

# Positive Cartoon Animation For Social Behavior Changed For Primary School Students Through ITS

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## Abstract

According to the researches of the effectiveness of science content for elementary school students through AI in Education-ITS #2(WEI, Boston, USA 2025) and Animation Cartoons, Contemporary Art, Which Is Designed As A Visual Explanatory Media In SDGs Research: Case-Study, (SDG, Columbia University(2024 Best Paper Award Winners), researchers have developed Cartoon Animation for communication that requires media to convey and encourage children to create a mindset to create positive behaviors through various system for transmitting learning activities, the Internet, online and most recently in the form of AI such as (ITS). Including a Games-based Learning model to support the ethics applied of living together in community concept for students in elementary school case study (UNESCO, Kunming, China 2012 and Nairobi, Kenya 2013). To coexist in society and be a good member of the community in the future.

This is the origin of this research that uses animated cartoon media to teach social studies content to primary school students through the ITS system to predict the positive social behavior changes of the student. The experimental of qualitative and quantitative research method 215 samples by random sampling. Of which the result of conduct studied has accepted the hypothesis levels with significance by ANOVA statistic of the SPSS program. It was found that between at least two groups ( $F(2, 0.16)$ ,  $p = 0.85$ ) evaluated by key social indicators of core values.

**Keywords:** Positive Cartoon Animation for social behavior changed, social behavior changed through AI in Education, ITS for social study for children, social behavior changed by cartoon animation, AI in social behavior education

## 1. Introduction:

Many of our research since 2009 has focused on media that positively changes children's behavior. Whether it is learning behavior or social behavior, so that children grow up to be knowledgeable adults and good people in the society in which they live. We use animation media, cartoons, comics, and several communication systems to convey academic knowledge and persuade and convince them to create their moral paradigm to facilitate or promote education in the classroom and outside the classroom, or to supplement teaching to increase awareness of positive behaviors. Those research papers, including the research topics we mentioned above in the abstract. For this study, we focused on changes in students' social behavior that was learned from cartoon animation with social studies content as a key indicator in researching the learning effectiveness of primary school students learning social studies through ITS, an AI tool in education. When they have to study outside of school in various crises, to continue their education in time of crisis.

## 2. Background Of Problem

This is because there are many social problems with the children due to the lack of ability to learn and adapt to the role of a good citizenship of society. Therefore, we want to create online teaching materials in social studies. That's where the research came from: "The science teaching tool for primary education in crisis times, the social innovation for communities" (ISRC2023, Applied Science University of Bern, Switzerland 2023). Expectations are the positive social behaviors of students who learn through the media as a result. Therefore, in this research, we created a cartoon animation material with socially specific content from social studies subjects. There is a particular segregation in the ITS system so that students will be able to learn this social studies subject anytime and anywhere that cannot be studied normally in the classroom. Even in times of crisis such as wars, pandemics and disasters.

### 3. Objective Of the Research

3.1 To develop an efficiency learning model with ITS, which has the social studies content inside the knowledge module. For primary school students to use online learning in both inside and outside the classroom.

3.2 Develop effective social studies content to encourage students to adapt to sociality in the role of a good citizenship of society. It is useful and can continue to take care of society in the future when it is an adult.

3.3 To examine the effectiveness of ITS for social studies and to evaluate and assess the result of the system based on the core values of students' social skills of the Singapore social education curriculum for primary school students grades 1-6 systematic.

### 4. Theoretical Framework

To design an efficient ITS model for teaching social studies. We would like to present only the theory of the design of the main functions. Other theories have been present in previous research as follows:

**4.1 Social Studies:** Social studies theory is the study of individuals, communities, systems, and their interactions across time and place that prepares students for local, national, and global civic life. It is a subject that aims to help students to grow in knowledge, develop skills and learn values related to the society and the world in which they live.

Specially, in Singapore, there is a systematic social studies curriculum for primary school 1-6 that can be used as a prototype model. The purpose of the curriculum is to prepare students to be effective citizens. By teaching them to understand the interconnectedness between knowledge and understanding. To develop critical and reflective thinking skills and appreciate diverse perspectives in multiculturalism. For a deeper understanding of the values of society, nurture the habit of being responsible for the collective society. Therefore, we thought it would be suitable for the cartoon animation concept designed to teach social studies to primary school student in our ITS system.

**4.2 Cartoon Animation:** It is the creation of images with bright colors arranged by adjusting the size equally. By changing the images one by one little in sequence by the right time by scientifically realistic

movements, using musical accompaniment to create fun for the audience, especially children. (Iamurai Siripen, Pathawit Chongsermsirikul, 2009-2025)

**4.3 Intelligent Tutor System:** ITS are the innovative learning of AI in education technology consists of four modules: Knowledge domain module is an important component of the system to respond the learning of user behavior in real time by using the knowledge based to create problems and assign tasks that are suitable for learners and interpret it by questions and comparisons, Student Module is a core component of the system to involve the issue of the learner by collaborating between the learner module and the knowledge based module, Pedagogical Module has the main function of how to manage content. The teaching course of solves the problem of how to teach them by providing a learning environment. An Interface Module is the part where the intelligent supplementary teaching system is used to communicate with system users.

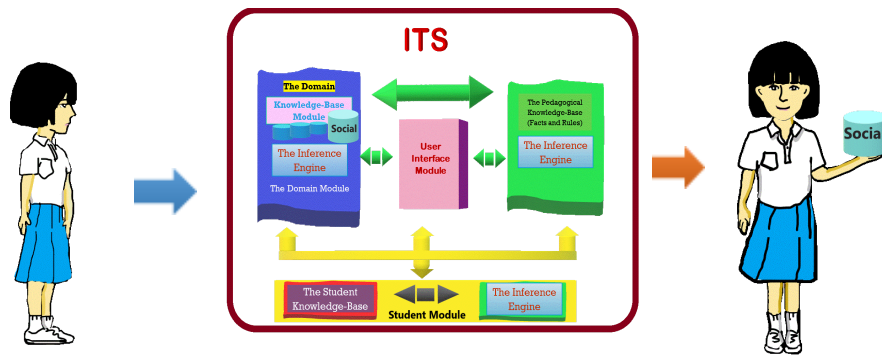


Figure 1: Four modules of ITS Architecture

The teaching curriculum solves the problem of teaching methods by providing a teaching reinforcement, and the Interface Module is the part that uses an intelligent auxiliary teaching system to communicate with the user of the system.

The social studies content is in the Knowledge Domain module together with other subject all knowledge theories within this module, each subject content is in a different form in the sub-module. One of them is the cartoon animation format, and the knowledge test of students' knowledge gained in the form of games is the sub-module of the social studies subject that we mentioned.

**5. Conceptual Framework**

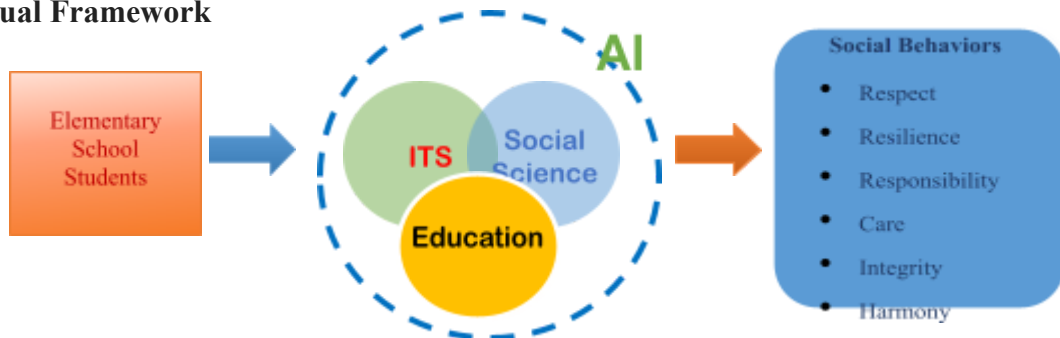


Figure 2: Social studies contributions conceptual framework

Level	Core Values	Socio-Emotional Competencies	21st Century Competencies			Desired Outcomes of Education
			Civic, Global and Cross-Cultural Literacy (CGC)	Critical, Adaptive and Inventive Thinking (CAIT)	Communication, Collaboration and Information Skills (CCI)	
<b>Primary One</b> Knowing Myself, Others and My Surroundings	<ul style="list-style-type: none"> <li>Respect</li> <li>Resilience</li> <li>Responsibility</li> <li>Care</li> <li>Integrity</li> <li>Harmony</li> </ul>	<p>The Primary One topic provides opportunities for the student to develop <b>self-awareness and social awareness</b> through understanding about himself or herself, the people around him or her and his or her immediate environment.</p> <p>The student also develops <b>relationship management</b> skills through examining the different roles he or she plays in relation to others.</p> <p>In addition, the student develops <b>self management and responsible decision-making</b> skills when he or she examines how his or her actions can affect the people and places around him or her.</p>	<p><b>CGC 1: Demonstrates understanding of values, ideals and issues of personal, community and national significance</b></p> <p>Students' understanding of values, ideals and issues of personal, community and national significance are developed through discussions and lesson activities about their roles and responsibilities as members of a community and how they can show care for the places around them.</p> <p><b>CGC 2: Plays active and constructive roles to improve the school, community and nation</b></p> <p>Through class discussions and lesson activities, students suggest ideas about how they can play their role firstly as family members and eventually as members of a school, community and nation.</p>	<p><b>CAIT 1: Exercises sound reasoning and decision-making</b></p> <p>Students exercise sound reasoning and decision-making as they gather and/or process information about themselves in relation to the people and places around them.</p> <p><b>CAIT 3: Assesses different contexts and situations in order to make connections and draw new insights</b></p> <p>As students listen to ideas shared by their peers through discussion-based inquiry, they leverage prior knowledge and draw new insights about the topics being discussed.</p>	<p><b>CCI 1: Effectively communicates information and co-constructs meaning</b></p> <p>Through the lesson activities and field-based learning activities, students develop the skills of documenting their learning processes using multiple modes of presentation and by communicating them to others.</p> <p><b>CCI 3: Interacts and works effectively in group settings to contribute to shared goals</b></p> <p>Students also collaborate with others to gather and process information in the exploration of who they are in relation to the people and places around them.</p>	<p><b>Confident Person:</b> The student works effectively in groups and presents ideas with clarity.</p> <p><b>Self-Directed Learner:</b> The student takes responsibility for his or her learning – questions, reflects and perseveres throughout the inquiry.</p> <p><b>Concerned Citizen:</b> The student develops an awareness of the importance of his or her role as an active citizen engaging in discussion about social responsibility.</p> <p><b>Active Contributor:</b> The student contributes actively to promoting and showing care for the people and places around him or her.</p>

Figure 3: the example of mapping of social studies of Singapore primary1 syllabus to the components of the framework for 21st century competencies and student outcomes

## 6. Research Methodology

**6.1 The sample:** 215 primary schools' students, grade 1-6: 80 (37.2%), 74 (34.4%), 61(28.4%) students from elementary school in both private schools and government school in Thailand by random sampling.

**6.2 Treatment:** The cartoon animation is based on the core concept of social values based on desired values, which reflects images from different scenarios for students to think and change behavior by persuading and encouraging students to create positive social behaviors or change behaviors in a positive way of themselves. Which there are 3 set with different scenarios and design by Desired Outcomes of Education concept of Singapore's MOE as follows:

**The Cartoon Animation treatment set1:**



Figure 4: The sample of treatment 1

Treatment No. 1: The cartoon animation which demonstrate empathy, compassion, and cooperation with others. To be a part of their own identities and have a sense of belonging and committed to create social cohesion and ethical judgment and taking responsibility for the consequences of decisions for the common good, as citizens, to create personal values for the benefit of the community. In a responsible manner that is useful to society.

**The Cartoon Animation treatment set 2:**



Figure 5: The sample of treatment 2

Treatment No. 2: The cartoon animation that demonstrates personal good traits and habits. In maintaining family relationships to help parents work and not act in trouble, be a good child. Perform their duties within their communities and families. Have a spirit to take responsibility for the society and the communities in which they live.

**The Cartoon Animation treatment set 3:**

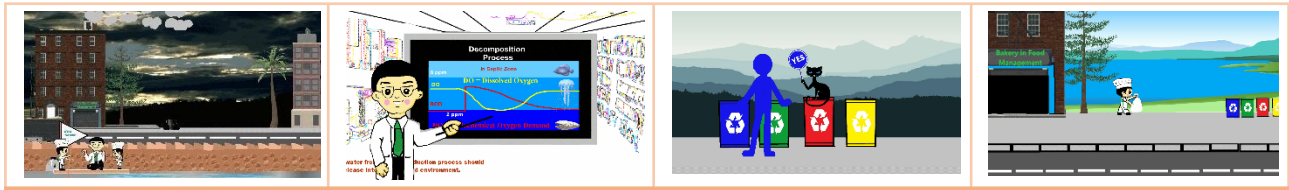


Figure 6: The sample of treatment 3

Treatment No. 3: The cartoon animation depicts caring and engaged citizens with a passionate spirit to contribute responsibly to the society and world they live in. Responsibility as a good citizen for society, the environment and global warming issues.

**6.3 The Research Method:** We use as follows:

- Experimental Research
- Mix Methods: Qualitative Method by Questionnaires and Quantitative method by in-dept interview

**6.4 Evaluation and Data Analyze:** SPSS Program And evaluated them in the experimental of qualitative and quantitative research method. By the social skills indicator from Singapore Primary School Core Values of Social studies with the same values from primary 1-6 as Respect, Resilience, Responsibility, Care, Integrity and Harmony.

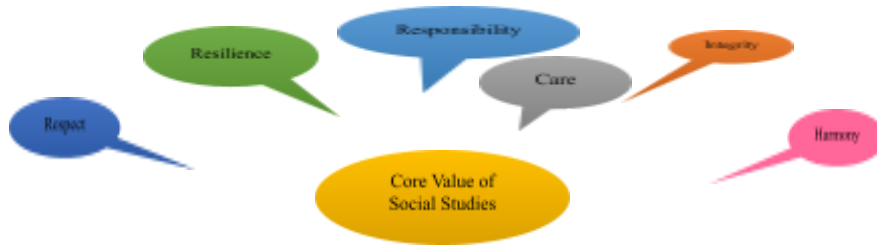


Figure 7: The Core Value of Social Science Studies.

**7. Result Of Research**

And evaluated them in the experimental of qualitative and quantitative research method 215 samples by random sampling. Of which the result of conduct studied has accepted the hypothesis levels with significance by A one-way ANOVA statistic of SPSS program as:

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Respect Pretest	Between Groups	0.07	2	0.03	0.16	0.85
	Within Groups	46.42	212	0.21		
	Total	46.49	214			
Respect Posttest	Between Groups	0.39	2	0.19	0.48	0.61
	Within Groups	86.09	212	0.40		
	Total	86.48	214			
Resilience Pretest	Between Groups	0.10	2	0.05	0.23	0.79
	Within Groups	49.02	212	0.23		
	Total	49.13	214			
Resilience Posttest	Between Groups	0.39	2	0.19	0.31	0.73
	Within Groups	134.93	212	0.63		
	Total	135.33	214			
Responsibility Pretest	Between Groups	0.10	2	0.05	0.23	0.79
	Within Groups	49.02	212	0.23		
	Total	49.13	214			
Responsibility Posttest	Between Groups	0.39	2	0.19	0.31	0.73
	Within Groups	134.93	212	0.63		
	Total	135.33	214			
Care Pretest	Between Groups	0.19	2	0.09	0.34	0.70

	Within Groups	59.35	212	0.28		
	Total	59.55	214			
Care Posttest	Between Groups	0.28	2	0.14	0.26	0.77
	Within Groups	113.32	212	0.53		
	Total	113.60	214			
Integrity Pretest	Between Groups	0.10	2	0.05	0.23	0.79
	Within Groups	49.027	212	0.23		
	Total	49.13	214			
Integrity Posttest	Between Groups	0.39	2	0.19	0.310	0.73
	Within Groups	134.93	212	0.63		
	Total	135.33	214			
Harmony Pretest	Between Groups	0.10	2	0.05	0.23	0.79
	Within Groups	49.02	212	0.23		
	Total	49.13	214			
Harmony Posttest	Between Groups	0.39	2	0.19	0.31	0.73
	Within Groups	134.93	212	0.63		
	Total	135.33	214			

Table 1: ANOVA: A one-way ANOVA revealed that there was a statistically significant difference in defined level between at least two groups ( $F(2, 0.16)$ ,  $p = 0.85$ ) We found that the results accepted a significant level of hypothesis.

By the social studies indicator from Singapore Primary School Core Values of Social studies with the same values from primary 1-6 by criteria of evaluate and analyze by the Social Skills criteria : Respect, Resilience, Responsibility, Care, Integrity and Harmony.

We found the that posttest of highest of care value was 0.77, meaning that the samples had the highest care core value after study the treatment from the cartoon animation. It has a minimum value of 0.61, meaning that the samples have the lowest core value of respect after studying the treatment from the cartoon animation.

## 8. Conclusion And Discussion

Positive Cartoon Animation of social studies subjects through the ITS learning system for primary school students can create social values such as Respect, Resilience, Responsibility, Care, Integrity and Harmony and student habits can change in a positive way. Therefore, it is an effective medium for teaching social studies to students in grades 1-6 so that they can create behavior and change positive behavior. It also helps students understand the rights and responsibilities of citizens and the role of members of society. Their identity as national, regional, and global. They make rational and responsible decisions through reflection and discrimination, with a sense of belonging to the nation, appreciate and strive to create social harmony and be a good member of a diverse family, community and society. They are motivated to behave with social responsibility ethically and take

responsibility for the consequences of their decisions. To be a good adult when they grow in the future.

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