ANALYSIS AND DESIGN OF LEARNING MEDIA INFORMATION TECHNOLOGY TECHNOPRENEURSHIPS BASED ON LEARNING STYLES

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ABSTRACT
Technopreneurship in the field of information technology is a new entrepreneurship in the era of digitalization. Technopreneurship combines entrepreneurial skills and advances in information technology. The research analyzes and designs entrepreneurship learning media with technopreneurships content in the field of information technology. The designed learning media is expected to be used to support learning that accommodates the personal characteristics of students, especially learning styles. The analysis stages include learning styles, namely Visual, Aural, Read and Kinesthetics (VARK) learning styles, entrepreneurship learning analysis, analysis of system builder needs. The design stage consists of logical design and physical design. The physical design of the learning media will be adjusted to the student's learning style. The results of the validation of the analysis and design of this learning media from the aspects of Entrepreneurship learning content obtained 80%, software engineering aspects 93.3%, visual communication aspects 93.3% and aspects of learning design 80%.

KEYWORDS
analysis, design, learning media, technopreneurships, information technology

INTRODUCTION

Entrepreneurships or entrepreneurship has often been discussed and even become a subject in various universities. The further development of entrepreneurship gives rise to various variants, one of which is technopreneurships. Technopreneurships are

entrepreneurship that combines entrepreneurial skills with technology (Singgih, et al, 2016). Technopreneur is an entrepreneur in a new era that adapts to the progress of the times. Technopreneurs combine entrepreneurial abilities, technology, creativity and market needs (Mopangga, 2017). The development of information technology that gave rise to the digital era also has an effect by directly producing technopreneurs in the field of information technology. Teknopreneurships in the field of information technology is the field of entrepreneurship based on information technology or computing-based technology.

Entrepreneurship learning in universities, one of the goals is to motivate and provide knowledge to students about entrepreneurship. Entrepreneurship courses will be more effective if they are adapted to the student's background. There is enrichment that is adjusted to the majors/study programs of students. An initial survey of STMIK Duta Bangsa lecturers and students found that entrepreneurship lectures were too general and did not match the characteristics of students. The introduction of technopreneurships in the field of information technology needs to be discussed specifically in entrepreneurship courses for students majoring in computational sciences.

Learning style is a person's characteristics in receiving and processing information that is different from others. Learning styles are unique (Lestari & Indah, 2015). The activeness of the learner or students in the learning model will improve the quality of learning. A person's activeness in learning is influenced by learning styles. The innovation of the current learning model is to adapt the learning media to the learning style (Damayanti & Pratitis, 2012).

Learning with learner-centered (student) or student-centered learning (SCL) is a learning model that makes students as subjects. Based on the problems above, this research analyzes and designs learning media with technopreneurship content in the field of information technology for entrepreneurship courses based on student characteristics, namely learning styles. The learning media designed is responsive webbased learning, a learning media that can be accessed via the regular web with a computer or with a smart phone (mobile).

Technoprenurship is entrepreneurship that combines entrepreneurial skills with the application of technology. Technopreneurs comes from the words 'technology' and 'entrepreneurship'. In general, the word technology is used to refer to the practical application of science to industry or as a knowledge framework used to create tools, to develop skills and extract materials to solve existing problems (Depdiknas, 2008).

The development of technopreneurships that will produce many technopreneurs is expected to provide a lot of solutions to unemployment and the progress of the nation and society. The growth and development of technopreneurs will also develop the economic sector, especially micro, small and medium enterprises (MSMEs) (Okorie, et al, 2014). Technopreneurships in the field of Information technology are technopreneurships that utilize applications with information technology/computers. Singgih, et al (2016) mapped technopreneurship in the field of information technology into eight (8) types, namely: Software Application Developer, Data Base Developer & Analyst, System Analyst, Software Engineer, Computer Network Engineer, Graphics Designer & Animator, Multimedia System developer and Embedded & Computer Systems engineer.

RESEARCH METHOD

Learning Styles Analysis

Learning style refers to the psychological state that determines how a person receives information, interacts, and responds to his learning environment. Learning style has several variables, including perception and information processing factors, motivational factors,

and psychological factors. Each individual has unique characteristics in learning. The key to successful learning is finding the unique learning style of the learner. Anyone can learn anything, if given the opportunity to do it in their own unique style, in their personal strengths. Learning style is a combination of how individuals absorb then organize and manage information (Lestari & Indah, 2015).

According to Flemming (Widianningsih & Putri, 2015) there are 4 kinds of learning styles, namely Visual, Aural, Read and Kinesthetics (VARK). Visual learning style is a learning style with the characteristics of being easy to understand something by sight or visuals. Aural learning style is a learning style with the characteristics of easy to understand something through listening or audio. Read learning style is a learning style with the characteristics of being easy to receive and process information by reading written or text-based. Kinesthetics learning style is a learning style with the characteristics of direct contact with objects or materials or based on movement.

Identification of Learning Needs

The materials that will be used for Technopreneurship learning media in the field of information technology are, as shown in the following figure:

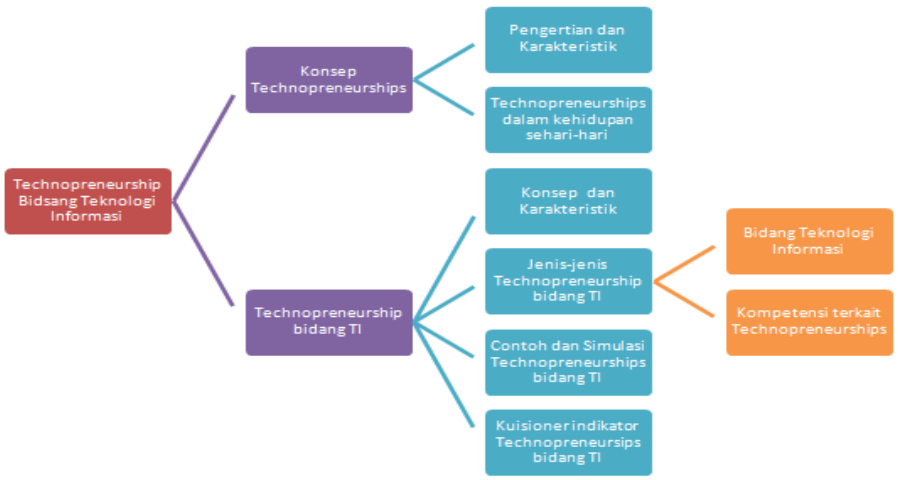

Figure 1. Learning Content Diagram

Learning Media Design

Learning media design is a design about the content or content of the system. The learning media system is designed as a Technopreneurships learning system in the field of Information Technology. Learning media content consists of curriculum, materials, games & simulations, evaluations and instructions. The description of each section is as follows:

- Curriculum
  The curriculum content will describe the formal foundations of learning Entrepreneurship and technopreneurships
- Material
  The material content contains Entrepreneurship course material, especially Technopreneurships material in the field of Information Technology. The display of the material is designed to accommodate the dominant learning in Visual, Aural, Read and Kinesthetics learning styles. For more details as in the table below:

Table 2: Material and Learning Styles

No	Learning Styles	Material Design	Description
1	*Visual*	The material content emphasizes the visual and image aspects. In the matter of Technopreneurships in the field of Information Technology, the explanation is attempted based on visuals. Descriptions and narrations are displayed approaching the visual aspect with short, solid sentences.	Voice adapts to learning.
2	*Aural*	The material content emphasizes the sound and sound aspects. In the Technopreneurships material in the field of Information Technology, the explanation will be based on sound.	The sound must be set on and different from other learning styles.
3	*Read*	Material content emphasizes written and verbal sequences. In the Technopreneurships material in the field of Information Technology, the display of the material puts forward writing and language. Image display needs to be narrated	Sound can be set on.
4	*Kinesthetics*	Material content emphasizes movement. In the Technopreneurships material in the field of Information Technology, the display of the material puts forward active and interactive learning.	The sound can be set on.

- Game and Simulation
  This content contains simulations and simple games related to Technopreneurips material in the field of Information Technology. This content aims to better understand

students about the material, this content contains: Software Application Developer, Data Base Developer & Analyst, System analyst, Software Engineer, Computer Network Engineer, Graphics Designer & Animator, Multimedia System developer and Embeded & Computer System engineer.

- Evaluation
  The evaluation content contains evaluation questions to test the level of student understanding. At the end of the evaluation, the scores and system comments are displayed.
- Help
  This content contains instructions for using and installing the system.

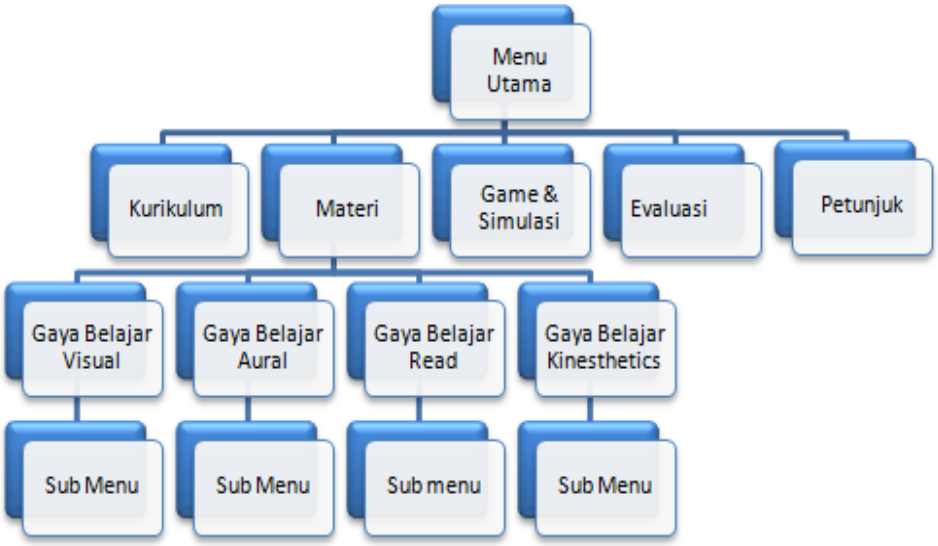

Figure 2. Navigation Menu

RESULT AND DISCUSSION

At this stage, validation of the analysis and design of Technopreneurships learning media in the field of Information Technology will be carried out whether it has fulfilled various aspects, both in terms of entrepreneurship learning content, software engineering, visual communication and learning design.

Tabel 3: Hasil Validasi

Aspect	Entrepreneurship Learning Content	Software engineering	Visual Communicatio n	Instructional Design
Result	80 %	93,3 %	93,3 %	80 %

Based on the validation results, it can be seen that the percentage of answers agreeing and strongly agreeing for the Entrepreneurship learning content aspect is 80%, the

software engineering aspect was 93.3%, the visual communication aspect was 93.3%, and the learning design aspect was 80%. , so it can be concluded that the analysis and design of this learning media can be continued to the next development process.

CONCLUSION

Analysis and design of Technopreneurship learning media in the field of Information Technology based on Visual, Aural, Read and Kinesthetics (VARK) learning styles can be used for further system development. The results of the analysis and design validation give an average value of 86.65%.

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