

Improving Students' Cognitive Learning Achievement in History Learning Through the Cooperative Script Model and Infographic Media in Class X IPS 1 MA Negeri 2 Surakarta

Siti Nurjanah¹, Sriyanto²

¹MAN 2 Banjarnegara, Wangon, Banjarnegara

²Universitas Muhammadiyah Purwokerto

ARTICLE INFO

Article history:

DOI:

[10.30595/pssh.v25i.1719](https://doi.org/10.30595/pssh.v25i.1719)

Submitted:

July 22, 2025

Accepted:

August 11, 2025

Published:

August 24, 2025

ABSTRACT

The purpose of this study is to improve students' cognitive learning achievement in history learning through the cooperative script model and infographic media. This study uses a quantitative approach with an experimental method in one class. Data collection was carried out through pretest, posttest and observation. The data analysis technique used SPSS with the Paired Sample T Test technique. Based on the results of the study, the Sig. (2-tailed) value was obtained at $0.000 < 0.05$, so we can conclude that there is a significant difference between learning outcomes in the Pre-test and Post-test data.

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).



Keywords:

Cognitive Learning
Achievement; Cooperative
Script Model; Infographic
Media

Corresponding Author:

Siti Nurjanah

MAN 2 Banjarnegara, Wangon, Banjarnegara

Email: janetee0795@gmail.com

1. INTRODUCTION

Education can be practically implemented by utilizing advancements in technology and information. History is one of the disciplines that plays an important role in understanding the origins, evolution, and transformation of human life over time⁽¹⁾. History education is often regarded as a discipline capable of enhancing appreciation, stimulating creativity, and fostering nationalistic awareness among students⁽²⁾. History learning helps students understand the current social and cultural context, as well as supporting character development. However, history education is often perceived as boring⁽³⁾, leading to the view that history is an additional subject that is less important.

This has become one of the challenges in education in Indonesia, especially with the development of 21st-century learning, which demands students to have character, be more active in thinking, competitive in the global world, and be capable of solving problems⁽⁴⁾. The complex and dynamic challenges of 21st-century learning, along with technological developments, social changes, and globalization⁽⁵⁾, can be addressed through innovations in learning, so that educational goals can be optimally achieved. It should be understood that each student has different understandings and learning styles, so an approach that utilizes technology can provide instruction that better meets the needs of each individual⁽⁶⁾.

One innovation that can be made in connection with the use of technology is the application of learning models and media. A learning model is a strategy or framework used to design curricula (long-term lesson plans), plan learning materials, and direct the learning process in the classroom⁽⁷⁾. Meanwhile, learning media refers to the tools that support the learning process, so that the messages conveyed are easier to understand and educational objectives can be achieved effectively and efficiently⁽⁸⁾. Students in Indonesia must undergo an assessment phase, where assessment is the process of gathering and processing information to determine the learning needs and developmental or learning achievements of students⁽⁹⁾.

Learning outcomes refer to changes in the cognitive, affective, and psychomotor aspects that occur as a result of the learning process experienced by students⁽¹⁰⁾. There are two factors that influence learning outcomes, namely internal factors (physiological, psychological, physical, and mental maturity) and external factors (social, cultural, and environmental)⁽¹¹⁾. The use of the right learning models and media in the learning process can help students understand the material and achieve better learning outcomes. However, history learning at MAN 2 Surakarta still uses conventional methods, such as lectures, to deliver learning materials⁽¹²⁾, which has resulted in history learning outcomes not meeting expectations.

This research aims to measure the effectiveness of using the cooperative script learning model and infographic media in improving the cognitive learning outcomes of class X IPS 1 student at MAN 2 Surakarta. It is hoped that this experiment will provide a solution and reduce the perception that history is a boring and unimportant subject.

2. METHODS

The approach used in this study is a quantitative approach with a pre-test and post-test design. In this design, students are tested before and after using the cooperative script learning model and infographic media. The results of the pre-test and post-test are then compared to measure the extent of the changes that occurred after the use of the model and media. The data analysis technique used in this study is the Paired Sample T Test technique to determine whether there is a significant difference before and after the use of the learning model and media.

3. RESULTS AND DISCUSSIONS

One of the cooperative learning models that has the potential to develop students' critical thinking skills is the cooperative script, which emphasizes students' ability to express opinions verbally, summarize, and draw conclusions from the material they have learned. Cooperative learning is a type of learning where students collaborate in groups to develop concepts and solve problems. In cooperative learning, students are divided into small groups and guided to study the assigned learning material. In cooperative learning, most of the learning activities are student-centered, where they study the material and solve the assigned problems.

The purpose of forming cooperative groups is to provide students with the opportunity to actively engage in the thinking process during teaching and learning activities. Several experts argue that the cooperative learning model is not only effective in helping students understand difficult concepts but is also highly beneficial in fostering critical thinking skills, cooperation, and helping peers. Furthermore, students' active involvement in the learning process can have a positive impact on improving their academic performance. Meanwhile, infographics are an element in graphic design theory that can explain information in a simple way. Infographics have a design foundation in communication that provides clear clarification.

Creating them requires skills and experience in the design process. It is important to realize that visuals (images) are easier to digest and more engaging compared to text. The practice of history learning by applying the cooperative script method and infographic media was implemented in class X IPS 1. The reason the researcher chose this class was due to the low cognitive learning outcomes of the students. The material presented by the author in this practice is the theory about the process of the introduction of Islam and Islamic culture to Indonesia.

The cognitive learning outcomes from the implementation of the learning process before and after the use of the cooperative script method and infographic media are as follows based on the data analysis:

Table 1. Paired Samples Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	35.2941	34	15.80857	2.71115
	POST TEST	77.2647	34	10.74021	1.84193

The output shows the results of the descriptive statistical summary of both samples or data from the Pre-test and Post-test.

Table 2. Paired Samples Correlations

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRE TEST & POST TEST	34	.895	<.,001

The second part of the output shows the correlation results or the relationship between the two data sets or variables, namely the Pre-test and Post-test.

Table 3. Paired Samples Test

Paired Samples Test									
		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	PRE TEST - POST TEST	-41.97059	7.84117	1.34475	-44.70650	-39.23467	-31.211	33	<.,001

From the table, there are several decision-making criteria as follows:

1. If the Sig. (2-tailed) value is <0.05 , then there is a significant difference between the learning outcomes in the pre-test and post-test data.
2. If the Sig. (2-tailed) value is >0.05 , then there is no significant difference between the learning outcomes in the pre-test and post-test data.

Based on the table, it is known that the Sig. (2-tailed) value is 0.000, which is <0.05 , so we can conclude that there is a significant difference between the learning outcomes in the Pre-test and Post-test data.

4. CONCLUSIONS

Based on the pre-test and post-test data conducted before and after the use of the cooperative script method and infographic media, a positive effect can be observed, indicating a significant change in learning outcomes from the implementation of the method and media. Based on the results of the study, the Sig. (2-tailed) value was obtained at $0.000 < 0.05$, so we can conclude that there is a significant difference between learning outcomes in the Pre-test and Post-test data.

REFERENCES

- Hati ST, Anisa N, Bratisya R, Fitriana. Jurnal Transformasi Pendidikan Modern Jurnal Transformasi Pendidikan Modern. 2025;6(1):294–308.
- Maulidan AC, Yulifar L. Filsafat pendidikan progresivisme dan implikasinya pada pembelajaran sejarah. 2025;15(1):20–38.
- Nurjannah, Ndari, Awaludin F. Pengembangan media pembelajaran berbasis sparkol videoscribe untuk meningkatkan minat belajar siswa pada mata pelajaran ekonomi kelas x ips di SMAN 2 2021;5:290–8. Available from: <http://repository.um.ac.id/id/eprint/186306>
- Hasna Prilia A, Irianto S, Sriyanto S. Bahan Ajar Tematik Berbasis Kompetensi Peserta Didik di Abad 21. J Ilm Kontekst. 2021;2(02):69–76.
- Astutik EP, Zaman AQ, Satianingsih R, Khabib S. Evaluasi Kinerja Guru Pamong : Kontribusi , Tantangan , dan Peningkatan Strategi dalam Mendukung Pendidikan Abad ke-21. 2025;5:402–13.
- Juneva A. Peran Inovasi Teknologi Dalam Meningkatkan Kualitas Pembelajaran di Era Digital. J Ilmu Pendidik. 2025;3(4):117–23.
- Simbolon WA, Ahmad M, Fadilla U, Kristanti AT. DENGAN MODEL PEMBELAJARAN KOOPERATIF TIPE TEAM GAMES TOURNAMENT (TGT). 2025;1(1):22–31.
- Miasari RS, Indar C, Pratiwi P, Purwoto P, Salsabila UH, Amalia U, et al. Teknologi Pendidikan Sebagai Jembatan Reformasi Pembelajaran Di Indonesia Lebih Maju. J Manaj Pendidik Al Hadi. 2022;2(1):53.

- Kemdikbud. Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi No 21 Tahun 2022 Tentang Standar Penilaian Pendidikan pada Pendidikan Anak Usia Dini, Jenjang Pendidikan Dasar, dan Jenjang Pendidikan Menengah. Kementerian Pendidik dan Kebud Ris dan Teknol. 2022;9.
- Nada ZQ, Darmawan D. Pengaruh Gaya Belajar Terhadap Hasil Belajar Siswa Setingkat Sekolah Menengah Pertama. 2025;2(1):498–506.
- Mulia E, Zakir S, Rinjani C, Annisa S. Kajian Konseptual Hasil Belajar Siswa dalam Berbagai Aspek dan Faktor yang Mempengaruhinya. Dirasat J Manaj dan Pendidik Islam. 2021;7(2):137–56.
- Putri AWA, Soebijantoro S. Penerapan Pembelajaran Kooperatif Tipe Group Investigation Untuk Meningkatkan Kualitas Pembelajaran Biologi. J Galeri Pendidik. 2022;3(1):112–21.