International Journal of Humanities and Social Science Research
ISSN: 2455-2070
Impact Factor: RJIF 5.22
www.socialsciencejournal.in
Volume 4; Issue 1; January 2018; Page No. 06-10

Teaching model of visualisation, auditory and kinesthetic (VAK) to improve the economic education achievement

Rosmawaty Siregar
Dept. of Social Sciences Education, Universitas Muslim, Nusantara AW, Medan, Indonesia

Abstract
Lack of development in methods and models of teaching resulted in low understanding of students on certain competencies in the economic education subject. This research concerned with the teaching Model of Visualization, Auditory, Kinesthetic (VAK); it is such a learning model that assumes that learning will be effective by paying attention to the combination of three things (visualization, auditory, kinesthetic). A Classroom Acion Research was conducted in Vocational Business School (SMK 6 PAB) Medan Indonesia as effort to improve the quality of special education in the learning process. Some achievement tests were administered with Minimum Criteria ≥ 70%. Data show only 50 % of students in Vocational Business School (SMK) 6 PAB Medan who achieved Level of Mastery in the first cycle, thus, in cycle II it increased with the total number of students who reached that level were 32. It showed that the teaching Model of Visualization, Auditory, and Kinesthetic (VAK) improved the achievement of students in learning economic education subject.

Keywords: teaching model, VAK, improve, achievement

Introduction

Teachers play an important role in organizing and managing students' learning environment as well as possible. Thus, they are expected to create ideal learning activities with a number of activities for better students learning outcomes. In Indonesia the Ministry of Culture and Education decided that the Minimum Criteria Mastery Learning (KKM) is 70 %. However, in schools, this mastery learning seems too high or the teaching learning process still finds it difficult to reach. For example, an initial survey revealed that the condition was found in Vocational School (SMK) PAB 6 Medan showed the lack of development of methods and models of learning that resulted in low understanding of students on certain competencies in the subject. It was seen from the low achievement of Mastery level. For instance, the daily test of Accounting subject in 11th semester of academic 2014/2015 year; only 13 of 40 students who achieved the Mastery Learning Level (KKM) with minimum score 70. It means classically the percentage of completeness only reached 40%. While the classical completeness that must be met is 70%. Also the student activity was still in passive model, by listening to the explanation of the teachers. It is logic, if students said that they feel reluctant to ask or give comments during discussion.

It was found that the learning method only the teacher-centred with a short discussions, closing with take home assignments. The use of media in the form of video learning on the subject of accounting has not been done. Implementation of such learning methods may not be able students to achieve the expected learning objectives. This causes boredom and laziness of students in learning.

Based on initial survey, it required the application of teaching learning models and media to understand the topics and subtopics of Economic Education in Vocational Business School in Indonesia. Each concept of material that will be taught with VAK and the activities for students improved the learning outcomes; at least to reach Mastery Learning Level (KKM). The VAK learning model makes learning as fast and effective process; a learning model that emphasizes the direct experience of learners. The VAK learning model assumes that learning will be effective by paying attention to all three things (visualization, auditory, kinesthetic). In other words, it exploits the potential students. It means that VAK learning model provides a learning experience directly and in it there are steps in understanding applying concepts and communicate. Additionally, Deporter *et al.* reveal that the "some studies show that the VAK learning model can improve learning motivation, improve score / value, increase confidence, increase self esteem, and continue the use of skills" (2000). The application of VAK learning model that will be implemented is expected that students can improve learning outcomes.The author would like to observe the students achievement improvement through a series of activities in the Model of Visualisation, Auditory, and Kinesthetic (VAK) Leaning in Economic Education Subject. Based on the background above, then the formulation of the problem is: The VAK learning model improves the students' learning outcomes of Grade 11th of Vocational Businsess School (SMK) PAB 6 Medan Estate, Indonesia.

Research Objectives

Based on the background of the problem, the author has the following objectives: "To know the application of VAK learning model in improving student learning outcomes on learning accounting students class XI SMK PAB 6 Medan Estate"

Theoretical reviews: Understanding the VAK learning model

The learning style of VAK uses three sensory macaques in receiving information, vision, hearing and motion, all of which are identified as learning styles. The VAK (Visualization, Auditory, Kinestethic) model is a learning model that optimizes all three modes of learning to make students feel comfortable (Mawartiningsih, 2016). This learning style is not a permanent one, just a tendency. Deporters *et al*. (2000: 117) state that "The results of the various generations over the course of a century, the various models of individual differences in absorbing and applying a stimulus are indications of individual differences". Therefore, Karim and Yahaya (in Halim *et al.,* 2016) [5], contend that learning style refers to the way to learn according to an individual tendency. While according to Jayakumar *et al.* (2016) [7], the term learning style refers to the way or method or approach by which a student learns. From all the learning style models, the Visualization, Auditory, Kinestetic (VAK) model is the most talked about learning style model. For different situations and conditions, it may require someone to use a learning style or a combination of several learning styles" The visual, auditory and kinesthetic (VARK) instrument has been used to help students identify how they learn (Fleming & Mills in Luna and Cullen, 2011) [8]. This VAK approach rests on the theory of learning modalities pioneered by Bobbi Deporter where is part of Quantum Learning. In Quantum Learning, the choice of learning modalities is said to be a learning style. According to De Porter (2000: 112) "a person's learning style is a combination of how he absorbs and then organizes and processes information". Modalities relate to how people absorb information easily. The recommended learning modalities are Visual (V), Auditory (A), Kinesthetic (K). Visual refers to learning through what is seen, auditory refers to learning through what is heard, and kinestetik refers to learning through motion and touch.

By applying VAK learning model is expected that students who have these three learning modes dapt equally understand the material taught without experiencing learning difficulties. Learning difficulties are the difficulties or disorders experienced by a person in studying certain basic academic fields as a result of disruption of the relevant central nervous system, or indirect influences from other factors".

Various learning styles in VAK

Learning style is the result of the interaction of information absorption and information processing. Silinker and Gas (in Saleh and Al faki, 2014) [10] explain that the learning style is often used interchangeably with personality, although the former is undoubtedly more variable, whereas the latter refers to a stable trait of an individual. The way of information absorption is known as learning modalities. This learning modality includes; Visual, Auditory, Kinesthetic ". Pasztor (in Janvier and Ghoui, 2004) confirms that introducing the correct sub-modality [visual, auditory, kinaesthetic] will enable the subject to more easily remember and recall instances. According to Deporter *et al.* (2000: 110) [2] "general agreement has been made of two general categories of how one learns. First, how we absorb information easily (modalities) and secondly, the way we organize and process that information (brain dominance) ". Deporter *et al.*, "there are three kinds of learning styles: visual learning styles, auditorial learning styles, kinesthetic learning styles (2000: 17)"

The above quote will be explained as follows:

1. Visual Learning Style : this modality accesses visual imagery, created or remembered. Color, space relationships, mental portraits, and prominent images in this modality. A highly visual person may be characterized as follows:

a Regular, pay attention to everything, keep up appearances
b Given the picture, prefer to read rather than to be read
c Require an overall picture, purpose and capture detail: remember what is seen.

2. Auditorial Learning Styles : this modality accesses all kinds of sounds and words, created or remembered. Music, rhythm, internal dialogue, and sound stand out here. A highly auditorial person may be characterized as follows:

a The attention is easily broken
b Talking with a rhythmic pattern
c Learn by listening, moving the lips / voices while reading
d Dialogue internally and externally.

3. Kinesthetic Learning Styles : This modality accesses any kind of motion and emotion-created or remembered. Move, coordination, rhythm, emotional response, and physical comfort stand out here.

Someone who is very kinesthetic often:

a Touching people and standing close together, moving a lot
b Learning by doing, showing writing while reading
c Given while walking and looking.

Gunawan (2004: 149) divides three kind of learners;

a The visual person will be very easy to see or imagine what is being said. They often see images related to words or feelings and they will understand the information when viewing the event, see the information written or in the form of images.
b Auditory people express themselves in the form of sound, either through internal communication with themselves or externally with others.
c The kinesthetic person is very sensitive to feelings or emotions and to the sensation of touch and motion. When asked to write a word, this person will "feel" the word first. The kinesthetic person will learn maximally in a condition where there is much physical involvement and move.

Maulina reveals the three different styles of learning and communication

1. Visual Learning through seeing things. someone likes to see pictures or diagrams. Someone likes to show, show or video. 2. Auditorial Learning through hearing a smile. Someone loves listening to audio cassettes, lectures, discussions, debates and verbal instructions. 3. Kinesthetic Learning through physical activity and direct involvement. Someone likes to "handle", move, touch, and feel / experience themselves. Although a person has all three learning styles (visual, auditorial, and kinesthetic), there must be one dominating learning style. Fuad (2005: 69) "a class usually consists of three groups

of learners namely Visual, Auditorial, and Kinestetik because that is, can not a teacher just practice one model of teaching and learning to be applied throughout the class. So the teacher must be able to combine the existing methods ".

Research Design

A Classroom Acion Research was conducted as effort to improve the quality of special education in the learning process. The model and explanation for each stage as follows:

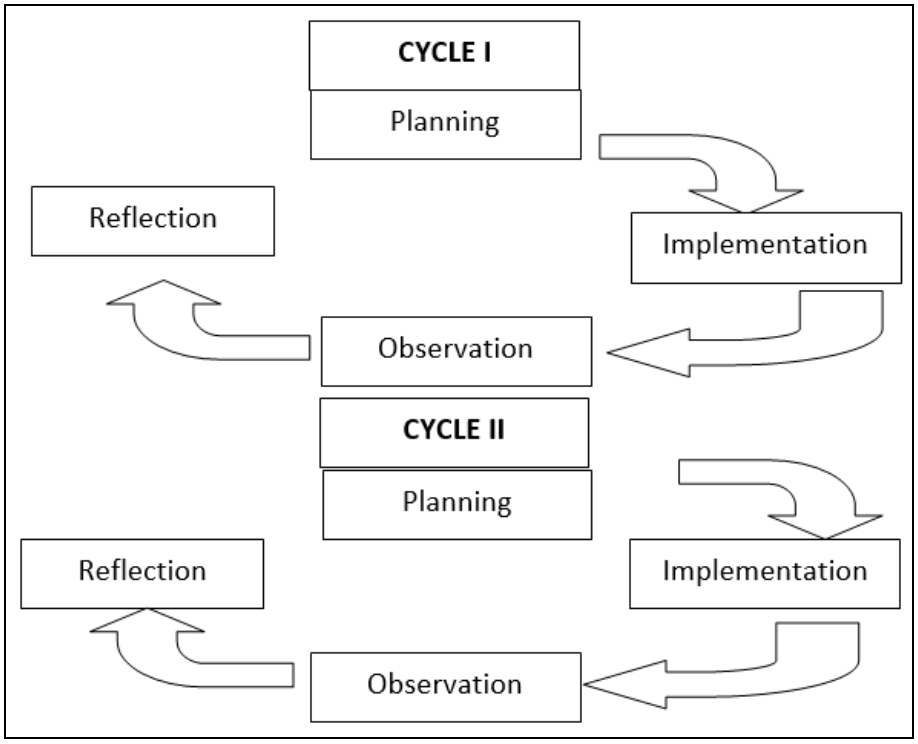

Fig 1: Classroom Action Research Model (Arikunto: 2010)

Research Subject

The subject of this research is all students of Grade 11 at SMK PAB 6 Medan Estate; It took 40 students.

2. Research Objects

The object of this research was the effort to improve the learning results with learning model of VAK (Visulization, Auditory, Kinestetic)

Research Instrument

The research instrument as the tool used in collecting data are as follow:

1. Observation sheet
2. Test

Data Collection Technique

1. Administer Test

The test is a technique used to know the knowledge that someone has by using questions with certain limitations. The test is performed to measure skills, knowledge of intelligence ability, and improvement of learning outcomes of individuals or students who participated in learning before the study and after the students finished in the learning, in accordance with the competencies that are delivered courses. The pre and post test administered at each meeting in order to obtain the raw data. The test was in the form of multiple choice of 10 questions with the assessment criteria with the correct answer to get a value of 0-10.

2. Observed the teaching learning process

An observation for all teaching activities using learning model VAK (Visulization, Auditory, Kinestetic) was carried out 30 days in Vocational School SMK PAB 6 Medan.

Data Analysis Technique

This research used a simple statistical analysis, that was with descriptive analyst. A descriptive analysis was an analysis model by comparing the mean percentage; then the average increased in each cycle was calculated. The pre test and post test in each cycle were analyzed. Further, the results of these pre and post tests led to be interpreted about students' learning mastery. The indicators of success of this action was 70% of 40 students. To measure the level or percentage of mastery of the subject matter then used the formula:

$$DS = \frac{scores\ obtained\ by\ students}{maximum\ score} \times 100\% \quad \text{(Arikunto, 2002:31)}$$

Where DS = absorbability,

With criteria

0% ≤ DS > 70%	students don't complete learning
70% ≤ DS ≤ 100%	students complete learning

Individually students have completed learning process if they reached score of 70; the students thoroughly in learning data show the cycles and understanding of students in learning

Accounting, Business, Marketing topics. Furthermore, learning process counted overall with the following formula:
D = x 100%
Where :
D = Percentage of classes that have completed the study
X = Total completed study
N = Total number of students
The guidelines used to see the level of mastery can be seen as follows:
85%-100% Students' ability is very good
75%-84% Students' ability is good
65%-74% Students' ability is enough
55%-64% Students' ability is low
0%-54% Students' ability is very low

Research Result
After conducting a Classroom Acion Research at (Vocational Business School) SMK PAB 6 Medan, by applying student-centered learning approach in improving student learning outcomes, in academic 2014-2015 year

Table 1: Students Learning Outcomes

Kind of test	Complete		Incomplete		Average
	Number of Students	Percentage %	Number of Students	Percentage %	
Cycle I	20	50	20	60	64,24
Cycle II	40	100	0	0	75,15

Data Analysis
The obtained data such as Reduction and Exposure were analyzed as follows:
The data Reduction was obtained by applying the active learning approach; that was centered on the students in learning activities. Collected data about were of students' learning outcomes in cycle I and cycle II. Thus, data Exposure of students' learning outcomes that have been reduced were presented to calculate mastery per individual and classical completeness. A student was said to complete the learning or achieve the competence taught if the student got score minimum 70 %. To measure the level of mastery of students in learning, the formula was:

$$DS = \frac{\text{scores obtained by students}}{\text{maximum score}} \text{ x } 100\%$$

For example to calculate mastery of students on behalf of Jekki Parulian are:

$$DS = \frac{\text{scores obtained by Mardiana}}{\text{maximum score}} \text{ x } 100\%$$

$$DS = \frac{80}{100} \text{ x } 100\% = 80$$

The completeness can be classically calculated by the formula:

$$DS = \frac{X}{N} \text{ x } 100\%$$

DS=50 %

In the first cycle, it has not reached the classical completeness because only 50.00 students who have completed learning. From data analysis of research results, learning outcomes obtained during teaching and learning activities can be seen in the following table:

Table 2: Completeness of Student Learning on Cycle I and II

Type / Description		Score	Number of Students	Percentage of Completeness	Criteria
Cycle I	Evaluation I	≥ 70	20	50	Complete (T)
		< 70	20	50	Incomplete (TT)
Cycle II	Evaluation II	≥ 70	40	100	Complete (T)
		< 70	0	0	Incomplete (TT)

Based on the table above, it can be seen that the learning completeness in cycle II increases with the total number of students who completed 40 Persons. Based on the picture above, it can be concluded that when the average value of students in the first cycle is 64.24 and increased in cycle II with an average score of 75.15 students.This indicates an increase in the value of the student's post test test action score cycle I and improvement of cycle II so it can be concluded that student's learning value through applying of student-centered learning approach tends to increase. From the data on the first cycle there is a percentage of the average completeness in classical accounting learning results of 50 % (20) students. This shows the results of student learning Accounting is not complete clasically, then done cycle II. In the second cycle obtained completeness of classical accounting learning results of 100% (40 students)

Reflection Action
Based on the results of the analysis of data acquisition of the evaluation cycle I, it can be concluded that the learning outcomes are still in the low category and still must be improved, because there are still some students who get low learning outcomes and the category is not complete and the students still have not understood in the recording transactions into the worsheet Working Paper of service company.
The results of data analysis obtained from the value of cycle I, based on the analysis of the data note that there is change. At the time of Cycle I the number of students who complete the study is 19 people (57.57%) with an average of 64.24 Based on the problems in cycle I can be used as a reference in

determining improvement actions for the planning phase in cycle II.

Cycle II

a. Cycle Action Planning II

The researcher revealed that based on analysis from cycle I, finally it was agreed that the implementation of cycle II will be held at second meeting II with time allocation 1 x 45 minutes to explain back material about store inventory card in service company according to learning and Learning Plan.

Implementation of action cycle II was almost the same as the implementation of action cycle II, only different in the implementation there is still needed improvement from cycle I that was by explaining the material that is taught in cycle I. The material presented in the second action implementation is more focused on working on stock cards.

b. Implementation of Action II

The learning steps in cycle II were the same as in cycle I, but the teacher was doing more for motivating students to be more proactive and might complete the card supplies.

Observation

Results from observations for student learning outcomes show that results in cycle II. On the learning outcomes in this second cycle students have reached the value of completeness of at least 70.

Reflection Action

Based on the results of data analysis of the acquisition of evaluation cycle II can be concluded that the learning outcomes were still in the category. It has been completed, because many students completed learning outcomes in working card merchandise inventory. Data analysis results obtained from the value of cycle II, based on the data analysis, it was known that there was a change. At the time of Cycle II the number of students who completed the study were 40 (100%) with an average of 75.15. Based on the data the students have completed in cycle II.

Conclusion

This study has some conclusions, as follows:

1. The results of the research cycle I showed that the result of post test average of 64.24. This acquisition does not meet the criteria of classical completeness of the students must obtain a value of ≥ 70, so it needed to proceed to the next (cycle II).
2. The cycle evaluation II showed the total number of students who completed the study 40 average of 75. 15 ; it was higher than that of minimum the value ≥70; so the teaching with VAK did not need to proceed to the cycle III. The result of this research indicated that the Learning Model VAK resulted in the achievement of Vocational Business School (SMK) PAB 6 Medan increased.

References

1. Arikunto Suharsimi *et al.* Research procedure. Jakarta: Rineka Cipta, 2002.
2. Deporter Bobby, Mike Henarcki. Quantum Learning. Bandung: Kaifa, 2000.
3. Fuad. Practical Guide for Quantum Teaching Educators. Jakarta: Zikrul Hakim, 2005.
4. Gunawan Adi W. Genius Learning Strategy. Jakarta: Gramedia Pustaka Utama, 2004.
5. Halim Noor Dayana Abd, Jusoh Amir, Ibrahim Nor Hasniza. Student's Perceptions on Teaching Aids With Different Learning Styles: Visual, Auditory And Kinesthetic. Man In India. 2016; 97(17):53-62.
6. 4 WA, Ghaoui Claude. Case Study An evaluation of the learner model in WISDeM. Interactive Technology & Smart Education, 2004; 1:55-66.
7. Jayakumar N, Suresh A, Sundaramari M, Prathap D, Puthira. Understanding Learning Style Variations among Undergraduate Students. Journal of Extension Education. 2016; 28(4):5727-5734, DOI:https://doi.org/10.26725/JEE.2016.4.28.5727-5734
8. Luna Gaye, Cullen Deborah. Podcasting as Complement to Graduate Teaching: Does it Accommodate Adult Learning Theories. International Journal of Teaching and Learning in Higher Education. 2011; 23(1):40-47 http://www.isetl.org/ijtlhe/
9. Mawartiningsih Lilik. Learning Model of VAK Visualization, Auditory, Kinestethic to Improve Learning Achievement Course Review of Biology Education Students Curriculum 2012. Proceeding Biology Education Conference, 13(1):441-444.ISSN:2528-5742.
10. Saleh Abdulaziz A, Al Faki Ibrahim. Identifying the Learning Styles of TESOL Master's Students in King Abdul-Aziz University Amira. American International Journal of Contemporary Research. 2014; 4(5):98-110.