The Effect of Using the Savi Model Toward Reading Comprehension Across Cognitive Style

by Muhammad Riko Yohansyah Zulfahmi

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Muhammad Riko Yohansyah Zulfahmi
Universitas Islam Negeri Sjech M. Djamil Djambek Bukittingi

Melyann Melani
Universitas Islam Negeri Sjech M. Djamil Djambek Bukittingi

Alamat: Jalan Gurun Aua, Kubang Putih, Kec. Banuhampu Kab. Agam Sumatera Barat
Korespondensi Penulis: hanmuhammad2206@gmail.com

Abstract. This study aimed to identify the effect of cognitive styles (that is, field-dependent and field-independent) on reading comprehension using the SAVI model (somatic, auditory, visual, and intellectual). The 52 students from two classes participated in the study, assigned to experimental and control classes. The experimental class was treated by teaching the SAVI model and the control group was taught conventionally (Teacher Centre). Students in the control and experimental classes were divided into groups based on their cognitive style (dependent versus independent) results on the GEFT (Group Embedded Figure Test). The results of the study indicated that it was about the interaction between cognitive style and reading comprehension. Research results show that there are differences in student reading performance between students using the SAVI learning model and the direct learning model (Teacher Center). There is an important interplay between learning models and students' cognitive styles regarding their ability to comprehend what they read. Among students with subject-independent cognitive styles, those who received the SAVI learning model performed better in reading than those who received the direct learning model. Students in the direct learning model with subject-dependent cognitive styles and reading comprehension perform better than those in the SAVI learning model.

Keywords: SAVI, Reading Comprehension, Cognitive Style.

Abstrak. Penelitian ini bertujuan untuk mengidentifikasi pengaruh gaya kognitif (yaitu field-dependent dan field-independent) terhadap pemahaman membaca menggunakan model SAVI (somatic, auditory, visual, dan intelektual). 52 siswa dari dua kelas berpartisipasi dalam penelitian ini, ditugaskan ke kelas eksperimen dan kontrol. Kelas eksperimen diberi perlakuan dengan pembelajaran model SAVI dan kelompok kontrol diajarkan secara konvensional (Teacher Center). Siswa pada kelas kontrol dan eksperimen dibagi menjadi beberapa kelompok berdasarkan hasil gaya kognitifnya (dependen versus independen) pada GEFT (Group Embedded Figure Test). Hasil penelitian menunjukkan tentang interaksi antara gaya kognitif dan pemahaman membaca. Hasil penelitian menunjukkan bahwa terdapat perbedaan prestasi membaca siswa antara siswa yang menggunakan model pembelajaran SAVI dan model pembelajaran langsung (Teacher Center). Terdapat keterkaitan yang penting antara model pembelajaran dengan gaya kognitif siswa mengenai kemampuannya dalam memahami apa yang dibacanya. Di antara siswa dengan gaya kognitif subjek independen, siswa yang mendapat model pembelajaran SAVI mempunyai kemampuan membaca lebih baik dibandingkan siswa yang mendapat model pembelajaran langsung. Siswa yang diberi model pembelajaran langsung dengan gaya kognitif subject-dependent dan kemampuan membaca pemahaman lebih baik dibandingkan siswa yang diberi model pembelajaran SAVI.

Kata Kunci: SAVI, Pemahaman Membaca, Gaya Kognitif.

INTRODUCTION

Reading is the most important language skill among the other three language skills. Reading is considered one of the most important skills in English language learning (Hakim & Tanuatmadja, 2022). Reading is a great way to develop and understand English. reading is one of the required skills for a student's success in the academic world (Yunus, 2017) (Logan et al., 2011). The purpose of reading has a great influence on the reading and comprehension process.

The importance of reading in language learning provides strategies for teaching reading skills (Grabe & Stoller, 2011). Reading comprehension, that is, the reading activity that the reader undertakes to understand the content contained in the reading. Reading comprehension skills in non-native speakers of English, including strategies for overcoming language barriers and developing a deeper understanding of English texts (Nation, 2009). The complexities of second language reading provide practical strategies for improving reading skills in non-native speakers of a language (Anderson, 1999). Reading comprehension requires a correct understanding of the meaning and purpose of reading. The reading process of second language learners offers practical strategies for developing reading skills in a second language, as well as designing engaging reading tasks and materials that can enhance reading comprehension and motivation among non-native readers (Urquhart & Weir, 2014). According to Taslim (2011:64), Reading comprehension is the reader's ability to comprehend all information contained in the implicit and explicit reading, and even the reader's ability to analyze, summarize, evaluate, and apply the information or content of the reading. A comprehensive framework for teaching reading that covers a wide range of reading sub-skills and provides practical activities and techniques to develop learners' reading abilities in a foreign language (Nuttall, 2005).

Many lesson models are provided to help teachers develop their students' reading comprehension, using the SAVI model to improve their students' reading comprehension. One of the lessons that provide a space for students to collaborate in the learning process is the SAVI (Somatic, Auditory, Visual, and Intellectual) learning model. The SAVI learning model was developed from a constructivist perspective. The SAVI model is a pedagogical approach for teaching reading comprehension in primary schools, as it encourages student-centered and collaborative learning, engages students' multiple senses, and supports the construction of meaning through the integration of various modes of representation (Nofrianni & Syahniar, 2019). The SAVI learning model, which emphasizes the importance of engaging students' somatic, auditory, visual, and intellectual abilities in the learning process, is an effective approach to improving students' reading comprehension skills. Using the Somatic, Auditory, Visual, and Intellectual (SAVI) approach found that the use of interactive and multimodal learning resources in science education can enhance students' activeness and conceptual understanding of scientific concepts (Anggreini & Dewi, 2020). A constructivist approach to collaborative learning assumes that students find it easier to construct knowledge, read, and solve difficult concepts when discussing problems with friends (Slavin, 1995).

The SAVI approach is a learning strategy started by Dave Meier. Getting up and moving doesn't automatically improve your learning. However, combining motor and intellectual activity and using all the senses can have a significant impact on learning. This is called SAVI learning. Components are easy to remember (Meier, 2000:42):

1) somatic: Learn by doing.

2) Listen: Learning by speaking and listening.

3) Visuals: Learning through observation and imagination.

4) Intellectual: Learning through problem-solving and reflection.

All four of these learning modes must be present for optimal learning. All of these elements are integrated, so the best way to learn is by using them all at once (Meier, 2000: 42). 1) Somatic learning

"Somatic" comes from the Greek word soma, which means the body (as in psychosomatic medicine). That means tactile, kinesthetic, and hands-on learning. This means moving your body and using and moving your body as you learn. Somatic learning consists of several activities such as Body and mind are one and involve the body. (Meyer, 2000:44),

2) auditory learning

Hearing is stronger than reality. The ear continuously captures and stores auditory information, even when we are not conscious of it. And when we speak, we produce our sounds, activating several key areas of the brain.

3) Visual learning

Sight is more pronounced in some people than in others, but it is strong in all. This is because there are more devices in each head for processing visual information than in any other sense.

4) Intellectual learning

The word "intellectual" refers to what learners are doing internally when they use their intelligence to reflect on their experiences and to connect, create meaning, plan, and, value from them. It is the reflective, creative, problem-solving, and meaningful part of being human.

Constructivist learning theories understand learning as the process of knowledge formation (construction) by the learner himself. According to Jonassen (Jonassen, 1991), the traditional view of knowledge as an objective truth is inadequate, and instead, a constructivist approach is needed that recognizes the active role of learners in constructing their knowledge through authentic and meaningful learning experiences facilitated by teachers. Knowledge exists in those who know (Schunk, 1986). Piaget's theory of cognitive development suggests that children are active learners who construct their understanding of the world through their

experiences, interactions, and exploration and that this learning process occurs through four distinct stages, each with its unique patterns of thinking, reasoning, and problem-solving (Carmichael, 1946). Cognitive development posits that learning and development are socially and culturally mediated processes, shaped by interactions with more knowledgeable others and that these processes lead to the formation of higher psychological processes and concept of the Zone of Proximal Development highlights the importance of scaffolding by more knowledgeable others to support children's learning and development and help them reach their potential (Vygotsky, n.d.). Instruction emphasizes the importance of actively engaging learners in the learning process, problem-solving, and scaffolding to support learners in discovering underlying principles and patterns through meaningful and relevant experiences (Bruner, 1966). In other words, the formation of knowledge is the student himself, so during the learning activity, the student should be active, think actively, construct concepts, and give meaning to the learning object, but not realize the learning symptoms. It is the student who decides. The learning intention itself. On the other hand, the teacher's role in constructivist learning is to help the student's process of knowledge construction flow smoothly.

According to constructivist philosophy, knowledge is passive, transitory, and constantly changing. It is we who understand the reality that exists. Knowledge is uncertain and unfixed. By understanding constructivism, students are expected to build their understanding from experience and prior knowledge. Students are expected to be able to apply the knowledge and experience gained in real life. This understanding is gained by students as they face a free learning environment. The SAVI learning model offers great advantages in completing academic tasks. Students who cannot solve problems with the material they read are assisted by the SAVI learning model. During this process, students acquire knowledge from what they do, hear, understand, see, and think about the relationships of ideas contained in the specific materials discussed in the learning process.

In general, this study aimed to determine the impact of a SAVI-oriented cognitive style learning model on students' ability to read English texts. Specifically, the purpose of this research is to 1) Find differences in text reading ability between students following the SAVI model and students following the direct learning model. 2) determine the impact of interactions between learning models and cognitive styles on students' ability to read texts; 3) For subject-independent cognitive style students, clarify the difference in students' reading comprehension when reading texts between students who follow the SAVI model and students who follow the direct learning model. 4) Finding differences in students' ability to read narrative texts between

students following the SAVI model and students following the direct learning model in students with domain-dependent cognitive styles.

METHOD

The research employs a factorial design. A factorial design is a form of a true experiment where the researcher controls independent variables and allows them to vary in forms of multiple factors. It allows the researcher to examine the effects of two or more individual independent variables simultaneously, as it also enables the researcher to investigate the interaction among variables (Gay et al., 2011). This design is intentionally chosen since it is possible to uncover not only which group (SAVI model versus Conventional model), and (field dependent versus field independent) has better reading comprehension. Interaction between variables indicates that each method (SAVI model and Conventional model) is differentially effective depending upon students' cognitive style (field dependent and field independent). Table 1 describes the factorial design employed in the research.

Table 1. Factorial Design

		Experiment Classroom	Control Classroom
CS	High	FI	FD
	Low	FD	FI

The research involves 52 students at XI IPS SMA Negeri 1 Payakumbuh district They are first-semester students taking reading for English in Senior High School. To determine which students, belong to each group (Field dependent and Field independent), the researcher uses MILLA results that can be seen in Table 2.

Table 2. Results of MILLA

	Number of Students in Experiment Group	Number of Students in Control Group
FD	16	19
FI	10	7

Conducting reading comprehension in the research is considered part of the reading course. Students practice reading comprehension taught with the SAVI model. Reading comprehension activities for each group are shown in Table 3.

Table 3. Reading Comprehension Activities for Each Group

No	SAVE model	Conventional model
1	Students read their topics of reading material at the meeting.	Students read their topics of reading material at the meeting.
2	Students report their reading activities by using the SAVI model	Students report their reading activities byusing a conventional model
	a. Teacher uses projector in front of a classroom	a. Students read the text or the teacher reads the text
	b. Students see, listen, and practice vocabulary what they see	b. Students write the vocabulary
	c. Teacher checks students' reading activityand gives feedback. Students are allowed to revise their work based on teachers' comment	c. Teacher checks students' reading activities
	d. Teacher asks for students to do what they read.	
	e. other students areallowed to comment on their friends ' reading text	

RESULTS

Two-way ANOVA is employed to answer the three research questions. Normality and Homogeneity tests are carried out before the analysis, and the results are shown in Table 4. It indicates that the significance level is 0,152, which is higher than 0,05. It means that the data is normally distributed.

Table 4. Result of Normality Test

Tests of Normality							
	Kelas	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_Belajar_Siswa	Control	0.269	26	0.1	0.846	26	0.11
	Experiment	0.21	26	0.14	0.877	26	0.152
a. Lilliefors Significance Correction							

Source: Data Processing Result

Table 5. Result of Homogeneity Test Levene's Test of Equality of Error Variances

Dependent Variable: Reading_Achievement

Levene Statistic	df1	df2	Sig.
10.492	5	50	.102

Source: Data Processing Result

Table 5 describes that the significance level is 0,102, which is higher than 0,05. It means that the data is homogenous. After the normality and homogeneity tests are carried out, two-way ANOVA is conducted, and the result is described in Table 6. The result of two-way ANOVA in Table 6 indicates three points. First, students who conducted learning by using the SAVI model have better reading comprehension than those who conducted learning by using the conventional model. It can be seen from the result of two-way ANOVA, where the

significance level of the independent variable (Extensive Reading) is 0,000, which is smaller than 0,005. Using the SAVI model for reading comprehension compared to the conventional model is advantageous both for teachers and students for several reasons. For teachers, it can be very efficient. Teachers can teach the students efficiently by using SAVI by giving them videos, and practicing directly while reading vocabulary in a text. Teachers can also monitor the student's activities.

Table 6. ANOVA

ANOVA					
Kelas					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.633	1	.633	.015	.000
Within Groups	2107.059	50	42.141		
Total	2107.692	51			

Source: Data Processing Result

Furthermore, SAVI provides the students with opportunities to become active learners. The students enjoy reading well because the components in SAVI give them a learning experience that they can use to help them develop their thoughts into meaningful texts. After all, learning success comes from what the learners see, say, think, and do in the learning process. SAVI is a highly effective teaching methodology that incorporates somatic, auditory, visual, and intellectual components in the learning process and this approach provides learners with opportunities to engage with the materials and construct their knowledge through active participation and reflection, leading to deeper understanding and higher retention rates (Kramsch & Kramsch, 2000). This goes in line with Meier (2000: 42) who explains that the component of teaching and learning covers Somatic activity, which is learning by moving and doing; Auditory activity, which is learning by talking and hearing; Visual activity, which learning by observing and picturing; and Intellectual, it is learning by problem-solving and reflecting. The SAVI model positively impacted the participants' motivation, engagement, and performance in writing tasks, by catering to different learning styles and preferences, SAVI allowed learners to tap into their full potential and express themselves more confidently and creatively (BANYARD & GRAYSON, 2000). SAVI is a well-established approach to active learning that has been shown to increase student engagement, motivation, and achievement across a wide range of disciplines and contexts, by stimulating learners' senses and cognitive processes, SAVI provides a rich and immersive learning experience that fosters creativity, curiosity, and self-directed learning (Freeman et al., 2014). It means that the components of SAVI (Somatic, Auditory, Visual, Intellectual) provide a good atmosphere for students in their writing activity because SAVI is accelerated learning in which it motivates students' minds,

acquires information, searches the meaning, triggers the memory, exhibiting what the students know, and reflecting on how the students have learned.

DISCUSSION

The effectiveness of the SAVI model in improving reading comprehension compared to the conventional model. Before the analysis, normality, and homogeneity tests were conducted, and the results indicated that the data were normally distributed and homogenous. The results of the two-way ANOVA showed that students who used the SAVI model had better reading comprehension than those who used the conventional model.

The advantages of using the SAVI model for both teachers and students, teachers can teach students more efficiently by using SAVI, and students have the opportunity to become active learners. The components of SAVI (Somatic, Auditory, Visual, Intellectual) provide a good atmosphere for students in their writing activity because it is motivating, helps students acquire information, search for meaning, trigger memory, exhibit what they know, and reflect on how they have learned.

The use of SAVI is supported by research as it has been shown to increase student engagement, motivation, and achievement across a wide range of disciplines and contexts. SAVI provides a rich and immersive learning experience that fosters creativity, curiosity, and self-directed learning.

CONCLUSION AND SUGGESTION

Based on the research findings, it can be concluded that the SAVI model is effective in improving reading comprehension for students with a field-independent cognitive style. However, for students with a field-dependent cognitive style, the direct learning model may be more effective. These findings suggest that teachers should consider students' cognitive styles when selecting teaching methods to improve reading comprehension. Additionally, teachers should incorporate diverse teaching methods, including the SAVI model, to cater to students' different learning styles and preferences. The research findings highlight the importance of considering multiple factors when selecting teaching methods to improve student learning outcomes. The results demonstrate that the interaction between the learning model and students' cognitive styles is a significant factor in determining the effectiveness of the teaching method. Therefore, teachers should consider not only the content of the lesson but also the learning styles and preferences of their students when designing and delivering instruction.

Moreover, the SAVI model offers an innovative and effective teaching approach that can help foster student engagement and motivation. The model incorporates multiple sensory modalities and encourages active learning and critical thinking, which can enhance students' creativity and problem-solving skills. Teachers can use the SAVI model to create a dynamic and interactive learning environment that caters to students' diverse learning styles and fosters their curiosity and love of learning.

Finally, the research findings also suggest the need for ongoing professional development for teachers to learn about and effectively implement the SAVI model. Teachers should receive training and support to understand the principles of the SAVI model and how to incorporate them into their teaching practices. By investing in teacher professional development, schools can improve the quality of instruction and enhance student learning outcomes. Further research can explore the effectiveness of the SAVI model in other academic subjects and with different student populations. Investigating how teachers can effectively implement the SAVI model in their teaching practices is also important. Overall, the SAVI model can potentially enhance student engagement, motivation, and achievement, and should be considered a valuable teaching methodology.

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