Implementing Technological Pedagogical and Content Knowledge from the Social Studies Learning Management Perspective

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Abstract. In today's digital era, one of the demands in the world of education is increasing teacher knowledge and managerial skills oriented towards Technological Pedagogical and Content Knowledge (TPACK). This research aims to analyze teachers' managerial knowledge and skills in terms of (1) planning learning, (2) implementing the learning implementation plan, and (3) reflecting the planning, implementation, and learning outcomes components of Social Studies that are oriented towards implementing TPACK. This research design is descriptive-qualitative. The results show that Teachers' knowledge and managerial skills are in the moderate category and tend to be lacking—teachers have limited knowledge of and skills in learning management. Social Studies learning management can be integrated with new social intelligence in innovative and fun learning based on the application of TPACK. Several recommendations are suggested for social studies teachers: first, increase managerial knowledge and skills in learning and using TPACK through training, technical guidance, and ongoing apprenticeship; second, form a professional organization for social studies teachers to share knowledge and experiences; third, create networks with social studies teachers in developed countries. Finally, the government and the private sector (especially internet network providers) need to pay attention to the needs of teachers to implement TPACK.

Keywords: Social Studies Teacher; Learning Management; TPACK

1. Background of the study

The dynamics of globalization, marked by technological advances in the fields of information and communication, have created a new paradigm in the provision of education. From an education management perspective, the condition and character of society in every region of the world reflects the educational policies and management that have been implemented. In the twenty-first century, education faces challenges, obstacles and even dangers which originate from the challenges and obstacles faced in implementing education (Olssen, 2020; Singh, 2018).

Advances in education have produced discoveries in information and communication technology, enabling relations between countries worldwide to become increasingly intensive and smooth, without geopolitical boundaries. Everyone can interact and build communication with others in any region, thanks to global information and communication technology (Dutta et al., 2015). However, some negative aspects are still a concern. The use of information technology in cases of premeditated murder committed by students to obtain body organs for sale, and several accounts of various crimes against children (under 18 years) are indications of the existence of complex problems in the provision of education, the use of information technology and communication, global interaction, and other related issues. Nevertheless, information and communication technology are vitally necessary in implementing education, especially in learning (Zhang et al., 2022).

Technological, pedagogical, and content knowledge (TPACK)-based learning answers society's needs in the current digital era (Srisawasdi, 2012). However, not every teacher has mastered it or has the knowledge and managerial skills to combine the components of TPACK. Setiana (2016)Click or tap here to enter text. explains the urgency and superiority of social studies education as follows: "One of the advantages of social studies learning is learning that is oriented towards students' learning needs to acquire life skills, skills, and character". However, the learning plans drawn up by Social Studies teachers differ from the learning needs of students in their classes. The Learning Implementation Plan documents used by teachers in both urban and rural areas are similar, even though the characteristics of students are very different. Why? Because the learning plan document that used is copy-pasted, not the result of analysis based on the application of learning management functions. The teacher is required to address the document provided to fulfill administrative requirements (Ningsih, 2022; Azizah & Haliq, 2022; Kristin, 2021; Mursini, 2018).

The results of this research will provide theoretical and practical benefits. Theoretically, the research results are expected to produce new findings related to the problems faced by social studies teachers in the 21st century. The managerial abilities of social studies teachers can be mapped in integrating and implementing TPACK in social studies learning at the junior high school level. The results can assist in improving the quality of education management in schools, especially in efforts to improve the quality of social studies teachers' performance. The results of this research present other problems relevant to this research topic to encourage researchers to conduct further research.

This research focuses on the problems teachers face in managing TPACK to produce social studies learning implementation that can meet students' learning needs in the 21st century, and aims to identify and analyze:
1. Teachers' knowledge and managerial skills in planning social studies learning oriented towards implementing TPACK.
2. Teachers' managerial knowledge and skills in implementing social studies learning plans oriented towards implementing TPACK.

3. Teachers' managerial knowledge and skill in reflecting learning plans and implementation, including student learning outcomes after participating in learning activities designed using TPACK.

2. Literature Review

From the perspective of Integrated Social Studies management education, which is integrative, holistic, and comprehensive, advances in information and communication technology have become essential to improving the quality of Social Studies Education. However, differentiation in providing communication tools (hardware), mastery of knowledge and skills in information and communication technology (software), and its impact vary significantly (Dinçer, 2018; Flower et al., 2017; McGarr, 2021; Pankowski & Walker, 2016; Stevenson et al., 2020; Turnbull et al., 2020). This disparity presents several variants and problems, such as the provision of information and communication technology devices like smartphones, laptops and tablets (Santos & Castro, 2021). The provision and availability of internet networks and the ability to provide/purchase internet data quota (purchasing power of internet quota) is even more urgent. The disparity exists, then, in the knowledge and skills necessary to use advanced technological devices to access the information and communication needed in learning activities (Taopan et al., 2020).

Education has resulted in advances in science and technology. The results are multiplied when education implements and utilizes innovations in science and technology. Educational scientists and practitioners have created various innovations, including technology integrated with pedagogy and knowledge. Technology, pedagogy, and content knowledge (TPACK) are increasingly in demand because they are appealing in the current digital era (Martin, 2015).

The application of TPACK as a requirement to become a professional teacher in the 21st century has provided several strengths in increasing accessibility to superior 21st-century education (Setiawan et al., 2019). On the other hand, the transformation process during the current "transition" period has not been as easy as was imagined (Kihoza et al., 2016). Many teachers tried their best to adjust but, in the process, neglected humanist aspects that should not be ignored.

Two controversial sides to meeting students' learning needs in the classroom must be met in the learning implementation plan (social studies learning management). On one hand, in the character-building process, students need to be guided to use the internet intelligently and wisely. On the other hand, adult content is presented freely, extensively and accessibly on the internet for students who are not yet adults, and who are still in the process of being guided to make wise, informed decisions. In this context, the teacher's ability to manage learning is needed to integrate it according to themes (Setiana, 2016).

The combination of technology, pedagogy, and knowledge must be managed appropriately (Figg & Jaipal, 2009). Learning management skills need to be combined appropriately and integrated according to the goals to be achieved (Hossain et al., 2020). The effectiveness of TPACK planning and implementation

has been achieved by competent teachers who strive to create meaningful and enjoyable learning when they demonstrate the ability to connect subject matter content with pedagogical means (Durdu & Dag, 2017). Teachers must guide students in learning to use technology in ways that encourage them to explore information available digitally—student learning. Three aspects can be explored: the introduction of technology in learning, the use of pedagogical aspects, and increasing knowledge (Durdu & Dag, 2017; Figg & Jaipal, 2009; Gökçe et al., 2014; Hossain et al., 2020). Thus, teachers can increase their own knowledge and skills using technology as a learning medium and as a source of information. However, using technology for social studies requires the teacher to develop appropriate strategies (Farisi, 2016).

Management is evident in various aspects of life. Although each expert defines management according to their respective points of view, goals, and functions, it is the art of completing work through other people. Management is a field of science and is a combination of art and science in varying proportions. The term 'management' was originally applied in the economic field to four general functions of management, namely: (1) planning, (2) organizing, (3) supervising/monitoring, and (4) evaluating (Talibo, 2018); the term has a broader meaning according to the needs, functions, and goals to be achieved (Usman, 2022).

Management is needed everywhere for all types of organized activities, by people working together to achieve common goals. Specifically in the field of education, education management includes four main things, namely: (1) Educational Planning, (2) Organizing Education, (3) Educational Activation, and (4) Evaluation of Education (Figueiró & Raufflet, 2015). With regard to the management of social studies education, which is integrated with character education, there are practical steps to implement it: planning, implementing, and reflecting (PIR) (R.S.Umbase, 2022).

In planning learning, it is essential to pay attention to several aspects such as the characteristics, criteria, functions, benefits, and urgency (Figueiró & Raufflet, 2015; Karlström & Hamza, 2019; MacFarlane, 2018; Umbase & Lonto, 2022). The criteria for quality learning planning are practical, effective and efficient, relevant to students' learning needs, accurate, adaptive, accelerated, predictive, visible, and sophisticated (Aler & Borrajo, 2002; Alexander & Faludi, 1989; Devlin & Samarawickrema, 2010; Peres et al., 2014).

The characteristics of learning planning are the formulation of the results of the thinking process, which are described in the formulation of objectives, a series of activities that are systematic, logical, rational, dynamic, relevant to student needs; and the existence of practical procedures that are operational and can be carried out by teachers and students; the existence of learning media, time allocation and budget considerations in implementation (Devlin & Samarawickrema, 2010; Peres et al., 2014).

The main components of education include students, educators, educational staff (technicians, laboratory assistants, librarians, security guards), learning materials, learning methods, education curriculum, educational facilities and infrastructure, educational evaluation instruments, and learning management (Mahmudi, 2022). All the components in education have different influences on the implementation of education and learning. One of the important components in learning is learning management in which teacher knowledge and managerial skills are vital (McGarr, 2021; Turnbull et al., 2020).

3. Research Methodology

This research design is descriptive-qualitative (Taylor et al., 2015) with the main focus on interpreting data about TPACK-based teacher knowledge and managerial skills in social studies learning in junior high schools in 2022–2023. The data include learning planning, learning implementation, and learning reflection on the overall implementation of the social studies learning management function. This descriptive-qualitative research analyzes each component of social studies learning management in implementing TPACK. The data analysis technique is not used for generalization but for interpretation/meaning, as is frequently carried out in descriptive-qualitative research. (Dinçer, 2018). The data come from 40 social studies teachers in North Sulawesi. The criteria for implementing the TPACK-based social studies learning management function are determined based on the frequency distribution analysis (percentage) of the following components: (1) planning, (2) implementing, and (3) reflecting.

The criteria for determining the category of knowledge and managerial skills of teachers in integrating TPACK in social studies learning are shown in Table 1 below:

Table 1. Criteria of Data Analysis

Category	Low	Moderate	High
Rank of Percentage	Below 30%	30 – 70%	Over 70%

4. Result

Overall, the results of this study show that teacher knowledge and managerial skills in using TPACK in social studies learning are in the moderate category, tending to low. These results tend to low because learning using TPACK must be implemented even though teacher readiness in terms of knowledge and managerial skills, knowledge and skills using TPACK may not yet be optimal, and the availability of digital devices, internet networks and costs for accessing the internet have not been effected. Teachers still need help with planning effective and efficient learning. The result of the research consists of learning planning, implementing, reflecting on teacher knowledge and skill managerial in using TPACK, and was analyzed from the lesson plan and learning device documents, implementation of planning, and reflection of planning and its implementation

obtained through observations, interviews, and documentation of 40 social studies teachers.

4.1. Planning Learning using TPACK

Data from the planning learning using TPACK based on observation, interviews, and documents. Although 40 teachers were observed, only 27 teachers (67%) had prepared a *Rencana Pelaksanaan Pembelajaran* (Learning Implementation Plan) or Lesson Plan using TPACK and other learning materials, Student Worksheets (LKPD), and test and non-test assessment instruments. Thirteen teachers' lesson plans did not use TPACK at all. The interviews showed that 27 teachers were familiar with the concepts, characteristics, criteria, objectives, functions, and benefits of planning and integrating TPACK for social studies learning and could prepare lesson plans that used TPACK. By contrast, 13 teachers stated that "*pe susah mo bekeng RPP pake TPACK*" (it is challenging to prepare lesson plans using TPACK).

The senior teachers (above 45 years old) stated that in today's digital era, it is difficult to adapt to the "*tuntutan jaman*" (demands of the times). Many obligations still need to be fulfilled.

4.2. Implementing Learning using TPACK

The data from implementing learning using TPACK is based on observations and interviews. Only 27 teachers who planned to use TPACK in learning activities in this section had implemented it. Teachers used PowerPoint, *homemade learning videos*, and videos downloaded from YouTube. The choice of digital learning media teachers used indicates the range of learning media teachers available.

Furthermore, teachers also used written and non-test assessments to complete student worksheets (LKPD) in assessment activities. Some assessments were carried out manually, but some also used Google Forms. The effectiveness of using TPACK relates to the teacher's knowledge and skills in designing TPACK-based learning. Again, in the implementing component, only 27 (67%) teachers had learning material documents, student worksheets (LKPD), and test and non-test assessment instruments in learning activities.

4.3. Reflecting on Learning Planning and Its Implementing

The data analysis for the reflection is based on observation, interviews, and documents. Reflection is carried out after the learning activity ends. It focuses on items such as the quality of the lesson plan, the use of TPACK, instruments of assessment (test and non-test), and assessment results. Only 21 teachers had complete and high-quality reflection documents. Six other teachers were able to prepare lesson plans that integrated TPACK. However, the documents needed to be completed, indicating that although they had carried out reflection, the results still needed to be fully documented. Reflections focus on the quality of the lesson plan, the use of TPACK, the instruments of assessment, and the assessment results (test and non-test). Twelve teachers met the criteria for quality documents assessed: availability, completeness, accuracy, conformity, sophistication, and recency. However, 28 teachers needed to improve the quality of documenting lesson plans and learning tools.

5. Discussion
The research results focus on three things regarding TPACK implementation from a social studies learning management perspective, namely: planning, implementing and reflecting on learning using TPACK.

5.1. Planning Learning using TPACK
Planning learning is decision-making to determine objectives, activities, materials, media, assessment and evaluation instruments in all learning activities. In planning social studies learning, teachers need to analyze problems that can hinder the achievement of learning objectives, to analyze students' current learning needs and their use in the future (Cavanagh et al., 2019; Regan et al., 2019; Santoyo & Zhang, 2016; Yaakob et al., 2019). In the context of learning planning that implements TPACK, an analysis of its effectiveness and efficiency in achieving learning objectives is necessary (Dutta et al., 2015; Faheem et al., 2018; Ives & Jarvenpaa, 1991; Martin, 2015; Olesen & Myers, 1999; Setiawan et al., 2019; Thompson & Nadler, 2002; Zhang et al., 2022).

In preparing effective and efficient planning, it is appropriate to consider seven principles: (1) significance, (2) relevance, (3) adaptation, (4) visibility, (5) certainty, (6) accuracy, and (7) projective/predictive. The principles of significance, relevance, and adaptability of a learning plan require analysis that is significant, relevant, and related to each other, adaptive to the times and needs of society in the twenty-first century and beyond. Adaptation refers to learning planning that is more adaptive, dynamic, and flexible so that it can always be adjusted to current developments. Visibility refers to efficiency in estimating costs, and the certainty of minimizing costs and other unexpected events. Care must be taken in choosing the learning devices used, both digital and non-digital. Finally, in learning planning, it is necessary to pay attention to predictive principles that can project future learning outcomes (Regan et al., 2019; Santoyo & Zhang, 2016; Yaakob et al., 2019).

There are at least eight characteristics of learning planning in the global era. The characteristics of good planning are: (1) upholding humanitarian values and human rights; (2) developing and maximizing all student potential; (3) applying the principle of non-discrimination to all students; (4) arranging material systematically; (5) comprehensively interrelating and integrating each component ; (6) orienting the planning towards continuous improvement and quality improvement; (7) prioritizing effectiveness and efficiency; (8) being dynamic, adaptive and responsive to creative and innovative ideas. (Gemnafle & Batlolona, 2021; Mahmudi, 2022; Meier & Talibo, 2018).

In TPACK learning, every teacher should have the knowledge and managerial skills to plan instructions for achieving learning objectives, detecting obstacles and difficulties in learning, becoming a standard and also a criterion for monitoring the implementation of learning, becoming a guide in determining the design of learning activities, starting from the systematics of activities to determine who is with whom, for what, and when it is created; minimizing errors in all learning activities; ensuring that all activities can be carried out effectively and efficiently; providing a comprehensive overview of the implementation of

learning (Cavanagh et al., 2019; Regan et al., 2019; Santoyo & Zhang, 2016; Yaakob et al., 2019).

5.2. Implementing Learning using TPACK

Implementing TPACK is supported by factors such as teachers' knowledge and managerial skills in integrating TPACK; the availability of hardware and software, of internet networks, and of funds to access the internet. Likewise, interest, availability of information and communication technology facilities, and students' expectations of its benefits in the future are important features in implementing TPACK (Oyetade et al., 2023). Learning management makes it easier for teachers to carry out their duties and becomes the basis for determining the success of the entire learning process and its quality. Learning management can also help teachers to overcome factors inhibiting educational success (Gemnafle & Batlolona, 2021), enabling the main components of education to function effectively and efficiently by implementing education and learning management functions. For example, quality management functions can be applied in managing quality social studies learning activities. Teachers' lack of knowledge and managerial skills shows that implementing learning faces problems that should not occur (Coleman & Bush, 2000; Sallis, 2014).

Learning implementation planning aims to design the overall process and evaluation of learning and how a visionary teacher systematically designs change through continuous improvement (Khotimah et al., 2022). In this context, a visionary teacher can also explain his vision through planning activities that are visionary, systematic, integrative, effective, and efficient. Planning is the basis for improving and increasing the quality of the learning process (Khotimah et al., 2022; Lew & Nelson, 2016; Wulandari & Suhardi, 2020).

In the current digital era, teacher knowledge and managerial skills are linked to teacher competence. The teacher is a manager in his class in the context of being a leader who creates meaningful activities for students. Effective teachers who are skilled in managing the classroom determine the effectiveness of learning management. In implementing the learning plan, the teacher's knowledge, skills, readiness, and commitment to implementing are evident (Khotimah et al., 2022; Talibo, 2018; Wulandari & Suhardi, 2020). In implementing learning, the first step to consider is the teacher's skills in managing the class. Management or class management functions can be applied systematically and described in the learning implementation plan. Teachers can facilitate an interactive learning process by attracting students' attention to support this effectiveness. Preliminary activities can begin with an introduction with questions, riddles, and guesses to engage students' senses and curiosity. Stimulating students' interest by displaying pictures, charts, and exciting information through learning media, then delivering teaching material effectively and interestingly enables students to understand it more readily. Effective learning encourages students to be active and critical and show interest in understanding the lesson better, and they can motivate students physically, mentally, and socially (Adeyemo, 2010; Boon et al., 2005; Heafner, 2004; Zhao, 2007).

In explaining the effectiveness of learning based on effective management, school climate management at the educational unit (school organization) level is essential in synchronizing the best interests of all parties in educational institutions, especially the best interests of students (R. Umbase, 2016). Information and communication technology should support the effectiveness of Social Science learning in the digital era so that children learn to use information and communication technology wisely and intelligently in class. Such learning can eliminate negative impacts such as addiction, and damage to organs such as the eyes, ears, and skin due to exposure to blue light, radiation, and electromagnetic waves (Raja & Nagasubramani, 2018).

The implementation of learning activities managed by teachers who have managerial knowledge and skills and are skilled in implementing TPACK is evident in students' active participation and enthusiastic learning. The final result is that students feel satisfied because their hopes were met. *Effective learning* is a structured combination that includes people, materials, facilities, equipment, and procedures that aim to re-direct student behavior in a better direction, according to the potential and diversity of students to achieve predetermined learning goals (Costley, 2014).

Teachers must always be aware of the challenges of education and implementing learning activities based on integrating aspects of technology, pedagogy, and social knowledge content in the 21st century. Whether digital learning is carried out online or offline, three learning functions are possible, namely, (1) to increase knowledge and skills, (2) to form attitudes, and (3) to maximize all potential within students (Brookhart et al., 2006; Riva et al., 2012). Social studies learning management is scientific knowledge about planning, implementation, monitoring, and reflecting on overall plans, actions, monitoring, assessment, and evaluation of social studies learning activities. Social studies teachers can carry out effective and efficient learning if they have the knowledge and managerial skills to plan, implement, monitor, and reflect on all management activities of social studies education and learning activities. The learning orientation in the 21st century is integrative, holistic, and comprehensive, aimed at responding to scientific polarization in education, which has produced barriers that limit the integrity of life values. Everyone knows there are differences in education's scope, objectives, functions, and benefits. However, there are relevant connections between each to complement each patterned limitation (Kihoza et al., 2016; Srisawasdi, 2012).

The 21st century is marked by a revolution in the field of information and communication technology; however, changes that are so rapid, broad and massive have often presented gaps in technological mastery, accessibility, and financing. Globalization is currently a concept that is much more appropriate for introducing changes in the education sector; the educational paradigm will experience changes in line with global demands and globalization. The development of educational resources occurs universally today.

5.3. Reflecting on Learning Planning and Its Implementation

The new paradigm in assessment is aimed at assessing student learning development. Each student has varying absorption capacities, so assessment is integrated into the learning process. Teachers can value students who make learning progress even when their learning outcomes are still low or have yet to reach a high score. So praise is received both by students who excel and those who experience periodic learning progress (Noman & Kaur, 2014). Each student compiles a portfolio of their learning results and provides notes on their progress while also writing plans to improve their learning results. The teacher's role is to assist students with independent assessment knowledge and skills.

Teachers can help students by creating a simple format based on the aspects being assessed and made chronologically with a systematic time sequence. This format can be developed and made interesting in social studies learning in junior high schools in pictorial tables and colored bar charts. Students are given a fully comprehensive opportunity to be creative so that the format can be displayed beautifully according to the students' own creations. Before implementing it, the teacher should have agreed with the students and made the assessment format a beautiful learning tool.

Anticipation of the application of technology in providing education has given birth to four pillars of education, which were built to support and strengthen the educational foundations laid by each country, based on the uniqueness and order of life values each possesses. Education is based on learning activities. According to UNESCO, the four pillars of education are: (1) learning to know, (2) learning to do, (3) learning to be, (4) learning to live together. As a response to global dynamics and challenges in development, which are used as global and national commitments for the welfare of society, four main aspects have been formulated in the Sustainable Development Goals (SDGs): (1) development that maintains a sustainable increase in the economic welfare of society, (2) development that maintains the sustainability of community social life, (3) development that maintains environmental quality, (4) development that guarantees justice and the implementation by governance that can maintain the improvement in the quality of life from one generation to the next (Dutta et al., 2015; Zhang et al., 2022).

Learning implementation activities that apply the latest learning elements in the 21st century have now been integrated into Technological, Pedagogical, and Content Knowledge (TPACK) with the intention of realizing innovative digital forms of learning such as Blended Learning, Sciences, Technology, Engineering, Arts and Mathematics (STEAM), Neuroscience, Higher Order Thinking Skill (HOTS) based learning, and the demands of 21st-century competency and literacy like Communication, Collaboration, Critical Thinking, Creativity (4C), and other components of 21st-century education and learning (Abbitt, 2011).

Observing every current situation and condition, social science education Teachers will continue to face challenges, obstacles, and even dangers, which, according to 21st-century education experts, must be addressed intelligently and wisely. Thus, social studies teachers' management abilities are essential for

increasing their professionalism and for the best interests of the students in their classes. Effective education and learning management are also needed to create effective learning, including assessing learning outcomes appropriately and correctly (Brookhart et al., 2006). In managing assessments, teachers should do at least five things, namely: first, plan the primary material being assessed; second, decide the form of test or non-test assessment; third, decide the forms of questions; fourth, include various levels of difficulty of questions; fifth, consider the ethics of conducting assessments (Lew & Nelson, 2016).

Assessment not only measures and assesses success based on plans made by the teacher, but also fulfills students' learning needs and increases students' learning motivation. Practical assessment is based on student learning needs in the classroom. Teachers with knowledge and managerial skills in assessing student learning outcomes will also try to build students' skills to assess themselves (Brookhart et al., 2006). So, students are required both to master the subject matter and also to have the skills to assess themselves independently (Noman & Kaur, 2014). Class-based assessment is characterized by integrated assessment during the learning process. This assessment is carried out transparently by conducting assessments between teachers and students. Teachers explain assessment techniques and criteria to make implementation more transparent and accountable (Brookhart et al., 2006).

The most important aspect of reflection on planning and implementation is that it enables teachers to analyze and evaluate all their learning activities. Teachers who have the knowledge and skills can find innovations to improve their teaching and improve the quality of learning in their classes.

6. Conclusion

If the knowledge and skills of social studies teachers in planning, implementing, and reflecting on learning based on the use of TPACK are still only moderate, the improvement of the quality of social studies learning in the current digital era is hindered. Learning activities are routinely carried out but do not realize the aim of implementing social studies education to produce students with knowledge, attitudes, and social skills in the digital era.

The planning function has implications for preparing learning that is structured systematically and operationally; the learning implementation function has implications for realizing planning, while the reflection function has implications for improving and enhancing the quality of learning and its impact on students, teachers, schools, and society. Teachers whose managerial knowledge and skills in implementing TPACK are in the moderate category or tend to be low, have implications for serious improvements in the quality of learning, namely teacher managerial knowledge and skills and mastery of TPACK. The challenge faced in today's global era is the problem of disparities in various fields of development in various regions. Therefore, every teacher must be able to see clearly and objectively and be creative in producing wise and innovative solutions. This gap is increasingly having an impact in the field of education, especially in access to the use of information and communication technology in learning.

7. Research Limitations

This research needs to be more comprehensive in describing teachers' knowledge and managerial skills in implementing TPACK in social studies learning among teachers in both villages and cities. Further research is urgently needed to analyze the magnitude of variations in gender, education, social, cultural, and economic factors that can influence increasing teacher knowledge and skills in implementing TPACK. The results of this research have presented new problems that can be studied further, such as how significant the differences in the mastery of TPACK are between teachers in different age ranges, how to overcome the access gap between rural areas and cities, how to see the dynamics of globalization from the perspective of other sciences, among various other relevant problems.

8. Recommendations

Teachers must develop a new paradigm for managing knowledge and improving managerial skills. Otherwise, challenges and threats from new competitors who are better adapted to current conditions could shift and replace the Social Studies teaching profession. The digital era is characterized by an increase in various types of social media that require new social intelligence and culture. Intelligence is developed through the ability to master "soft skills" that are increasingly sophisticated and surprising because they have never been encountered before. Teachers should be able to identify and analyze the learning needs of students in their class in order to design a TPACK-based learning implementation plan, then to implement the plan and assess and reflect on it.

Teachers need knowledge and managerial skills in integrating TPACK, and there are several things that social studies teachers should do, namely, increase managerial knowledge and skills in learning, and use TPACK through training, technical guidance, and ongoing apprenticeship; form a professional organization for social studies teachers to share knowledge and experiences; network with social studies teachers in developed countries. The government and the private sector (especially internet network providers) need to pay attention to the needs of teachers to realize quality education.

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Appendix

RESEARCH INSTRUMENT
Implementing Technological Pedagogical and Content Knowledge from The Social Studies Learning Management Perspective

1. Observation Guidelines

No.	Component	Result	Interpretation	Remarks
1.	Planning			
2.	Implementing			
3.	Reflecting			

2. Interview Guidelines

No.	Component	Result	Interpretation	Remarks
1.	Planning: 1. Concept 2. Characteristic 3. Criteria 4. Objectives 5. Function 6. Benefit 7. Integration of TPACK			
2.	Implementing Activities 1. Introducing 2. Main learning Implementing TPACK 3. Assessing: -Test & Non Test 4. Closing			
3.	Reflecting - analysis and evaluation on quality of: 1. Planning 2. Implementing 3. Improvement and increasing of job performance in planning and implementing			

3. Guidelines of Document Analysis

No.	Component	Criteria of Document Quality						Interpretation	Remarks
		1	2	3	4	5	6		
1.	Planning: 1.Lesson Plan 2. Other Documents								
2.	Implementing 1. Teachings Material 2. Assessing Documents - Test - Non-Test - Result of Assessing 3. Other Documents								
3.	Reflecting All Documents of Reflecting Result								

Remarks:
1. Availability
2. Completeness
3. Accuracy
4. Conformity
5. Sophistication
6. Recency