This selective model is used if the number of computers in the school / institution education very limited (for example there is only one computer unit). In the In this model, the teacher must choose one of the tools or media that available that are felt to be appropriate for delivering learning materials. If teacher find ingredient e-learning which quality from Internet, so with forced teacher only could show ingredient The lesson is given to participants as demonstration material only. If there is more from one computer in school/class, so participant must given opportunity for get experience direct.

b. Sequential Model

This model is used if the number of computers in the school/class limited (eg only two or three computers). participants in group small by take turns use computer for look for source lesson which needed. Participant use e-learning materials as reference material or to look for information new.

c. static Station Model

This model is used if the number of computers in the school/class limited, as is the case in the sequential model. In the In this model, the teacher has several different learning resources to achieve the same learning objectives. e-learning materials used by one or two groups of participants to achieve destination learning which has set. Group participant other use source study another for reach destination learning which same.

d. Laboratory Model

Model this in Use if available amount computer in schools / laboratories equipped with internet network, where participants can use it more freely (one participant one k computer). In Thing this, ingredient e-learning could used as ingredient learning independent .

Every model e-learning which could used in learning on each have strength and Weaknesses- The choice depends on the telecommunications infrastructure and equipment which available at school. However effort Learning with this e-learning approach needs to continue to be tried in order to overcome the problems faced in Century which will come.

Approach Pedagogic in e -learning

Technology communication by general could categorized as as asynchronous and synchronous. Asynchronous is activities that use technology in the form of blogs, wikis, and discussion boards. In this form, participants can develop ideas or exchanging ideas or information without any link between participant one with participant other on time which same, as example use e-mail including asynchronous where messages can be sent or received without both having to participate in the same time. In this case a message sender or certain information whenever needed . On the other side receiver message no required access message or information the on time which together.

Synchronous show on categorization activity exchange idea or information which require participant use time which together. Face to face discussion is wrong one example form communication synchronous.Activity synchronous require whole participant each other communicate or relate to one another such as session on line or virtual classroom or meetings.

Although learning activities through e-learning devices emphasizing the online communication system, does not mean this process is the same completely negates the elements of the pedagogical relationship between the teacher and participant. When this happens, it is feared that the learning process Becomes lost meaning essential. Because learning is activity which comprehensive, covers various dimensionsgood cognitive psychomotor and affective.

Through the Wikipedia site (2018), several approaches have been proposed pedagogy which applied in e-learning, namely:

a. Instructional designs, where learning more focused on curriculum developed by drip. focus on approach education group or teacher by individual.
b. social-constructivist, is approach pedagogy which most activity conducted in form forums discussion, blogs, wiki and activities collaborative on line.
c. Laurillard's conversational model, is one form of approach pedagogy which drip weight on use form- form discussion direct by large.
d. Cognitive Perspective, drip focus on the development process cognitive through activity learning .
e. Emotional perspective, more focused on development dimensions emotional learning, like motivation , engagement, models game, and others .
f. Behavior perspective, drip weight on skills and behavior resulting from the learning process . Learning model in form this for example play role (role playing) and implementation in in activities real field .
g. Contextual perspective, in focus on setting factor instrumental and social environment which could push the learning process occurs . Shapes real this model like interaction with person other, models collaborative and so on .

As for type application e-learning in learning distance far Among other:

a. Based on Open Source
   1. Moodle
      Term moddle abbreviation from Modular object oriented dynamic Learning Environment which means the place studywhich dynamic with use model oriented onobject or is package environment education based web which dynamic and developed with draft object oriented.
   2. tutor
      E-learning applications based on open source other than Moodle is atutor. tutor is Web based open source learning control management system (LCMS) in designwith accessibility and ability adaptation. tutor is a software package produced for activities internet based learning. Teachers can quickly install, package and distribute learning materials, and stage course its online alone.

b. Audio and videos conferencing as well as Videobroadcasting
   1. Audio Conferencing
      Audio conferencing is interaction or conference directly in the form of audio (voice) between two people or more which is at in the place different, even couldinvolve learner which many on location which spread and different. Technology which used ismeans teiphoil. In implementation audio conferencingneeded device addition (audio conferencing bridge) which can reduce interference (noise) as well as interaction on system.
   2. Videos Conferencing
      Technology multimedia videos broadcasting could allow whole learner see, hear, andwork same by direct. In accordance his name, videoconferencing provides live visualizationand complete for all learners

with multimedia (videos, audio and data) .

Video conferencing distance learning allow interaction between two or more people, two or more classes on the place which different and time which together using a multipoint system. Interaction occurs Among learner with teacher, learner with other learners, learners with learning materials and learner with sources information (information resources) on location which different and done by direct (real time) with communicative like on class conventional which apply stare advance direct. Theory learning on videos conferencing distance learning served in form voice (audio), picture (visual), nor text, by separated or together (simultaneously).

Quality Assurance System

In the current era of globalization, it has become an obligation for training institutions, especially the Human Resources Development Center to implement a quality assurance system in conducting training activities that are specifically based on e-learning in this era. The increasing value of public awareness of the importance of training Based on e-learning , the more demands from stakeholders to get quality training. This need is a reaction and proactive from the training stakeholders, thus to be able to meet these needs , the organizers of the training program Based on e-learning, it is necessary to develop a quality assurance system, in order to have competitiveness among stakeholders who are free to choose certain quality standards.

Quality assurance in training e-learning based is part of a larger system, namely the quality management system, in which there are integrated and mutually influencing parts, one of which is the quality assurance system and other quality management system components. Quality assurance in training e-learning- based serves as a tool for management to provide evidence so as to build confidence that quality can function effectively and efficiently as stated by Joe Mangino, (2006: 84) provides the definition of Quality Assurance (QA) as follows. Quality Assurance activities include a planned system of review procedures conducted by personnel not directly involved in the inventory compilation/development process. Reviews, preferably by independent third parties, should be performed upon a finalised inventory following the implementation of QC procedures. Reviews verify that data quality objectives were met, ensure that the inventory represents the best possible estimates of emissions and sinks given the current state of scientific knowledge and data available, and support the effectiveness of the QC programme.

Meanwhile Gaspersz (2012: 2) defines Quality Assurance in training Based on e-learning is "all planned and systematic actions that are implemented and demonstrated to provide sufficient confidence that the product will satisfy the need for a certain quality". Thus, quality assurance in e-learning can be interpreted as a process of fulfilling and determining management quality standards to achieve the agreed goals and objectives consistently and sustainably, so that all interested parties, including consumers, producers, and other parties who have an interest in obtaining satisfaction (conformance of expectations).

While the main purpose of quality assurance in training based on e-learning according to IMHE (2002: 37) are as follows. The main purpose of quality assurance is to help the institution contemplate a journey of constant improvement and regular evaluation for feedback. Although the influence of quality assurance on the quality of teaching is controversial, the implementation of mechanisms is likely to have an impact on the teaching performance of teachers and on the learning conditions of students.

The main goal of quality assurance / quality in training based on e-learning is to help institutions direct towards continuous improvement and evaluation processes on a regular basis to be used as feedback. Besides that The purpose of Quality Assurance, according to Rinda Hedwig (in Arif Rohman and Giri Wiyono, 2008:4) 'a quality assurance system in e-learning training can be carried out both in its entirety and in a tiered form, comprehensive means all processes involved in providing online -based education and training/human resource development such as participant registration , e-learning , to the online learning process. pass graduates whose quality is guaranteed based on e-learning . Meanwhile, what is meant by gradual is that the training institution/HR development institution can carry out quality assurance in e-learning training is only in the learning process. The e-learning- based training quality assurance system aims to provide benefits for both internal and external parties of the training/HR development institution.

Guarantee Quality is a medium that aims to build organizational quality to explore the needs and desires of educational stakeholders and is processed within the organization by building SOPs (standard operating procedures) with QMS guidelines . especially to stakeholders who use e-learning training .

Further in this section the author will emphasize on how quality assurance (Quality Assurance) in e-learning training . According to Cheng (2001: 4) "education quality is not different from education effectiveness. Also, quality assurance often refers to the efforts for improving the internal environment and processes such that the effectiveness of learning and teaching can be ensured to achieve the planned goals". Referring to the opinion above, quality assurance in e-learning training is one of the efforts made by institutions and or institutions to guarantee quality, and the efforts made are to lead to e-learning training, which is effective and efficient so that the objectives are achieved. planned e-learning training.

STUDY METHOD

The author 's study do implementing a Systematic Literature Review, namely terms used for refers to the methodology study or research and development carried out for gather as well as evaluate research related to focus

topics certain. Frequent Systematic Literature Review abbreviated as SLR or in-Indonesia- right as review References systematic is method review literature with method identify , assess , and interpret whole findings on a topics study in skeleton answer question research (research question) that has been set previously (Kitchenham & Charters, 2007). SLR method is done by systematic with follow stages and protocols that enable the review process literature avoid from bias and character subjective from the researcher .

Activity study using SLR begins with submission question research (Question Research). Question study this is what will guard thread red literature review to keep it focus .

ID	Research Question	Motivation
RQ1	How the Quality Assurance model was developed in To do training based on e - learning?	Identify journal containing _ publication of the most significant Quality Assurance models in guarantee quality training based on e-learning
RQ2	What Quality Assurance Model Which are the most superior and relevant? with condition current e-learning training this ?	Analyze identified journal _ publish excellent and relevant models with needs and conditions current e-learning training this
RQ3	How perspective Development of Quality Assurance models in nature Maintenance Training Based on e-Learning ?	To do synthesis and discussion to the selected Quality Assurance model for developed as a reinventing alternative model for needs guarantee quality in training based on e-learning

SLRs share stages search to in 4 stages , namely
1. Planning (related with development of review questions and plan methods/protocols);
2. Data Collection Phase (search strings, screening titles and abstracts , filtering & assessment, and data extraction);
3. Phase (Analysis descriptive and thematic) and
4. Synthesis stage (discussion).

Study process systematic literature that , author do it with follow PRISMA 2009 flow diagram guide . In complete the PRISMA 2009 flow diagram , the researcher carry out the process of searching and screening literature. Search beginning conducted for identify language and glossary , which then used in search wide . Besides it , search more carry on conducted for find suitable article _ with needs study this . The author also gave opportunity seek and get literature from other sources outside the Search Engine Electronic Database. Selected article only published research _ in language England . Selected article then reviewed by the author for determine eligibility . Article set worthy is what fulfills needs study .
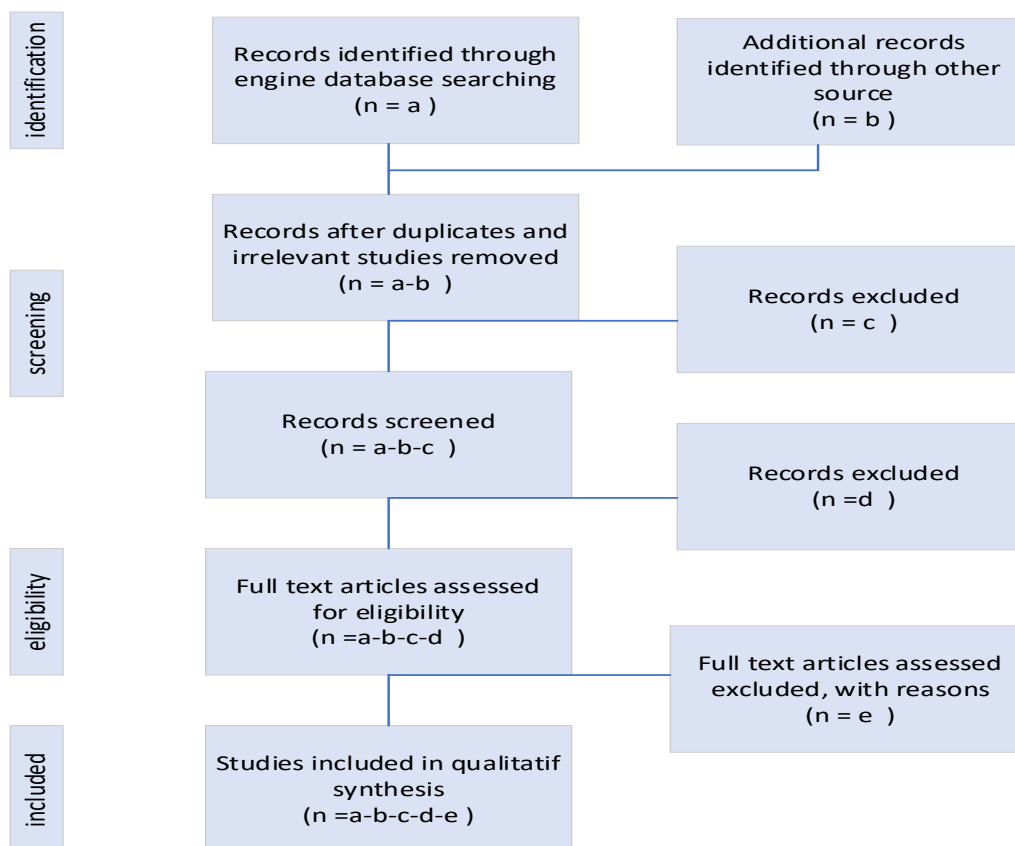
RESEARCH RESULTS AND DISCUSSION
Stages Planning

Stages development of review question and plan method/ protoco . Stages this conducted started with determination planning that includes : developing review question ; display method ; and display protocol plan .

1. Research Question

ID	Research Question	Motivation
RQ1	How was the Quality Assurance model developed in conducting e-learning-based training held?	Identify journals that contain e-learning-based Quality Assurance publications
RQ2	Which Quality Assurance models are the most superior and relevant to the current state of e-learning training ?	Analyzing the journals identified and published that have been implemented with the needs and conditions of the current apparatus training.
RQ3	What is the perspective of developing the Quality Assurance model in the Implementation of e-Learning-Based Training ? (developed ideas, developed points)	Synthesize and discuss the selected model to be developed as an alternative reinventing model for Quality Assurance needs in e-learning-based training

PRISMA 2009 flow diagram

identification	Records identified through engine database searching (n = a)	Additional records identified through other source (n = b)
screening	Records after duplicates and irrelevant studies removed (n = a-b)	Records excluded (n = c)
	Records screened (n = a-b-c)	Records excluded (n =d)
eligibility	Full text articles assessed for eligibility (n =a-b-c-d)	Full text articles assessed excluded, with reasons (n = e)
included	Studies included in qualitatif synthesis (n =a-b-c-d-e)	

Stages Implementation

Data Collection stage (search strings, screening titles and abstracts , filtering & assessment, data extraction). Stages this taken with To do data browsing includes search by comprehensive related title and abstract , filtering and rating appropriate articles and do _ data extraction .

1. Search Journals and Research Results

Data extraction is done with adjust to the formula question studies (Research Question – RQ) that have been set before , that is

RQ 1:   How the Quality Assurance model was developed in To do training based on e-learning held ?

RQ2:   What Quality Assurance Model Which are the most superior and relevant? with condition current e-learning training this ?

RQ3:   How perspective Development of Quality Assurance models in Maintenance Training Based on e-Learning ?

Writer To do data exploration with To do search strings using keywords _ from search engine electronic database, **Google Schoolar , [Research], Proquest** . Search started from string that point to the source information (result research , journals , reports , theses / dissertations) on Quality Assurance Training by general . Some keywords _ pinned in the search box for be read by skimming / scanning, source which information can taken .

Search taken with see the amount of data obtained the more shrink , so make it easy find results research , journals , reports , theses / dissertations that can be considered Becomes references and references . Result shown as following .

Keywords _ Search	G. Scholar	Proquest	Research
" guarantee " the quality of " e-learning "	10,700		
"Quality assurance" e-learning/online	1,140		

Next To do data extraction with the same process as above , but _ for related keywords _ _ about Planning Quality Assurance Training and Evaluation of Quality Assurance Training . Result shown as following .
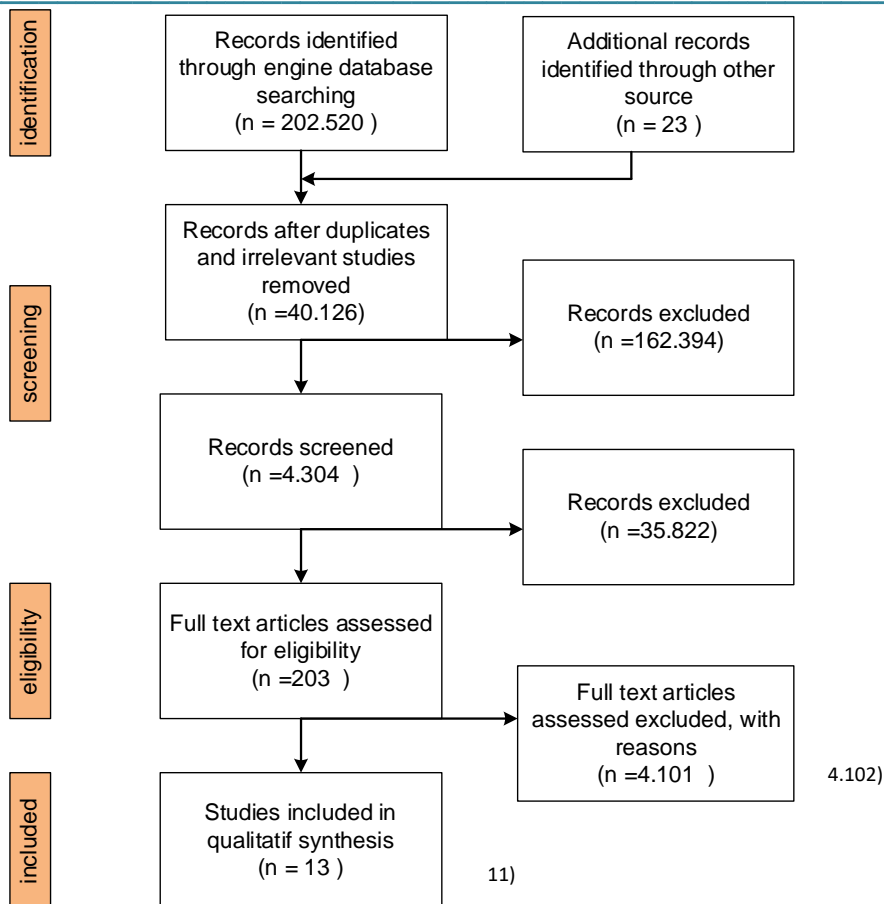
Keywords _ Search	G. Scholar	Proquest	Research
"Monitoring, Evaluation" e-learning	33,400		
Quality Assurance, e-learning, planning	9,630		
Quality Assurance, e-learning, evaluation	5.710		
Quality Assurance Planning	9.020	1.054	
Evaluation Model " " Assurance Quality " Training	2,570		1

Activities above more appropriate is activity identification as effort answer RQ1 for get amount results research, journals, reports, theses/dissertations that must be analyzed short related supportive needs study this. In stages next , author screening , and checking the eligibility of a number of results research , journals , reports , theses / dissertations for chosen Becomes source information reference as form activity answer RQ2. Some data is excluded because seen no support / suit with needs reference study this . Selected research results , journals , reports , theses/ dissertations is superior and relevant with condition needs study . Next do excluded and included stages end for get Reference needed for answer RQ3, which has perspective required model development in study this. At stage answer the author 's RQ3 succeed get amount classified articles as results research, journals, reports, theses / dissertations . From the article here writer expected could find findings (reinventing) or model development and theory.

Related Results amount journals , reports , theses / dissertations , as well as results research that is included as described above , the author recap in table following this .

Table 1
Recapitulation Amount **Articles (journals , reports , theses / dissertations , results research)**
Relevant _ according to Keyword on Range Year 2010-2021

	Keywords _	Name Search Engine Electronic Database	Identification	screening & eligibility		included
			Filter number 1	Filter 2nd	Filter the 3rd	Filter to 4
1	Quality Assurance	ProQuest	1.325	147	34	
		Google Scholar	10,700	977	56	6
		Sub Quantity 1	**12.025**	**1,124**	**90**	**5**
2	Planning Quality Assurance Model	ProQuest	1,235			
		Google Scholar	19,150	1,667	57	3
		Sub Quantity 3	**44,435**	**1,667**	**57**	**2**
3	Evaluating Quality Assurance Model	ProQuest	1,452			1
		Google Scholar	8,932	1,536	45	3
		Sub Quantity 2	**99.254**	**1,536**	**45**	**3**
4	E-Learning Quality Assurance Model	ProQuest	362			
		Google Scholar	3.650	450	65	2
		Sub Quantity 4	**202,520**	**450**	**65**	**10**

The systematic review activities carried out writer as above _ follow pattern PRISMA 2009 flow diagram guide as protocol study based on Systematic Literature Review. Detailed steps for get reference research that becomes recommendation taken with : (1) define criteria eligibility ; (2) define source information ; (3). election literature ; (4) collection data; and (5) selection of data items. All stages that writer apply for study this with the process of searching and screening literature. Search beginning conducted for identify language and glossary , which then used in search wide . Besides it , search more carry on conducted for find suitable article with needs study this . The author also gave opportunity seek and get literature from other sources outside the Search Engine Electronic Database. Selected article only published research _ in language English and Indonesian .

Diagrammatically, the result shown as following .

```
┌─────────────────────┐        ┌─────────────────────┐
│ Records identified  │        │ Additional records  │
│ through engine      │        │ identified through  │
│ database searching  │        │ other source        │
│ (n = 202.520 )      │        │ (n = 23 )           │
└─────────────────────┘        └─────────────────────┘
```

identification

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┌─────────────────────┐        ┌─────────────────────┐
│ Records after       │        │ Records excluded    │
│ duplicates and      │───────▶│ (n =162.394)        │
│ irrelevant studies  │        │                     │
│ removed             │        └─────────────────────┘
│ (n =40.126)         │
└─────────────────────┘
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screening

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┌─────────────────────┐        ┌─────────────────────┐
│ Records screened    │        │ Records excluded    │
│ (n =4.304  )        │───────▶│ (n =35.822)         │
│                     │        │                     │
└─────────────────────┘        └─────────────────────┘
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┌─────────────────────┐        ┌─────────────────────┐
│ Full text articles  │        │ Full text articles  │
│ assessed for        │───────▶│ assessed excluded,  │
│ eligibility         │        │ with reasons        │
│ (n =203  )          │        │ (n =4.101  )    4.102)│
└─────────────────────┘        └─────────────────────┘
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eligibility

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┌─────────────────────┐
│ Studies included in │
│ qualitatif synthesis│
│ (n = 13 )     11)   │
└─────────────────────┘
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included

At the moment identification , author get title as much as 202,520 (obtained from Search Engine Electronic Database Google Schoolar , Proquest . With method read skimming and scanning identification continue, author find amount more title reduce

Description Title and Analysis Results Articles Filtering
After To do number of excluded, selected (included) six mercy Article title from amount journal , results research, report, or thesis / dissertation selected, namely :
(1)   THE EFFECTIVENESS OF E-LEARNING: AN EXPLORATIVE AND INTEGRATIVE REVIEW OF THE DEFINITIONS, METHODOLOGIES AND FACTORS THAT PROMOTE E-LEARNING EFFECTIVENESS Erna Signe Schack Noesgaard [1] , and Rikke rngreen [2]
[1] Word Foundation, Sønderborg , Denmark &
[2] ResearchLAB: IT and Learning Design, Dep. of Learning and Philosophy, Aalborg University, Copenhagen, Denmark

Article Resume Analysis and Synthesis
Paper this investigate effectiveness of e-Learning through review integrative Among Definition , Methodology , and Factors that carry e-Learning. Paper this answer question study following : How e-Learning effectiveness defined ? How the effectiveness of e-Learning is measured ? What makes _ effective e-Learning solution ?

Studies this show that difficult for use e-Learning to increase performance teach , with thereby participating teachers _ could apply some strategies for avoid change substantial related practice _ with profession teach .

More continue , study the show that only use fulfillment destination learning that has been determined as an effectiveness parameter no allow developers and researchers for see changes that don't unexpected and not wanted in practice going on as consequence of the e-Learning program.
Developed models categorize perspective :
(1) the context in which e-Learning solutions are used ,
(2) artifacts (the e-Learning solution alone); and
(3) individuals who use artifact .
   With existence e-learning activities , it is necessary existence optimization to supporting aspects _ e -learning effectiveness , good means infrastructure ICT -based , as well as source power other including source power human , source power application as well as online based environment .

(2)   CONSIDERATIONS FOR QUALITY ASSURANCE OF E-LEARNING PROVISION

Ebba Ossiannilsson

Swedish Association for Distance Education, EDEN

Article Resume Analysis and Synthesis

Document this containing considerations _ related all Quality Assurance activities are held by e-learning. Document this apply for all a form of e - learning facilitated learning through use Technology Information Computers (ICT) such as : Distance education courses; Online courses (Synchronous online courses Asynchronous courses); On line programs ; Blended/hybrid courses; OER (open educational resources); MOOCS (massive open online courses).

E-learning is field very dynamic and innovative and understandable learning covers every form facilitated activities _ through use of ICT, including blended learning (but no including MOOC and OER).

The guide inspire writer for find idea creative related guarantee quality (QA) for implementation learning in organized training _ institution training based on e-learning with consider QA on : Distance education courses; Online courses (Synchronous online courses Asynchronous courses); Online programs ; Blended/hybrid courses; OER (open educational resources); MOOCS (massive open online courses). That thing support need existence development or innovation so that achieving effective and efficient e-learning in development competence source power human , of course supported guarantee quality based _ application by independent .

(3)   QUALITY ASSURANCE: Content (SPADA), Assessment Director General Dikti 2019

Analysis and Resume

Guide issued Director General Learning and Student Affairs at the Ministry of Research , Technology and Higher Education is one of the from four Guarantee Manual _ Quality consisting of above : Guarantee Guide Quality Content , Guarantee Guide Quality of Learning Process , Assurance Guide Quality Evaluation , and Assurance Guide Quality System this start proclaimed Indonesian Open and Integrated Online Learning (PDITT) which is effort together colleges tall in Indonesia to work hand in hand serve service education tall quality for whole Indonesian society . This guide given System Guide name Online Learning (SPADA) as an Assurance Guide Quality Content for College in _ organize online learning (e-learning).

This guide recommend the ADDIE model, the Dick and Carey model,

design model ADDIE instructional model, which is a five- step model consisting of: above : Analysis, Design, Development, Implementation, and Evaluation. This possible is the most common model known and often used in environment academics who become reference guarantee internal quality . ADDIE model illustrated as following .

Models Dick and Carey assume learning is system , which focuses on connectedness Among context , content , learning and teaching . According to Dick and Carey, the components of learning for example instructor , learner , teaching material , activity learning , system delivery , and environment learning interact one each other and synergize for reach achievements learning .

The guide inspire writer for find idea creative related guarantee quality (QA) for implementation learning in organized training _ institution training . Guarantee quality (QA) that requires development based application , so support effectiveness training based on e-learning.

(4)   USING ANALYTICAL HIERRACHY PROCESS IN E-LEARNING SYSTEM QUALITY ASSESSMENT BASED ON ISO 19796-1

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Article Resume Analysis and Synthesis

Research on journals this answer about fast development the use of e-learning, in particular answer needs will existence measurement quality e-learning system . On research this , made capable system / application _ measure quality e-learning system . The system created also provides facility for stakeholders to give weight priority each process in evaluation quality e-learning system . Weight priority the then processed with use AHP

(Analytical Hierarchy Process) method . Output system this in the form of total value quality and recommendation arranged repairs _ in accordance with stakeholder priorities .

Research results this show that method evaluation in created apps _ capable accommodate stakeholder priorities in development e-learning system , so that repair quality e-learning system can conducted by more effective and efficient .

Based on results research on journals this , author try adapt as idea creative that is apply AHP concept with a number of adjustment in accordance Quality Assurance needs on activities training based on e-learning. With thereby guarantee quality (QA), can support effectiveness training based on e-learning, of course with internal and external support . _

(5)   E-LEARNING QUALITY ASSURANCE: A PROCESS-ORIENTED LIFECYCLE MODEL
M'hammed Abdous
Center for Learning Technologies, Old Dominion University, Norfolk, Virginia, USA). Quality Assurance in Education

Article Resume Analysis and Synthesis

Writing this article aim proposes a process -oriented LIFECYCLE model for ensure quality start from launch , development and delivery of e-learning, to withdrawal return e learning products developed .

As a dynamic and iterative process , guarantee related quality (QA) with the e-learning development process . This post emphasize that QA requires supportive environment which _ _ explicit confess quality as score work and as an enabler for reach destination organization .

Framework process -oriented QA work life cycle model that is structured in three non-linear phase

- Before : planning and analysis ;
- During : design , prototype and production ; and
- After : post production and delivery .

Based on results research on journals this , as synthesis , author try adapt as idea creative that is the model could made reference in development guarantee QA quality in activity training based on e-learning.

(6)   EVALUATING THE RELIABILITY AND IMPACT OF A QUALITY ASSURANCE SYSTEM FOR E-LEARNING COURSEWARE
YT Sung, KE Chang, WC Yu - Computers & Education, 2011 - Elsevie

Article Resume Analysis and Synthesis

Paper this introduce method guarantee quality of e-learning courseware (system certification quality) adopted by eLQSC (Service Center Quality e-Learning) in Taiwan. A design sequential / explanation with methodology mixture used for collect research data and conduct data analysis. Paper this recommend that applications (67 applications) supporting e learning are reliable (steady) in manage and operate learning based on e-learning. Recommendation this enough reasoned remember learning always based on e-learning need digital activities that require amount application for manage learning start from preparation learning , implementation study teaching , assessment learning , up to reporting results learning .

Six twenty seven e-learning courseware application evaluated using e-Learning Courseware Quality Checklist (eLCQC). Analysis item difficulty , item discrimination and generalization show that eLCQC give guarantee quality (QA) quality tall in e-learning.

After participate in the certification process , e-learning manufacturers are reported more believe self in increase quality of e-learning courseware. Experience certification also helps producer for change draft design they previously about e-learning courseware

(7) QUALITY ASSURANCE WITH QUALITY FUNCTION DEPLOYMENT METHOD: IMPLEMENTATION CONCEPT AT HIGHER EDUCATION INSTITUTIONS
Alfi Arif1
Jur . Jember University Accounting

Article Resume Analysis and Synthesis

The Quality Function Deployment (QFD) model becomes choice in several college high in Indonesia, especially in maintain Quality Assurance. In writing in the Journal this researcher believes that QFD is a tool for College tall as institution organizer of the learning process teaching and learning no just for internal parties but also for stakeholders or party external other . Attribute thus , make college tall sued for be in condition where standard quality maintenance service institutions , along with guarantee quality service (quality assurance) becomes a feasible parameter whether or not something college tall become the center of excellence for society and nation , and power competitive in the middle competition increasingly industry competitive .

Likewise , writer believes that QFD method as a tool for management in the design and development process quality product as needed and chill consumers . In development , QFD has also many support the evaluation

process by systematic capability product or service in Fulfill needs and wants consumer by structured and sustainable. Therefore , it's worth it when institution training The government also applies the Quality Function Deployment model to the implementation Quality Assurance process his training .

(8)   A RUBRIC TO EVALUATE LEARNING MANAGEMENT SYSTEMS
Ramesh, Vyshnavi Malathi
Ramanathan, Chandrashekar
Proceedings of 2013 IEEE International Conference on Teaching, Assessment and Learning for Engineering, TALE 2013

Article Resume Analysis and Synthesis
Results of research conducted from writer on journal this in the form of rubric for ensure the quality of the LMS used institution education including rubric to the frequent Moodle LMS used . LMS has role important in activity learning distance distance (distance learning) on some institution education during a pandemic that requires learning no conducted in form stare advance straight away .

(9)   DESIGN OF LEARNING EVALUATION MODEL FOR DISTANCE EDUCATION
Liu, Gang
Advances in Social Science, Education and Humanities, 2020.

Article Resume Analysis and Synthesis
Written research results _ in journal this is recommendation about the guarantee model quality effect study student from two aspect : evaluation formative and evaluation summative , which gives reference new for evaluation Distance learning Far or training based on e-learning.
Aspect formative is part no inseparable in evaluate results learning . Evaluate formative in article this contain the meaning of learning feedback during the learning process take place . Whereas aspect summative is feedback on the learning process by thoroughly at the end of the learning program . This show that Quality assurance efforts are carried out from corner look aspect evaluation learning .
This thing in line with needs writer about supporting reference _ to smoothness activity organized training _ with distance far using the e-learning model.

(10)   QUALITY ASSURANCE IN E-LEARNING: PDPP EVALUATION MODEL AND ITS APPLICATION
Zhang, Weiyuan ; Cheng, YL
International Review of Research in Open and Distance Learning
2012, Vol 13, Issue 3, P 66-82

Article Resume Analysis and Synthesis
Studies this show that guarantee high quality (QA) of teaching and learning could confirmed with use procedure guarantee systematic quality (QA) of PDPP . Guarantee model PDPP quality (QA) and its implementation expected could Becomes reject measuring for build mechanism guarantee better quality of e-learning wide in the institution education and training . Paper this build a guarantee model quality (QA) four phase for e-learning courses, which include evaluation planning , development , process, and product , called the assurance model quality (QA) PDPP PDPP is a activity guarantee quality from corner view process learning . This thing Becomes part no inseparable that learning is also as part of the e-learning process.
From the corner corner view learning content (content learning), QA needs of a learning process is part no inseparable from guarantee e-learning quality .

(11)   DEVELOPMENT OF A QUALITY ASSURANCE SYSTEM FOR E LEARNING PROJECTS
Mark Nichols
eLearning Consultant, EDI Faculty
Universal College Of Learning (UCOL), NEW ZEALAND
m.nichols@ucol.ac.nz

Article Resume Analysis and Synthesis
Studies this strengthen how importance system guarantee quality learning based on e-learning. Study carried out on activities learning at Universal College Of Learning (UCOL), NEW ZEALAND whose LMS is pinned on the blackboard site at UCOL in e-campus system . Conservation against LMS done with pay attention to Performance; Features; Reliability; conformance; Durability; Serviceability; Aesthetics ; Perceived Quality. Elements the must always awake quality in an LMS. QA development of system e - learning special conducted with guard the quality of the existing LMS at the university . By no direct study this convey that a QA e-learning system should started from QA LMS owned the e-learning system . Development could performed on a number of procedure such as : Information Repository; One-Way Communications; Online Exercises; Two-Way Communications; Learning Objects

Analysis and Synthesis Journal of Planning Quality Assurance Model

Writer get group journal no. 3, 4 and 8, which are considered recommended for made consideration in enrich recommendation to the planning quality assurance model between other :

A training web -based (or e-learning) should be guaranteed quality . Form guarantee quality something training is give evaluation to planning indicators following this .

a. Object learning must designed so appearance so that capable motivate and spur student for study by active ;
b. Object learning integrated in Learning Management System - LMS
c. Presentation Theory learning variative shaped text , audio, video, or combined various the media elements .
d. Theory learning served in pieces small that can aired one screen full with a short showtime _
e. Interaction Among learner with facilitator held by asynchronous and synchronous .
f. When made reference , ISO 19796-1, can utilized category the rating for see e-learning quality .
g. System application a kind of Analytical Hierarchy Process – AHP can be used as a tool in evaluation planning a Quality Assurance training

Analysis and Synthesis Journal implementation of Quality Assurance Model

Writer get group journal numbers 1, 2 and 5, which are considered recommended for made consideration in enrich recommendation to implementation of quality assurance training based on e-learning . Writer _ try To do synthesis as following.as following .

Activity implementation guarantee quality as a control tool quality institution training moment this , already Becomes mainstay in ensure quality activity training by a institution training . Implementation guarantee poured quality _ in three activity still could reliable as effort escort quality .

Still reliable for control quality training by a institution training . Guarantee quality the need supported components that become indicator determination standard quality , determination procedure operational , and monitoring and evaluation indicators . Indicator the Becomes marker how implementation guarantee quality could escorted as good as maybe by executor activity training by independent with method refers to the established indicators .

Analysis and Synthesis Journal of Evaluate Quality Assurance Model

Writer get group journal numbers 6, 7 and 9, which are considered recommended for made consideration in enrich recommendation to evaluate quality assurance training based on e-learning .

Training for apparatus as alternative achievement education in skeleton enhancement competence will Becomes vehicle learning quality when evaluated like evaluate organizing formal education in college high. Because it 's a reliable evaluation model Becomes needs urge for maintenance training . Especially training the depend on form of e-learning as strength organization training quality at the sight advance Becomes something not possible implemented . Evaluation training with consider 8 standards national education Becomes recommendation are you serious for reliable possibility applied . Evaluate training with utilise instrument evaluation you deserve too Becomes consideration for evaluate quality training based on e-learning.

Analysis and Synthesis Journal of Development Quality Assurance Model

Writer get group journal numbers 8, 10 and 11 which are considered recommended for made consideration in enrich recommendation towards development quality assurance training based on e-learning . Writer _ try To do synthesis as following . Writer evaluate Development of Quality Assurance Model in training based on e-learning, as has performed by a number of researchers at several article journal established scientific _ taken by the authors , some of whom worthy for developed and recommended as a model for developing Quality Assurance in training based on e-learning. For example , in the author 's AHP model see this model representative as a guarantee model quality in e-learning. Because the model hierarchy is a process of thinking and working using digital tools, such as LMS, digital distance learning, and others.

To journals above _ _ writer give synthesis that the Development Quality Assurance Model a training e - learning based required by a institution training . That 's the model that will be control which way _ training . this model can adapted in goal oriented based thing . Because , a institution training sure have vision and patterns that make up characteristics superiority compared institution training other . More QFD models complete again , even QFD pays great attention customer wishes with donate self that institution education (read : training) as his house quality (House of Quality). In part end something research , this model also does not escape from activities assessment (evaluation) as form of quality assurance with utilise application level excel .

From the side implementation activity , writer get conclusion that the guarantee model quality (QA) training still Becomes mainstay in control quality training compared when must rely on the instrument accreditation institution training . This it means , even though accreditation still permanent worn as activity guarantee quality institution training , if referring to research about effectiveness training by institute training still lost his strength with activity guarantee

internal quality . Activity great internal quality assurance training at least arrange planning about : determination standard quality reference ; determination procedure operational raw ; and monitoring and evaluation .

Idea big from study this writer convey after see three Suite activity something training started _ from planning , implementation , and the evaluation as well as development .

Discussion question QR 1 research , developed model in the context of Quality Assurance (QA) held .

Based on from studies carried out writer in form search literature (systematic literature review). Writer To do synthesis to a number of literature that has filtered as literature reference in give answer to the model of the internal quality assurance (QA) model held . Acquired and relevant models answer the QR 1 Among other :

1. Considerations For Quality Assurance Of E-Learning Provision
 Description short document this discuss about considerations (considerations) for doing guarantee the quality of e-learning at least must To do guarantee to : Distance education courses; Online courses (Synchronous online courses Asynchronous courses); On line programs ; Blended/hybrid courses; OER (open educational resources); MOOCS (massive open online courses).
Document this Becomes guide for e-learning organizer for always QA on : The guide inspire writer for find idea creative related guarantee quality for implementation learning in organized training _ institution training based on e-learning with consider QA on : Distance education courses; Online courses (Synchronous online courses Asynchronous courses); Online programs ; Blended/hybrid courses; OER (open educational resources); MOOCS (massive open online courses).

2. The Feasibility Of Quality Function Deployment (Qfd) As An Assessment And Quality Assurance Model
QFD becomes the best choice in perform assessment and quality assurance. Finding main studies this prove QFD eligibility as tool evaluation and assurance quality in education height , and as a compact and holistic model for guarantee quality that includes many fragmented models available . _ Journal this is one that carries QFD as a guarantee tool quality .

3. A Rubric To Evaluate Learning Management Systems
 Learning Management System (LMS) has role central in maintenance learning based on e-learning. Therefore , guaranteeing an LMS is necessary To use guard quality learning during e-learning takes place . Journal this point out rubric for evaluate the quality of the LMS used institution education including rubric to the frequent Moodle LMS used

4. Design Of Learning Evaluation Model For Distance Education
 Journal this more enrich outlook writer about amount existing design _ related to the evaluation model learning distance far away (distance learning). This thing in line with needs writer about supporting reference _ to smoothness activity organized training _ with distance far using the e-learning model.

5. Quality Assurance In E-Learning: PDPP Evaluation Model And Its Application
By special , guarantee quality required for implementation learning during e-learning takes place . the QA covers preparation learning , implementation learning , and assessment learning . This thing Becomes highlight especially for the custodian learning (teacher/ widyaiswara , instructor). Journal this offers the PDPP model as application guarantee quality During learning take place .

Discussion question QR 2 research , the most superior and relevant model with condition training .

Analyzed articles related to the flagship model that became reference writer among them as following .
1. Guarantee Model Quality Content Learning (SPADA in Higher Education);
Guide issued Director General Learning and Student Affairs at the Ministry of Research and Technology Dikti (2019) is one of the from four Guarantee Manual _ Quality consisting of above : Guarantee Guide Quality Content , Guarantee Guide Quality of Learning Process , Assurance Guide Quality Evaluation , and Assurance Guide Quality System this start proclaimed Indonesian Open and Integrated Online Learning (PDITT) which is effort together colleges high in Indonesia to work together serve service education tall quality for whole Indonesian society .

This guide given System Guide name Online Learning (SPADA) as an Assurance Guide Quality Content for College in _ organize online learning (e-learning).

Advantages of this model , Guarantee quality institution education could conducted by accountable with adopt one of the models or To do adaptation various models while weakness is no revealed are ADDIE models and Dick and Carey models too representative for guarantee institution training . As In conclusion , learning is system , which focuses on connectedness Among context , content , learning and teaching .

2. The use of the Analytical Hierrachy Process in Evaluation Quality ISO 19796-1 Based E-Learning System;
Research on journals this answer about fast development the use of e-learning, in particular answer needs will existence measurement quality e-learning system . On research this , made capable system / application _ measure quality e-learning system . The system created also provides facility for stakeholders to give weight priority each process in evaluation quality e-learning system .

Research results this show that method evaluation in created apps _ capable accommodate stakeholder priorities in development e-learning system , so that repair quality e-learning system can conducted by more directed and efficient . Advantages , the e-learning system must believed good quality , one of them ISO based . AHP is believed could provide an overview output quality something e-learning system . Whereas weakness Not explained is AHP believed ? could provide quality e-learning output for activity training . As the conclusion Weight priority the then processed with use AHP (Analytical Hierarchy Process) method . Output system this in the form of total value quality and recommendation arranged repairs in accordance with stakeholder priorities .

3. Self Evaluation of Quality Assurance System; Quality Function Deployment (QFD) models;

This article peeling about benefits and implementation of Quality Function Deployment (QFD). QFD is helpful methodology _ translate needs customer to in requirements design for ensure that output, fine in the form of product as well as processes, meet needs this . The advantages of QFD are that basic is a planning process with approach quality for design , development and implementation product new needs and values driven _ _ customer . This thing suitable developed and implemented for Internal Quality Assurance training . Whereas weakness Method this is the most developed in the business world , so that if applied in draft management training need a number of adjustment .

This article peeling about benefits and implementation of Quality Function Deployment (QFD). QFD is helpful methodology _ translate needs customer to in requirements design for ensure that output, fine in the form of product as well as processes, meet needs this . The advantages of QFD are that basic is a planning process with approach quality for design , development and implementation product new needs and values driven _ _ customer . This thing suitable developed and implemented for Internal Quality Assurance training . Whereas weakness Method this is the most developed in the business world , so that if applied in draft management training need a number of adjustment .

From this SLR synthesis , the author get a Quality Function Deployment (QFD) model in Quality Assurance (QA) in Higher Education which is seen as linear with interest implementation of internal QA training in institutions training . When this applied in institutions training then the adapted QFD Becomes choice appropriate in To do internal assurance .

Desire Consumers (Field A)
a. Gather voice from consumer (in Thing this is alumnus of the participant training), which can conducted with various techniques , such as interviews , questionnaires through letter , or focused group discussion (FGD).
b. Selecting and grouping voice from consumer to in category , that is category primary (primary), secondary , and if possible until category tertiary . Compilation this it will be very easy when composing response technical
c. Making wishes consumer to in column desire (net) house field A).

Planning (Field B)
Charging planning this is writing repeat a number of activity planning as displayed on the component planning .
Technical Response (Field C)
Response technical is language technical institutions used _ _ training for translate desire consumer (participant training) to be things that are technical for institution training .
Correlation (D Field)
(a) Submatrix correlation show strength connection Among desire consumers (participants) (Field A) with Technical Response (Field C). Charging submatrix this is very important at this time determination priority actions taken by management _
(b) correlation characteristics technical translated into the multiple upgrade targets quality as listed in Table 4.1 Rank column .
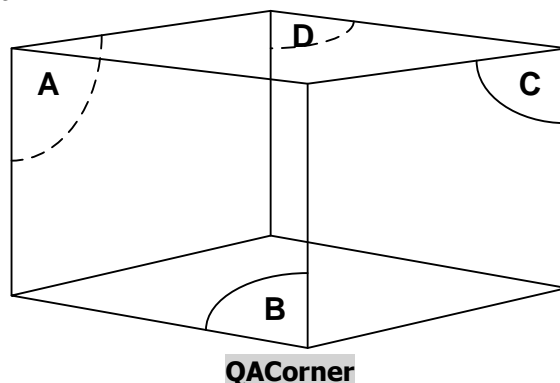
Technical Correlation (Field E)
(a) Correlation section technical house quality called the roof of house quality this
(b) Contents about results explanation characteristics technical Becomes QA indicators from every desired development _ achieved by team developer institution training .

That's it results literature review about this QFD model , next will developed become a model idea writer for training QA development models in institutions training .

Discussion question QR 3 research , development of Quality Assurance models in Maintenance Training Based on e-Learning.
Results of discussions and discussions as shown above _ generate model output from SLR study of amount journal as analyzed above . Quality Assurance model development in Maintenance Training Based on e-Learning, with adapt from results study and research a number of the journals mentioned above , in particular journal that discusses regarding : Quality Assurance; Quality Assurance (QA) Planning Model ; Quality Assurance Evaluation Model ; and Quality Assurance Models for activity training based on E-Learning, then writer recommend : Training QA Development Model through Adaptation of Quality Function Deployment (QFD) Model.

In the proposed QFD model a number of researcher as shown above , appears _ one the concept called " home " quality ", i.e. QA concept with illustrate house based on stage, which consists of of five fields (stages). Writer To do adaptation to the model with the nickname "QA CORNER" (read **: QACorner**). QA corner writer analogy as a cube built by four _ wall (author call it " chamber "). " Four booth " this is what becomes representation from Pan-Do-Check-Action (PDCA) system as framework think the Quality Assurance (QA) Model internally for activity training based on E-Learning in institutions government .

QACorner

Development and adaptation of this QA model , authors pour by technical in form instrument evaluation self (attached).

Thereby Development of Quality Assurance models in Maintenance Training Based on e-Learning, the author develop . With hope this could Becomes reference for support effectiveness and efficiency maintenance training based on e-learning in the future come .

Developed Quality Assurance Model this , basically a hybrid model utilizing online -based digital technology as a learning tool by together with learning stare face . This thing no hinder recommended quality assurance writer in study this . Because , the developed "QA corner " writer is " home " quality " controlling " guarantee quality a learning process (read : training) that puts e-learning as a draft the learning whatever and however the learning model , including the hybrid model. Even when blended learning that combines virtual and face-to- face advance on training basic CPNS, fixed QA corner can Becomes tool guarantee quality something training similar it .

QA corner relying on " four " room in QA corner " recommended writer as instrument evaluation self for organizer training that utilizes technology learning based on e-learning as a learning tool . Throughout the learning model (training) load partial e-learning instrument or full (completely) then four room in recommended QA corner writer still permanent update for worn as thread keeper _ red quality learning in context training organized by the institute training . Writer believe instrument evaluation self loading _ instrument about hope user training ; planning ; technical implementation ; and internal evaluation can reliable for maintain and conserve quality something good training _ part nor whole using e-learning.

Thereby end in study this , author attempted do my best , however writer realize study this , still far from perfect . because of need development and study / research more continue to get maximum results and contribute _ for takers _ policy for realize that training _ good quality _ now nor for in the future come .

CONCLUSION

The author succeeded in developing the study by proposing a QA development model, namely the Development of Internal QA Training through the Adaptation of the Quality Function Deployment (QFD) Model. Furthermore, the author calls this adaptation of QFD development as Quality Assurance Corner (QACorner), which is an adaptation of the term "house of quality" which was developed for quality assurance of the QFD model in higher education. This QA Corner is a quality corner for every training institution that organizes e-learning-based training. The training manager can take advantage of the examples and illustrations of the instruments presented by the authors in this study without closing the possibility to develop and modify them according to the needs of e-learning-based training..

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