# "Hi, Learning Models": A Development of Online Learning Media for Accounting Learning and Teaching Strategies Course

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**Abstract.** Online learning media today is very useful, seeing technological developments very rapidly. Therefore, this study aims to produce products for learning in the form of learning media online for the course of Accounting Learning and Teaching Strategies with the product name "Hi, Learning Models" will be uploaded on a platform learning. The result of the product has gone through a validation process so that declared fit for use in the learning process in the Accounting Teaching and Learning Strategies course . This study was research and development used the Borg and Gall development model which has been adapted to field conditions. The stages used include (a) preliminary situation analysis, (b) developing a "Hi, Learning Models" design, (c) creating products, (d) validity testing, (e) 1st revision of online Learning Media Hi, Learning Models, (f ) Limited field trials (g) 2nd revision of online Learning Media Hi, Learning Models , (h) final product. Validation of online learning media was carried out by two subjects, namely material experts and media expert. Based on the results of this study, it is suggested to accounting lecturers in particular to take advantages online learning media in the learning process sees that currently technology is very influential on all aspects of life, especially learning. On the other hand, the researchers hope that it will be developed later as well as online learning media with other forms and for courses and other materials.

**Keywords**: Learning Media; Cooperative Learning; Accounting Education; E-learning

## INTRODUCTION

Quality education can determine the quality of a nation so that it is not left behind with other nations. For this reason, educational renewal is needed and becomes a guide in improving the quality of national education. During this pandemic, almost all educational institutions, from early childhood education to universities, are conducting online learning. In line with the statement (Sangster et al., 2020) that the higher education sector has been greatly affected by this pandemic. Usually these educational institutions have their respective e-learning platforms to facilitate the online learning process. E-learning is learning through electronic means that aims to achieve skills transfer supported by computers and networks (Lihitkar et al., 2013). The use of online learning media should be controlled by today's lecturers because of the demands of the times and needs. Every lecturer needs to learn how to select and determine learning media so that the optimal achievement of learning objectives in the lecture process. Even though this

learning media is still often ignored for various reasons. Moreover, educating students in the 21st century, if only in classrooms, or conventional face-to-face meetings, it will be even more difficult (Akgündüz & Akinoglu, 2017).

The Accounting Learning and Teaching Strategies course is usually taught directly because there are some that do require teaching practice in class. But it can't be done right now because of the pandemic. Therefore, researchers developed online learning media for the course of Accounting Learning and Teaching Strategies, especially in cooperative learning materials. Researchers are looking for ways that the developed online learning media can be successful, because online learning usually makes students tired and bored. Especially students who are over the second semester, definitely tend to get bored because the previous semester also used online learning for half the semester. This is in line with the opinion (Beatson et al., 2019) that later the grades of students in higher semesters will tend to comply. It can

happen because you are bored with online learning.

Hi online learning media, Learning Models that are developed are expected to make it easier for students to understand and form constructs in online learning about cooperative learning in the subject of Accounting Learning and Teaching Strategies at X University. Hi, Learning Models online media are expected to be a reference for online learning media. for accounting lecturers who teach Accounting Learning and Teaching Strategies courses in implementing the learning process in the Strategy and Teaching Accounting course in online learning.

**Online Learning Media**

Media is a tool used in the learning process. Learning media helps in delivering learning material in lectures from lecturers or teachers to recipients (students / students), so that it can increase the efficiency and effectiveness of lectures in achieving learning objectives. (Hamzah & Aksara, 2011) also explained that the media are all forms of communication tools that can be used to convey information from sources to students. In line with the statement (Tafonao, 2018) which states that learning media is anything that can be used to transmit the sender's message to the recipient, so that it can stimulate the thoughts, feelings, attention, and interests of students to learn. Meanwhile, according to (Adam et al., 2015) learning media are everything in the form of both physical and technical in the learning process that can help teachers to make it easier to convey subject matter to students, making it easier to achieve the objectives learning that have been formulated. Quoting from (Kemp, 1989), a number of media contributions in learning activities include:

> 1) the presentation of teaching material becomes more standard, 2) learning activities are better, 3) learning activities become more interactive, 4) the time needed for learning can be reduced, 5) the quality of learning can be improved, 6) learning can be presented wherever and whenever as desired, 7) increasing the positive nature of students and the learning process to be stronger / better, 8) giving positive values to the teacher.

The benefits of learning media in the lecturing process in general are that it makes it easier for students, or students to capture the knowledge conveyed by student lecturers to feel comfortable, lecturers are also easier in delivering material,

effective time, and the creation of learning objectives.

In many countries, both developed and developing countries, e-learning is emerging as one of the most important educational methods (Lihitkar et al., 2013). The term e-learning is used in a variety of ways such as online learning, network collaborative learning (NCL), computer-supported collaborative learning (SCL), web-based training (WBT), online resource-based learning (ORBL), and computer-based learning (CBL) (Lihitkar et al., 2013). In the 21st century, especially during a pandemic like this time, the internet is used everywhere, especially in areas where there are many educational institutions (Akgunduz & Akinoglu, 2016). E-learning technology can change learning to be synchronous or asynchronous (Phelan, 2015). When the material was presented in real time, so its been synchronous learning (for example, live webinars). When the materials was anytime stored and anywhere, its been asynchronous learning is when (for example, a video recording linked to an e-learning platform) (Phelan, 2015). Online learning also shows the importance of connecting and implementing collaborative technology as a means of flexible thinking, thus preparing college students for online communication skills and teamwork (Barak, 2018). From some of the opinions above, it can be concluded that online learning media is a tool used for online learning for the success of learning objectives.

**Cooperative Learning**

Cooperative learning and group learning are often used in the lecture or learning process. Cooperative learning is very suitable to be used in learning so that students are motivated to express their opinions. Cooperative learning places students into groups, and asks them to work on solving problems (Gilies & In, 2003). Cooperative learning also focuses on using students small group to work together in maximizing learning conditions, so they can get achieve learning goals (Sugiyanto, 2010). (Lie, 2007) states that the cooperative learning model is not just learning in groups. The implementation of the cooperative learning model correctly will show the lecturer to manage the class more effectively. According to (Slavin, 1980) cooperative learning refers to various kinds of learning models in which students work together in small groups consisting of various levels of achievement, gender, and different ethnic

backgrounds to help each other in learning subject matter. In cooperative learning, students are expected to be able to help each other, discuss each other, and argue to hone the knowledge they mastered at that time and close gaps in each other's understanding. Cooperative learning is more than just group learning, because in this learning there must be a stimulus and assignment that is cooperative in nature so that interactions are truly beneficial between students for learning purposes. (Shoimin, 2016) argues that cooperative learning is learning in groups to work together to help each other construct concepts and solve existing problems.

**METHODS**

The development model used in this study was the Borg and Gall development model (Borg & Gall, 1983). This is because the Borg and Gall model is simpler in development, and does not reduce the quality of the product. According to (Gall et al., 1996) explains ten steps of research and development that will be used as guidelines in this development, namely as follows:

1. Research and information collecting (research and data collection which includes measurement of needs, literature review, classroom observation).
2. Planning (Planning) Included in this step to formulate skills and expertise related to problems.
3. Develop preliminary form of product (development of initial product draft). Included in this step is the development of learning materials, the learning process and evaluation instruments.
4. Preliminary field testing
5. Main product revision
6. Main field testing
7. Operational product revision (Conducting revisions to products from the results of field trials)
8. Operational field testing
9. Final product revision
10. Dissemination and implementation (disseminating the developed product / model).

The reason for choosing this model is also because it is easy to follow the steps and appropriate used in research on the development of online learning media "Hi, Learning Models" for learning the subject of Accounting Learning and Teaching Strategies. The online learning media "Hi, Learning Models" were tested on a limited basis only to 26 certain students who had taken Accounting Learning and Teaching Strategies courses because of the covid 19 pandemic. Based on procedures development of online learning media above, then in compiling

the development of online learning media "Hi, Learning Models" uses a development model from (Borg & Gall, 1983)) which has been adjusted to the needs, so in this study it took eight stages, namely (a) preliminary situation analysis, (b) developing a "Hi, Learning Models" design, (c) creating products, (d) validity testing, (e) $1^{st}$ revision of online Learning Media Hi, Learning Models, (f ) Limited field trials (g) $2^{nd}$ revision of online Learning Media Hi, Learning Models , (h) final product. The validation of learning tools was carried out by three subjects, namely material experts, education experts and users (students).
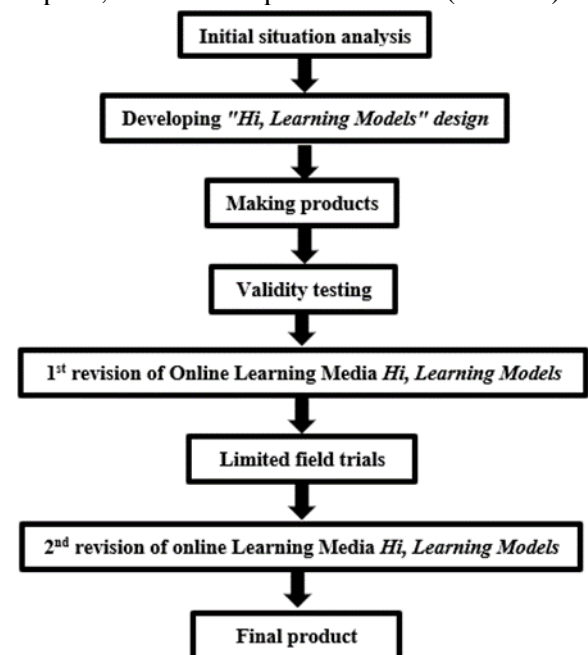


Figure 1. Development Design of Online Learning Media "Hi , Learning Models" (adaptation: Borg and Gall)

**Quantitative Data**

The quantitative data obtained is the result of closed questionnaires and test results, this quantitative data is used as the basis for determining the validity / feasibility of Hi online Learning Media, Learning Models.

**Qualitative Data**

The questionnaire instrument in addition to producing quantitative data also produces qualitative data obtained from suggestions, criticisms and opinions in general about online learning media "Hi, Learning Models", suggestions, criticism and general opinions given by material experts and limited field testing (students) From the observations of online learning media "Hi, Learning Models" by researchers as a consideration for improving the

online learning media Hi, Learning Models developed.

**Validity test**

Validator in the development of online Learning Media Hi, Learning Models are two experts consisting of IT experts and accounting education experts. This validation stage is one of the steps to get input and feedback in perfecting the online learning media developed.

**Material Expert Validation**

Material expert validation data were obtained from accounting education experts to determine the accuracy of the material in the Hi online Learning Media, Learning Models. Validators are experts in accounting education. In addition, the validator is also a senior accounting education lecturer at X University whose credibility is undoubted.

**Media Expert Validation**

Media expert validation data is obtained from Information and Technology experts to determine the quality of online learning media in terms of media quality. Validators are experts in the field of Technology and Information and are also lecturers of Technology and Information so that the opinions of the validators can be used as accurate data in the media expert validation stage.

**RESULTS AND DISCUSSION**
**1) Description of online Learning Media Development "Hi, Learning Models"**

Development of online learning media "Hi, Learning Models" was developed in accordance with the materials and curricula used by universities today. The procedure for developing this learning device uses the Borg and Gall procedure which has been modified to suit field conditions, limited time, energy, and cost. So in this study, researchers took seven steps in developing Hi online learning media, Learning Models, with the following steps: (a) analysis of the initial situation, (b) developing the design of "Hi, Learning Models", (c) making products, (d) validity test, (e) revision I Hi online Learning Media, Learning Models, (f) Limited field trial (g) revision II Hi online Learning Media, Learning Models II, (h) final product. Online Learning Media "Hi, Learning Models" is Models", so that it can be interesting and easy to understand the material in the Accounting Learning and Teaching Strategies course. Online learning media that are created are able to meet

suitable for use in any e-learning platform (moodle or google classroom) because it is in MP4 format. Even this media can also be seen by students at any time both online and offline, so that students can easily learn at any time, either with an internet network or without an internet network.

*a. Initial Situation Analysis*

The initial situation analysis stage is used to find out what needs are needed to overcome the problems found in learning activities. The initial situation analysis was carried out by means of observation and interviews with accounting lecturers at X University. Based on the results of observations and interviews with accounting lecturers at X University, it can be concluded that in the Accounting Learning and Teaching Strategy course there are various kinds of learning models where there must be unique ways to teach and convey it to students. In addition, because of the COVID-19 pandemic which required full online lectures, therefore a support was needed as a tool to help students to more easily understand the learning models in the Accounting Learning and Teaching Strategy course. Previously, accounting lecturers at X University had never used video to convey this material, lecturers only used power point slides and class discussions.

*b. Development of Online Learning Media Design "Hi, Learning Models"*

In the early stages of designing the Hi online Learning Media product, Learning Models to be developed, the researcher examines the Lecture Unit which is defined so that in developing the material to be published in Hi online Learning Media, Learning Models are in accordance with the Lecture Unit and can achieve the goal learning. At this stage the researcher also collects libraries that cover the material that will be presented in the video. Sources are collected as a reference and in planning by making product designs. Researchers also collect other libraries in the form of pictures and cases on the internet.

*c. Creating Online Learning Media "Hi, Learning Models"*

The results of the initial situation analysis provide input in the development of the Hi video, Learning Models. These results are used as a basis for determining the components to be included in the learning video "Hi, Learning expectations and can be used in learning. The contents of the online learning media "Hi, Learning Models" consist of various kinds of cooperative learning models so that students

understand and are able to practice learning in the Accounting Learning and Teaching Strategies course. With an attractive appearance with the help of the Screen Cast O Matic application, the online learning media can be made well in the hope that it can increase student motivation and interest in studying cooperative learning material in the Accounting Learning and Teaching Strategy course. After the online Learning Media is complete, the researcher will also upload the online Learning Media to the online learning platform at X University.

### d. 1st Revision of Online Learning Media Hi, Learning Models Revision

*Revision of material*

Revision of online Learning Media material Hi, Learning Models is carried out on data obtained from material expert validation. Material revisions were made to improve Hi, Learning Models online learning media. The revision actually states that the material described

is too long and must be shortened, because students will tend to get bored if the material in online learning media is too long.

*Revision of media*

Media revisions are carried out on data obtained from validation of media experts. Media revisions were made to improve the quality of online learning media Hi, Learning Models. The revision states that the backsound in the online Learning Media Hi, Learning Models is too loud so that the narrative is difficult to hear. So that revisions are made to improve the backsound.

### e. Limited Field Trials

Limited field trials were carried out to improve online learning media Hi, Learning Models viewed from users. Limited field trials were carried out in one class that took the Accounting Learning and Teaching Strategy Subject at X University.

The quantitative data obtained from the validation are presented as follows:

Table 1. Material Expert Validation Results

| Assessment Indicators | Assessment Points | Score | | Percentage |
|---|---|---|---|---|
| | | Xi | Yi | % |
| **I. FEASIBILITY ASPECT OF CONTENT** | | | | |
| A. The suitability of the material with the learning plan | 1. Completeness of the material | 4 | 4 | 100% |
| | 2. The breadth of the material | 4 | 4 | 100% |
| | 3. Depth of material | 3 | 4 | 75% |
| B. Accuracy of material | 4. Accuracy of concepts and definitions | 4 | 4 | 100% |
| | 5. Accuracy of data | 4 | 4 | 100% |
| | 6. Sample accuracy | 3 | 4 | 75% |
| | 7. The accuracy of the terms | 4 | 4 | 100% |
| | 8. Using examples in everyday life | 4 | 4 | 100% |
| C. Encourage Curiosity | 9. Encourage curiosity | 4 | 4 | 100% |
| | 10. Encourage students to ask questions | 4 | 4 | 100% |
| | 11. Encourage students to find concepts | 4 | 4 | 100% |
| **II. ASPECTS OF SERVICE QUALIFICATION** | | | | |
| D. Presentation Techniques | 12. Conceptual order | 3 | 4 | 75% |
| E. Interactivity | 13. Student involvement in using Online Learning Media in learning | 4 | 4 | 100% |
| **III. ASPECTS OF LANGUAGE QUALIFICATION USED** | | | | |
| F. Straightforward | 14. The accuracy of the sentence structure | 4 | 4 | 100% |
| | 15. The effectiveness of the sentence | 4 | 4 | 100% |
| | 16. Standardization of terms | 4 | 4 | 100% |
| G. Communicative | 17. Understanding of information | 4 | 4 | 100% |
| H. Dialogical and Interactive | 18. Ability to motivate students | 4 | 4 | 100% |
| I. Conformity with Development Learners | 19. Conformity with intellectual development college student | 3 | 4 | 75% |
| | 20. Conformity to level emotional development college student | 4 | 4 | 100% |
| J. Compatibility with the Rules of Language | 21. Grammatical accuracy | 4 | 4 | 100% |
| | 22. Spelling accuracy | 4 | 4 | 100% |
| Total | | | | **2100%/2200% = 95.45%** |

Table 2. Media Expert Validation Results

| Assessment Indicators | | Assessment Points | Score | | Percentage |
|---|---|---|---|---|---|
| | | | Xi | Yi | % |
| I. MEDIA EFFICIENCY ASPECTS | | | | | |
| A. Facilities | 1. | Ease of using Online Learning Media | 4 | 4 | 100% |
| | 2. | Ease of selecting the Online Learning Media menu | 4 | 4 | 100% |
| | 3. | Online Learning Media entry and exit facilities | 4 | 4 | 100% |
| II. MEDIA VIEW ASPECTS | | | | | |
| B. Quality of Design / Appearance | 4. | Custom color selection | 3 | 4 | 75% |
| | 5. | The suitability of selecting the font and font size | 3 | 4 | 75% |
| | 6. | Suitability of background selection | 4 | 4 | 100% |
| | 7. | The suitability of the animation with the material | 4 | 4 | 100% |
| III. QUALITY OF MEDIA CONTENT | | | | | |
| C. General quality of Online Learning Media for Learning Management System | 8. | The developed of online learning media was compatible with the online learning platform used | 4 | 4 | 100% |
| | 9. | The size of the Online Learning Media File is in accordance with the Learning Management System | 4 | 4 | 100% |
| | 10. | Online Learning Media Files are easy to download from the online learning platform used | 4 | 4 | 100% |
| | | Total | | | 950%/1000%= 95% |

From table 2 above, data from the validation results of educational experts, it can be concluded that online learning media has been developed that do not require much revision of the percentage results from the validity test of material experts, namely 95.45%. Meanwhile, the results of the feasibility test from media experts have a percentage of 95%, which means that they have valid criteria and are suitable for use.

Table 3. Limited Field Trial Data

| Assessment Indicators | | Assessment Points | Score | | Percentage |
|---|---|---|---|---|---|
| | | | Xi | Yi | % |
| I. ATTRACTIVE ASPECTS | | | | | |
| A. Attractive Materials | 1. | The text in the inkuri-based accounting learning module caught your attention | 104 | 104 | 100% |
| | 2. | The picture in the inquiry-based accounting learning module catches your eye | 104 | 104 | 100% |
| | 3. | The table in the inquiry-based accounting learning module caught your attention | 104 | 104 | 100% |
| | 4. | Text, pictures, and in this inquiry-based accounting learning module can motivate you to use this module | 100 | 104 | 96% |
| II. MEDIA VIEW ASPECTS | | | | | |
| B. Quality of Design / Appearance | 5. | The language used in the inquiry-based accounting learning module program is simple and easy to understand | 100 | 104 | 96% |
| | 6. | The figures and tables in the inquiry-based accounting learning module make it easier for you to understand the concept | 100 | 104 | 96% |
| | 7. | Suitability of background selection | 104 | 104 | 100% |
| | 8. | Suitability of animation with material | 104 | 104 | 100% |
| IV. GENERAL ASPECTS OF MEDIA | | | | | |
| C. General quality of Online Learning Media for Learning Management System | 9. | The developed online learning media is compatible with the online learning platform used | 104 | 104 | 100% |
| | 10. | The size of the Online Learning Media File is in accordance with the Learning Management System | 100 | 104 | 100% |

| | | | | |
|---|---|---|---|---|
| 11. | Online Learning Media Files are easy to download from the online learning platform used | 104 | 104 | 100% |
| | Total | | | 1088%/1100%= 99% |

## A. Data Analysis
### 1. Data Validation Analysis

The data generated at the validation stage were analyzed using percentage descriptive analysis techniques, namely the techniques or methods used to convert quantitative data into percentages then interpreted with qualitative sentences consisting of material expert data analysis and limited field trial data (students). Data analysis was performed on each question item and the overall total with the question item. The data analysis is described as follows:

Table 4. Material Expert Validation Analysis

| No. | Components assessed | Percentage | Validity Criteria |
|---|---|---|---|
| 1 | Feasibility Aspect of Content | 95 % | Valid |
| 2 | Aspects of Service Qualification | 87,5 % | Valid |
| 3 | Aspects of Language Qualification Used | 94 % | Valid |
| | Average | 95% | Valid |

Source: Material Expert Validation Questionnaire

Based on the Material Expert Validation Analysis table in online learning media Hi, Learning Models, it can be seen that the content eligibility criteria are valid and suitable for use with a percentage of 86%, the presentation feasibility aspect obtains valid criteria and can be used with a percentage of 87.5%, in the aspect of feasibility the language used also meets the valid criteria and can be used with a percentage of 90%. From this data, we can conclude that the average percentage is 95%, so online learning media Hi, Learning Models are declared valid and suitable for use in the Accounting Learning and Teaching Strategy course.

Table 5. Media Expert Validation Analysis

| No. | Components assessed | Percentage | Validity Criteria |
|---|---|---|---|
| 1 | Media efficiency | 100 % | Valid |
| 2 | Media display | 87,5 % | Valid |
| 3 | Media quality | 100 % | Valid |
| | Average | **95%** | Valid |

Source: Media Expert Validation Questionnaire

Based on table 5. Validation Analysis Media experts can see the results of the analysis of validation questionnaires by media experts from the efficiency aspects of online learning media Hi, Learning Models can be obtained valid criteria and can be used with a percentage of 100%, and the media display aspects obtained valid and feasible criteria used with a percentage of 87.5%, media quality aspects obtained valid criteria and can be used with a percentage of 100%. The results of the validation of online learning media Hi, Learning Models from media experts obtained an average percentage of 95.0% and it can be concluded that the online learning media Hi, Learning Models that have been developed by researchers are valid and suitable for use in the learning process of the Accounting Teaching and Learning Strategies course

Table 6. Analysis of Limited Field Trials

| No. | Components assessed | Percentage | Validity Criteria |
|---|---|---|---|
| 1 | Attractive Aspects | 99% | Valid |
| 2 | Media View Aspects | 98% | Valid |
| 3 | General Aspects of Media | 100% | Valid |
| | Average | 99% | Valid |

Source: Limited Field Trial Validation Questionnaire

Based on Table 6. Analysis of Limited Field Trials (26 students) it can be seen that the results of the analysis of the limited field trial questionnaire from the aspect of the attracting material obtained valid criteria and can be used with a percentage of 99%, the media display aspects obtained valid criteria and can be used with the percentage is 98%, while in general the criteria are valid and can be used with a percentage of 100%. The results of the limited field trial (students) obtained an average percentage of 99% and it can be concluded that the online learning media Hi, Learning Models that have been developed by researchers are valid and suitable for use in the learning process in the Accounting Learning and Teaching Strategies course.

Table 7. Overall Validation Analysis

| No. | Type of Questionnaire | Percentage | Validity Criteria |
|---|---|---|---|
| 1 | Material Expert Validation | 95% | Valid |
| 2 | Media Expert Validation | 95% | Valid |
| 3 | Limited Field Trials | 99% | Valid |
| | Rata - rata | **96%** | Valid |

Source: Material Expert Validation Questionnaire, Media Expert, and Limited Field Trial

Based on Table 7. Overall analysis of validation was obtained from material experts with an average percentage value of 95%, education experts obtained an average percentage value of 95% and limited field trials obtained an average value of 99%, so that the average percentage 96% overall. So it can be concluded that the online learning media Hi, Learning Models that have been developed are valid and suitable for use in the learning process in the Accounting Learning and Teaching Strategy course.

### f. Final revision of online Learning Media Hi, Learning Model
This second product revision was obtained from limited field trials and from the conclusions of the existing analysis results, there were several revisions from the limited field trials that turned out to be the same as the validation results of media experts, namely in terms of backsound that was too hard, so improvements were made in the backsound in online learning media. Hi, Learning Model.

### g. The final product
Based on data analysis from the validation results of material experts, media experts and limited field trials, it can be concluded that the online learning media Hi, Learning Model has been declared valid and suitable for use as an independent online learning media. However, criticisms and suggestions about online learning media Hi, this Learning Model is taken into consideration at the product revision stage, this is done with the aim of further optimizing Hi online learning media, Learning Model as an independent learning tool. The final product of this development is in the form of Hi online

learning media, Learning Model which can be used in the learning process of the Accounting Learning and Teaching Strategy course. With this online learning media, it is hoped that online learning will be more fun and easy, this is in line with (Alawamleh et al., 2020) which states that online learning with the help of supporting tools and media will facilitate learning objectives.



Figure 2. Screen Capture Initial Display of Online Learning Media Hi, Learning Models



Figure 3. Screen Capture Display of Online Learning Media Content Hi, Learning Models

**CONCLUSIONS AND SUGGESTIONS**
Learning media is anything that can be used for learning materials, so that it can

stimulate student attention, interest, thoughts, and feelings in learning activities to achieve learning goals. Online learning media Hi, Learning Model is one of the supporting media in learning the Accounting Learning and Teaching Strategy course at X University.

Online learning media Hi, Learning Model that has been developed is online learning media made with a combination of video with screen cast o matic for the course of Accounting Learning and Teaching Strategies. In Hi's online learning media, Learning Models, there are materials about cooperative learning models. This was raised because of the Covid 19 pandemic, currently at X University it is doing full online learning so it requires online learning media to convey the material precisely and clearly so that the learning objectives are achieved. The hope of the authors in future research, this online learning media can be developed in other courses, and with other applications.

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