

Development of an E_Learning Management Model Based on Hybrid Learning

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Abstract---This study aims to analyze the e-learning governance model that has been implemented so far, analyze the e-learning governance model that suits the needs of teachers, analyze the validity of the e-learning governance model developed based on hybrid learning and analyze the effectiveness of the e-learning governance model. Learning based on hybrid learning developed at SMP 2 Kudus.

This research method in terms of research procedures, types of data and analysis, including research and development, which is only carried out until the fifth stage. The research flow design is research and collection, planning, development of the initial draft, initial field trials and limited revision of the results of product trials (main product revision). The subject of product trial was to 40 SMP 2 Kudus teachers. The data in this study were analyzed using descriptive analysis and quantitative verification analysis.

The results showed that the N-Gain analysis of the hybrid learning governance model obtained an average N-Gain score for the control group of 61.23 or 65.60% which was categorized as quite effective after the development of the e_learning model with a N-gain score of at least 46.00 and a maximum value. 92.10.

The conclusion is that the hybrid learning-based e_learning model is quite effective because it is easier to use and more useful. Suggestions, it is hoped that teachers can implement a hybrid learning-based e-learning governance model with the help of supporting media for the Ekleapp.com application.

Supporting facts about the quality of educators in Indonesia in terms of e_learning management are strengthened by direct observations made by researchers through seminars, training, workshops and technical guidance for teacher forums at regional, regional and national scales in Indonesia. manage online learning or virtual classes. The findings from field observations are that there are weaknesses in online learning, namely the management of e_learning which is considered less effective for use during learning due to both internal (human resources) and external (infrastructure) constraints. This causes teachers to no longer use the e_learning system in learning. So it can be concluded that the fact that the condition of using e_learning in Indonesia is currently not optimal.

Keywords: Governance, E_Learning, Hybrid Learning.

I. INTRODUCTION

Another interesting phenomenon to study through the survey results of SMP 2 Kudus teachers is that they have not been fully able to combine and implement e_learning in learning activities. In fact,

in SMP 2 Kudus, there is often an In House Training on the use and management of e-learning training. From the initial research survey through google form which was shared through the WhatsApp group at SMP 2 Kudus with 40 teachers not including 4 ICT teachers and IT expert teachers, it was concluded that most SMP 2 Kudus teachers had not entirely used e_learning in the management of learning. Therefore we need a learning management system with virtual classes and actual classes or so-called e_learning model based on hybrid learning which in its management can be implemented effectively. Thus, it is hoped that there will be a management system or management of online learning that is effective, easier and more useful.

The concept of a hybrid-based e-learning governance model with a hybrid learning supporting application design is expected to also help previous research on e-learning whose results have not been optimal. In the hybrid-based e-learning governance model, the main role or actor managing online learning is an administrator (admin) who has a good quality of IT understanding so that it is hoped that the development of a hybrid learning-based e-learning governance model will have an impact on the implementation of e_learning use for teachers. - the teacher at SMP 2 Kudus can run sustainably.

Based on the opinion of governance or management experts above, it can be concluded that governance is a regulatory process that includes planning, organizing, implementing and controlling in controlling online learning to achieve certain goals effectively and efficiently. The importance of governance is that to achieve success in an activity it depends on the way the activity is managed. Both start from planning, organizing, implementing, and supervising.

The essence of E_Learning according to the National Education System Law No. 20 of 2003 Article I Paragraph 20 Learning (Learning) states learning is "the process of interaction of students with educators and learning resources in a learning environment". Learning as a learning process that is built by the teacher to develop creative thinking that can improve students' thinking skills, and can increase the ability to construct new knowledge as an effort to increase good mastery of subject matter. Learning has now shifted by combining learning with media (electronic tools) called electronic

learning or e_learning which is now increasingly recognized as a way to solve educational problems, especially online learning.

One definition that is quite acceptable to many parties, for example from Darin E. Hartley (2001) which states "E-learning is a type of teaching and learning that allows teaching materials to be delivered to students using the Internet, Intranet or other computer network media". -learning is the use of learning media using the internet, to send a series of solutions that can increase knowledge and skills. So e-learning means a way in the teaching and learning process by using services assisted by electronic media such as computers and the internet as a learning system. In its implementation, e-learning uses audio, video or computer services or a combination of the three. The e-learning learning model can be implemented face-to-face or online with a synchronous learning system or it can be asynchronous.

Hybrid learning is a further development of the e-learning model. For some people, hybrid learning is equated with Blended learning. When viewed from the side of the same approach, namely a learning that combines traditional methods with modern methods. However, when viewed from the technical side, hybrid and blended have different characteristics. If hybrid learning combines a virtual class with a conventional class in which there is an instructional design that is ready to be used as part of the learning process that will be carried out by the learner independently. On the other hand, blended learning combines offline and online learning, but instructional design is not yet available and must be managed during learning. Suppose a hybrid is a class that has been filled with all kinds of learning needs, but in blended only empty classes are available still needs to be filled. In conclusion, if using the hybrid technique, students can learn independently and dynamically because it is available according to what they want to choose.

The acceptance of a hybrid governance model according to Davis, the behavior of someone who wants to use IT begins with the perception of the benefits (perceived usefulness) and the perception of the ease of using IT (ease of use). These two components indicate a degree of trust in someone to use them. Davis defines perceived usefulness based on the origin of the word useful, which is capable of being used advantageously, or those that can be used for certain purposes that provide the benefits that are believed to be obtained.

II. METHODS

This research method in terms of research procedures, types of data and analysis including research and development according to Borg and Gall. For the Research Implementation Procedure, there are ten steps in the implementation of research and development according to Borg and Gall, only

up to the fifth stage. The research flow design is research and collection, planning, development of the initial draft, initial field trials and limited revision of the results of product trials (main product revision). The instruments before and after were tested for the model were validated by IT expert validators and IT practitioners. The subject of product trial was to 40 SMP 2 Kudus teachers. The data in this study were analyzed using descriptive analysis and quantitative verification analysis. Data sources and research subjects, namely 1) Informants 2) Events 3) Documents and research subjects were teachers of SMP 2 Kudus. Data collection techniques in this study were distributing questionnaires, interviews through FGD. This taking technique was obtained directly from the results of filling out a questionnaire conducted by the teacher at SMP 2 Kudus. The instruments used in this study were divided into instruments in the preliminary study, instruments on expert validation, and limited test instruments.

The validity of the data in this study was carried out by using triangulation techniques. The validators in this study were IT experts and practitioners. The test subjects were 40 teachers of SMP 2 Kudus. In collecting data by distributing questionnaires, students who were the subject of the trial did not become respondents. The study divided the instrument into 3 parts, namely 1 sheet of questionnaire at the preliminary stage about e-learning which has been used by SMP 2 Kudus teachers, 1 sheet of product validation for IT experts and IT practitioners and 1 sheet of questionnaire for teachers after the prosuk trial. The data analysis technique used qualitative and quantitative descriptive analysis to support the research results. Quantitative analysis is used to analyze data and information obtained from development studies and model trials.

III. RESULTS AND DISCUSSION

From the observations of the e-learning governance model that has been used and used in SMP 2 Kudus, in general the e_learning governance model as a factual model is as follows:

- 1) e-learning Governance Model for Admins
 - a. Planning: none
 - b. Organizing: none
 - c. Implementation: none
 - d. Supervision: None
- 2) The e-learning Governance Model for Teachers
 - a. Planning: registration to get a personal gmail account and personal password and act as admin, editing the teacher's own data profile, preparing teaching materials, media, learning resources, student worksheets, assessments and assignments to be uploaded to the classroom during implementation.

- b. Organizing: Creating online classes according to conventional classes, providing class access codes to students, after creating virtual classes the teacher can see and check students who have been included in the online class
 - c. Implementation: the teacher uploads teaching materials, media, learning resources, student worksheets, assessments and assignments for students during the learning process. After that the teacher can direct and guide students in online classes.
 - d. Supervision: The teacher monitors and carries out evaluations
- 3) E-learning Governance Model for Students
- a. Planning: registration for a personal gmail account and personal password, then waiting for the access code from the teacher to enter the online classroom. After logging in with the access code obtained from the teacher, students can see the classes and subjects the teacher created
 - b. Organizing: After being able to log in then students can edit their profile, Students can send messages to teachers or friends, Students can create forums or announcements
 - c. Implementation: After that students can download teaching materials, media, quizzes that will be given online, students download teaching materials, media, learning resources, student worksheets, assessments and assignments and upload assignments given by the teacher during the learning process.
 - d. Supervision: Students can also view grades by clicking on a subject.

An e-learning governance model that suits the needs of teachers in SMP 2 Kudus

By looking at the initial conditions for the implementation of e-learning governance that has been implemented in SMP 2 Kudus, the majority of the obstacles are The existing e_learning governance system is still considered ineffective in management, teachers still play a role and act as the main manager. So in this study the development of a hybrid learning-based e_learning governance model is designed, namely the user as the main actor in planning and organizing the hybrid learning-based e_learning governance model is the administrator. For teachers, students and supervisors are the implementers and supervisors only. The development design of the e_learning governance model for admins, teachers and students in the planning, organizing, implementing and monitoring stages is as follows:

(1) Design of governance model for admin

- a. Planning: Administrators as virtual class administrators who prepare usernames and

passwords for each teacher and student, admin create virtual classes according to conventional classes taught by the teacher.

- b. Organizing: managing teacher / student / supervisor usernames and passwords, inputting data such as classes, subjects, semesters and academic years, uploading teaching materials, media, learning resources, student worksheets, assessment and assignments for one semester given by the teacher to the admin.
- c. Implementation: helping teachers and students when there are obstacles in e_learning governance and uploading student test scores.
- d. Supervision: Admin monitors possible problems during implementation.

(2) Design of e-learning Governance Model for Teachers

- a. Planning and organizing: Teachers do not need registration, for users and passwords can be obtained from the admin. The teacher prepares the learning administration and leaves it to the admin to upload it first before the teaching and learning activities begin, the teacher can edit the profile, the teacher can use the chat room for interaction with students and the principal / principal
- b. Implementation: face-to-face learning enters the e_learning application without a username and password, the teacher directs and guides students to download teaching materials, media, learning resources, student worksheets, assessments that have been uploaded first by the admin or by the teacher himself (flexible). For online learning, the teacher enters the LMS application using the username and password from the admin so that if you forget to ask the admin, the teacher uploads teaching materials, media, learning resources, worksheets, assessments and assignments during learning.
- c. Supervision: The teacher monitors learning activities and carries out evaluations

(3) e-learning Governance Model for Students

- a. Planning and Organizing: Administrators as virtual class admins who prepare usernames and passwords for each each student, the admin makes virtual classes according to the class division of students. Waiting for directions from the teacher to select teaching materials, media, learning resources, student worksheets, assessment and assignments during implementation.
- b. Implementation: Students enter the e_learning application without a username and password when face to face, only choosing teaching materials, media,

learning resources, student worksheets, assessments and assignments directed by the teacher. Online learning students enter the LMS using the username and password given by the admin.

- c. Supervision: Students can also view grades by clicking on a subject

It can be concluded for the design of the development of a hybrid learning-based e-learning governance model in its management centered on admin. For planning and organizing, it is managed by the admin and implementation and supervision is carried out by the user himself, namely teachers, students, supervisors. After improving the draft model for the final model of e-learning governance based on hybrid learning for admin, teachers and students, it can be concluded as follows:

(2) The Final Model of e-learning governance based on Hybrid Learning for Administrators

Planning and Organizing: Administrators as virtual class administrators who prepare usernames and passwords for each teacher and supervisor use NIP and students use NIS, create virtual classes according to conventional classes taught by teachers, create link drives for teaching material content, media, learning resources, student worksheets, assessment and assignments for one semester for teachers.

Implementation: helping teachers and students when there are obstacles in e_learning governance and uploading student test scores.

Supervision: Admin monitors possible problems during implementation.

(3) The final model of e-learning governance based on hybrid learning for teachers

- a. **Planning and Organizing:** the teacher waits for a username and password for each teacher by using the NIP, managing virtual classes according to conventional classes that have been created by the admin. Providing files for the content of teaching materials, media, learning resources, student worksheets, assessments and assignments for one semester given to the admin.

- b. **Implementation:**
Offline-based learning (face-to-face) does not use a username and password. Teaching materials, media, learning resources, student worksheets, assessment and assignments are already available in the ecle application and the teacher only directs students to select the menu by clicking the learning administration menu button.

- c. **Online-based learning** teachers use the NIP username and password created by the admin to enter (LMS) as e_learning application, the teacher uploads teaching

materials, media, learning resources, student worksheets, assessments and assignments for students during the learning process

- d. **Supervision:**

Teachers monitor learning activities and carry out evaluations (3) The Final Model of e-learning governance based on Hybrid Learning for Students

- a. **Planning:** setting up a username and password for each student using the admin's NIS. Waiting for directions from the teacher to select teaching materials, media, learning resources, student worksheets, assessments and assignments.

- b. **Implementation:**
Offline based (face to face) does not use a username and password. Teaching materials, media, learning resources, student worksheets, assessments and assignments are already available in the Ecle application and students select the menu in the Ekle application by clicking the button according to the teacher's direction.

Online-based (e_learning) students use a username and password in the form of an NIS created by the admin to enter (LMS) as an e_learning application. Students download teaching materials, media, learning resources, student worksheets, assessments and assignments uploaded by the teacher.

- c. **Supervision:**
Students can also view grades by clicking on a subject. The Validity of the E_Learning Governance Model Based on Hybrid Learning Developed in SMP 2 Kudus.

Based on the results of statistical analysis of the pre-test instrument for the validity of the hybrid learning-based e-learning governance model developed at SMP 2 Kudus, the results are statistically summarized as follows:

1) Instrument Validity and Reliability

It should be noted that in a study, the research instrument must be tested for validity and reliability before being used to retrieve data. Based on the results of the SPSS 20.0 analysis, the results of the pre-test instrument validity and reliability are based on the following attachments: 1) Validity test, based on the results of the analysis, the validity of the data is declared valid because the instrument items from numbers 1-10 on the instrument have a Corrected Item-Total Correlation value of more than 0.4132. This shows that the instrument has a good validity value, which means that the instrument is very appropriate for measuring the sample. 2) Reliability Test the instrument is declared reliable because t arithmetic is greater than t table ($0.975 > 0.4132$). R Table on $DF = N-2$ ($DF = \text{Number of samples} - 2$)

Then $25-2 = 23$ obtained r table 0.4132 and probability 0.05. With $DF = 23$ obtained t table, 4132 This shows that the instrument has a good consistency value where the instrument has a reliability that does not change even though it is used in populations elsewhere.

While the results of statistical analysis of the post-test instrument validity of the hybrid learning-based e-learning governance model developed at SMP 2 Kudus are statistically inferred from the results of the SPSS 20.0 analysis, the results of the validity and reliability of the post test instrument are based on the following attachments: 1) Test Validity, based on the results of the analysis, the validity of the data is declared valid because the instrument items from numbers 1-10 on instrument has a Corrected Item-Total Correlation value of more than 0.3739. This shows that the instrument has a good validity value, which means that the instrument is very appropriate for measuring the sample. 2) Reliability test, reliable instrument is declared reliable because $0.976 > 0.3739$ R Table on $DF = N-2$ ($DF =$ Number of samples -2) Then $30-2 = 28$ obtained r table 0.3739 and probability 0.05. $\Rightarrow 0.4132$. This shows that the instrument has a good consistency value where the instrument has a reliability that does not change even though it is used in populations elsewhere.

The Effectiveness of E_Lerning Governance Model Based on Hybrid Learning in Developed in SMP 2 Kudus.

The data for assessing the effectiveness of the governance model based on hybrid learning in the form of effectiveness data before and after development can be seen in the following table:

Table of categories and percentage of N-Gain effectiveness

N-Gain Value	Category
$G > 0,7$	High
$0,3 \leq g \leq 0,7$	Medium
$G < 0,3$	Low

Sumber: Melzer dalam Syahfitri (2008:33)

Percentage	Interpretation
< 40	Ineffective
$40 - 55$	Less effective
$56 - 75$	Effective enough
>76	Effective

Sumber: Hake,RR, 1999

Based on the calculation of the NGain score above, the NGain score average for the control group is 19.05 or 19.05% in the ineffective category with a minimum value of 11.40 and a maximum of 30. 16. So the e_learning governance model before development has not been effective. In the experimental group, the average NGain score for the control group was 61.23 or 65.60% which was considered quite effective after the development of the e_learning model with a minimum Ngain score of 46.00 and a maximum value of 92.10. It can be concluded that the final model is a hybrid learning

governance model with supporting elements in the form of a hybrid application whose management relies on administrators (admin). Admin plays a role as the main actor in e-learning based on hybrid learning (online and face-to-face) so that it can overcome teacher weaknesses in using e-learning governance models. This model is also very effective for novice users to introduce a hybrid learning system (online and face-to-face).

Discussion

E_learning Governance Model that has been used in SMP 2 Kudus

Based on the results of the study, the e_learning governance model that has been used in SMP 2 Kudus has not been fully implemented optimally because there are obstacles or weaknesses when managing online-based learning. This is evidenced by the results of statistical analysis of 45.25%. The perception by most of the teachers at SMP 2 Kudus considers that the existing e_learning governance is not yet effective because the e-learning management stage is difficult to use and the operation is not easy, starting from organizing planning, implementation and supervision, everything is still teacher-centered. The teacher as well as the admin is the main controller in e-learning management, so an effective e-learning management model is needed so that it can be used either face-to-face or online.

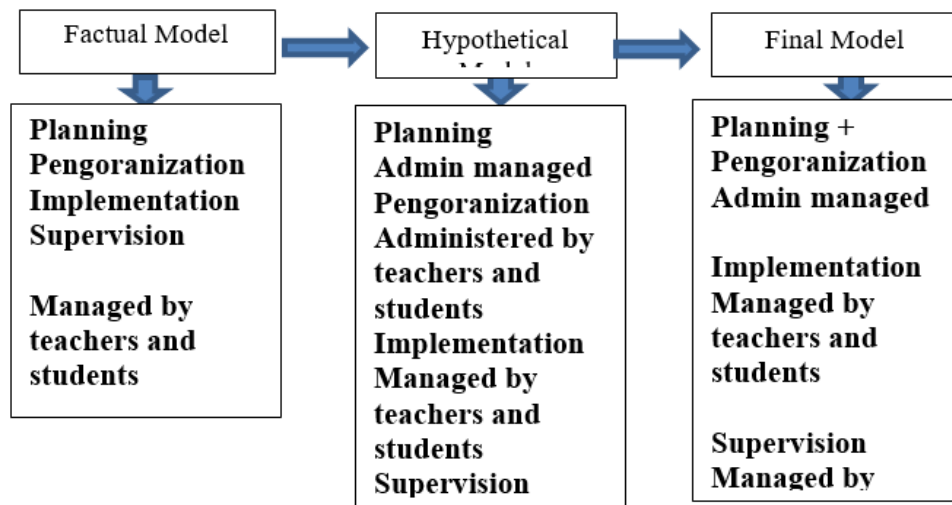
The design of e_learning governance models developed by online and offline learning systems or hybrid learning. Therefore, in this study the researcher as one of the teachers at SMP 2 Kudus who has so far known very well how the e_learning learning system in SMP 2 Kudus. So that researchers try to overcome obstacles by developing models in governance. Effective management is a governance model that relies on the administrator (admin) as the main actor or main controller in e_learning management.

Development of E_Learning Management Model Based on Hybrid Learning According to the Needs of SMP 2 Kudus Teachers

The design of the development of an e-learning governance model that makes it easier for teachers to manage it so that it can be implemented in a sustainable manner, the hybrid-based e_learning governance model is more managed by administrators as the main controller of e_learning. Administrators are tasked with planning, organizing, implementing and monitoring. In addition to preparing usernames and passwords for users to be effective in their management. The admin creates a username and password, so that both teachers and students in the first step are expected to experience ease in running e_learning. The admin is also in charge of creating and managing conventional classes into online class systems (virtual classes) with the help of an application system that can virtualize the conventional teaching and learning

process into more effective virtualization, Nana, Endang Surahman (2019). Oktaviany (2019) makes it easier for schools, especially teachers, in managing the e_learning governance model, a learning management system that prioritizes administrators (admins) is needed so that the implementation of the e-learning system can run effectively. Although the hybrid learning governance model is managed with admin assistance, students are required to self-determine learning with a heutagogy approach that prioritizes independence in learning, Hase, Kenyon, 2000; Eberle (2009).

For a detailed description of the three factual models, the hypothetical model and the final model, the development of a hybrid learning-based e_learning governance model in planning, organizing, implementing and monitoring is managed by admin, teachers, and students with a hybrid learning-based e_learning model of governance which has differences. to the administrator as the main controller and manager of e_learning management. To distinguish the main function of the admin in the factual model, the hypothetical model and the final (final) model can be visualized in the following figure:



Gambar Perbedaan Fungsi Admin Pada Model Tata Kelola E_Learning

Validatas of E_learning Governance Model Based on Hybrid Learning in SMP 2 Kudus

Based on the results of the validity analysis, the e-learning model based on hybrid learning is valid. The results of the overall feasibility percentage level of the hybrid-based e_learning governance model through the hybrid learning support application media in the form of the ekle application show that it is very feasible to be used as the final model of hybrid-based e_learning governance. When viewed from the results of the analysis of SPSS 20.0, the t test data obtained with a value of $4.333 > 0.1385$ (t table in population 40 is obtained t table at 0.05 equal to 0.1385) that the e-learning governance model based on hybrid learning has an effect which is significant for all aspects of the hybrid.

The effectiveness of the E_lerning Governance Model (ekle application) based on Hybrid which was developed at SMP 2 Kudus.

Based on the results of the SPSS 20.0 analysis, the t test data obtained with a value of $4.333 > 0.1385$ (t table in population 40 obtained t table at 0.05 equal to 0.1385) shows that it is very effective with views of various aspects of hybrid governance, namely planning, organizing, implementing and monitoring so that it is possible to use this hybrid learning

governance model not only as a supplement but can be implemented in an ongoing manner,

From several previous studies regarding the e_learning system which states that the effectiveness of learning using e-learning tends to be no different when compared to conventional learning, but the advantage that can be obtained is in terms of the effectiveness of the e-learning governance model.

When compared with the results of the percentage analysis after the development of a hybrid learning governance model from the teacher's response that the ease of use of the hybrid learning governance model with the help of hybrid applications shows 95% planning for the organizational aspect shows a percentage of 90%, for the implementation aspect shows 93%, and for the aspect of supervision 88%. Overall, the percentage of effectiveness of the hybrid governance model is very easy for teachers to use in hybrid-based learning. The design of an effective hybrid learning governance model is expected to change the mindset and behavior of teachers who were initially reluctant to implement a hybrid learning system to want to combine offline learning with online learning with the help of hybrid learning governance model media in the form of an "ekle" application.

The final conclusion of this study is that the e-learning governance model based on hybrid learning is effective for use as an online and offline learning model system. However, e-learning cannot completely replace conventional learning activities in the classroom, but e-learning can be used as a supplement (complement) or learning support. This is evidenced by the testimony of the use of the e-learning governance model based on hybrid learning throughout Indonesia through social networking media (Facebook) after disseminating the webinar. For testimonials can be seen at the following link <http://gg.gg/Testimoni-model-tata-kelola-hybrid-learning>.

The renewal of a research on the development of a final model of e-learning governance based on hybrid learning can be accepted by the community or community and provides benefits in the form of ease of management so that the effectiveness of the model is created. Referring to the principles of governance, it can be concluded that through the governance model hybrid learning can increase the effectiveness of hybrid learning in a sustainable manner. This is because the arrangement is done through a process and arranged based on the order and functions of good and planned governance. Governance has an important meaning in managing everything, because of the success of a lesson or its success an activity that depends on the way the management of the planning, organizing, implementing and monitoring the learning itself.

IV. CONCLUSION

Conclusion

Based on the research on the development of a hybrid learning-based e-learning governance model that has been conducted, it can be concluded that this hybrid-based e-learning governance model relies on administrators (admin). Admin as planner, organizing, as well as assisting the implementation and supervision of e-learning learning. In addition, the hybrid-based e-learning governance model also helps relieve teachers from planning, organizing, implementing and monitoring processes because learning management is well managed by administrators so that teachers don't bother running e-Learning. After testing the validity and reliability, it was found that the level of effectiveness was quite high in the hybrid-based e-learning governance model as a model that could overcome teacher weaknesses. Given the ease with which this e-learning governance model is easier than other e-learning governance models, this hybrid-based e-learning governance model is believed and in demand by teachers as a governance model that is categorized as very effective and can be used sustainably. After the effectiveness test is carried out, it can be said that the hybrid-based e-learning governance model with supporting elements in the form of a hybrid application that has a high level of

effectiveness and is in accordance with the needs. This hybrid e-learning governance model is different from the average online classroom. The difference between this model and others is the hybrid learning design which is managed centrally by the administrator.

Implications

The development of a hybrid-based e-learning governance model can be used as an e-learning governance model that is easier to use and more useful and effective enough in management by utilizing the administrator as the main administrator of e-learning at SMP 2 Kudus which has been designed to be used by two actors, namely teachers and students. The theoretical implication of the research results, obtaining a synthesis as the final model of developing a hybrid learning-based e-learning governance model is that it can provide usefulness and convenience in managing planning, organizing, implementing, and supervising admin-controlled to reduce the burden and improve teacher performance. The practical implication of this research is that the application design of the hybrid learning model can be used by teachers with online and offline learning systems that are effective and according to the needs of the teacher which has an impact which directly impacts the convenience of students.

Suggestion

Based on this research, the authors provide the following suggestions: 1) For schools, the hybrid learning governance model is used as a standard model that can be applied in schools. 2) For SMP 2 Kudus teachers, the hybrid learning governance model can be recommended as one of the e-learning governance models that teachers are interested in because it makes it easy for teachers to manage online and offline learning. 3) For students, the development of this hybrid learning governance model is well implemented so that it will be able to bring students to face the era of the industrial revolution 4.0 in the future.

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