

## RESEARCH ARTICLE

# Systematic Analysis of Studies on Professional Competencies, 21<sup>st</sup> Century Skills and Literacy Skills by Social Studies Teachers and Prospective Teachers

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## ABSTRACT

Teacher competencies are defined as the knowledge, skills and attitudes required to fulfil the teaching profession effectively and efficiently. Teachers' possession of these basic competencies is seen as one of the key factors for increasing students' achievement and ensuring their personal development. In addition, to adapt to the changing conditions of the 21<sup>st</sup> century, several significant businesspeople, politicians and educational experts of the period have gathered and put forward studies on the skills that individuals should gain. In order to effectively implement these skills, it is of great importance that teachers have the appropriate competencies. The alignment of teacher competencies with the skills set forth in the P21 framework is necessary to increase the level of success in education. In recent years, literacy skills have gained importance and literacy fields have diversified. Due to this importance, many literacy skills have been included in curricula. In the acquisition of these skills by students, it is emphasized that teachers should have these skills first. From this point of view, this study aims to determine how the researches on social studies teacher competencies are distributed according to research approach, method, sample/study group, research year and type and in which competency area they are concentrated. In line with this purpose, it is thought that this study will provide a road map for future research on social studies teacher competencies, 21<sup>st</sup> century skills partnership framework and field literacy skills. In accordance with the purpose of the study, 190 studies that were reviewed in "YÖK Thesis" and "TR Index" databases, using 36 key concepts, and met the inclusion criteria were included in the review. According to the results of this research using the systematic literature review method, it was determined that the studies were mostly conducted by prospective social studies teachers, most of which were master's theses, that there was an increase in the number of studies after 2019, and that they were concentrated in the fields of content knowledge, field education knowledge, information and communication technologies literacy, and digital literacy.

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## 1. Introduction

Qualification means a document issued when an individual's learning outcomes are recognized by the relevant institution at the end of an evaluation and validation process (T.C. Mesleki Yeterlilik Kurumu, 2015). Bandura (1977)

defines self-efficacy as "one's belief in one's own abilities to plan and carry out the courses of action needed to manage future situations". He analysed the components of self-efficacy under three headings: cognitive processes, emotional processes and control process. Self-efficacy theory is based on the idea that people's belief in themselves about how successful they can

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be shapes a part of their performance and motivation (Bandura, 1989). The institutions and organizations that carry out the legal regulations, procedures and coordination related to the definition and presentation of qualifications are the Ministry of National Education, higher education institutions under the coordination of the Council of Higher Education and the Vocational Qualifications Authority (T.C. Mesleki Yeterlilik Kurumu, 2015).

The teaching profession, which has responsibilities beyond transferring and measuring knowledge, has existed in all stages of human history (MoNE, 2017). In this context, a research has been conducted by the Ministry of National Education, Educational Research and Development Directorate at the beginning of the 21<sup>st</sup> century in Turkey, on the skills that teachers should have. In this research, it was emphasized that there should be teachers who can adapt to the information age, renew themselves and have the skills to utilize alternative paths to access information (MoNE, 2006). For this purpose, the competencies that teachers should have were determined.

Teacher competencies are defined as “the knowledge, skills and attitudes that teachers should possess in order to fulfil the teaching profession effectively and efficiently”. Teachers' possession of basic competencies is one of the key factors for increasing students' achievement and ensuring their personal development. General competencies required for the teaching profession can be expressed as follows:

1. Professional Knowledge: field knowledge, field education knowledge, legislation knowledge
2. Professional Skills: planning education and training, creating learning environments, managing the teaching-learning process, measurement and evaluation
3. Attitude and Values: National, spiritual and universal values, approach to students, communication and cooperation, personal and professional development (MoNE, 2017).

To adapt to the changing conditions of the 21<sup>st</sup> century, several significant businesspeople, politicians and educational experts of the period have gathered and put forward studies on the skills that individuals should gain (Rotherham & Willingham, 2009). Among these studies, the “21<sup>st</sup> Century Learning Partnership” project, which has an important place in the world, was realized. The aim of the project, which was created with the partnership of thirty-three different institutions and organizations, is to carry out studies to gain the skills anticipated for the 21<sup>st</sup> century (P21, 2009). Under the 21<sup>st</sup> century learning partnership, the P21 framework was determined. This framework consists of three main headings and sub-headings. These are:

1. Learning and Innovation Skills: creativity, flexibility, collaboration, problem solving and communication.

2. Information, Media and Technology Skills: information literacy, information and communication technologies literacy, media literacy.

3. Life and Career Skills: flexibility and adaptability, self-management, social skills, productivity and accountability, leadership (P21, 2009).

To effectively implement these skills, it is crucial that teachers have the appropriate competencies. The alignment of teacher competencies with the skills in the P21 framework is necessary to increase the level of success in education. In particular, the P21 framework is centred on critical thinking and problem-solving components. These components are important for teachers to plan their lessons creatively and flexibly and to create classroom environments that are conducive to students' development (Saavedra & Opfer, 2012)

In this direction, social studies teacher competencies include the characteristics that teachers should have to provide their students with knowledge, skills and values in the field of social sciences effectively. The field-specific competencies for social studies teaching are grouped under the following main headings. Planning and Organizing the Teaching Process; Learning-Teaching Process; Monitoring and Evaluation; Collaboration with School, Family and Community; and Providing Professional Development (MoNE, 2008).

According to the Turkish Century Education Model, knowledge and skills are in an interactive structure that feed each other in the learning process. According to this model, knowledge is the basis for acquiring skills, while skills are used to access knowledge and produce new knowledge. Moreover, relevant content is considered as the context for the maturation of social-emotional learning skills, values, literacy skills and dispositions. The process components of literacy skills in the Turkish Century Education Model are designed to be acquired by students at three levels. These three levels are the level of awareness for defining, understanding, being aware of and showing sensitivity to the basic knowledge, terms, concepts and facts in the literacy type; the level of functionality for students to realize the holistic relationship between these knowledge, terms, concepts and facts; and the level of agency for students to act on the acquired knowledge (MoNE, 2024).

A systematic literature review (SLR) is a detailed and replicable strategy that seeks answers to a specific research question. It includes published and unpublished studies relevant to the research question. It is evaluated according to the results of inclusion and exclusion. It is a comprehensive literature review that provides an objective and coherent summary of the results of this assessment. A systematic literature review is usually conducted by a research team. This literature review can identify gaps and trends in the available evidence. It also helps to support future research in the relevant field of study (Munn et al. 2018). In this context, the purpose of this study is to reveal

the focus of the studies examining the competencies of social studies teachers and pre-service teachers within the framework of teacher competencies and to analyse the trends in the related field. This study can provide a roadmap for future studies by using a systematic literature review.

This study aims to provide information about the general characteristics, research methodologies and research trends of the research on social studies teacher competencies and to provide a road map for future research in the related field of study. For this purpose, answers to the following questions were sought:

1. What are the general characteristics of the studies conducted on “teaching profession competencies”, “21<sup>st</sup> century skills” and “literacy” skills of social studies teachers and candidates?

1.1. What are the general characteristics?

1.2. How is the distribution according to research approach/method and publication type?

1.3. How is the distribution according to sample/study group and data collection tools?

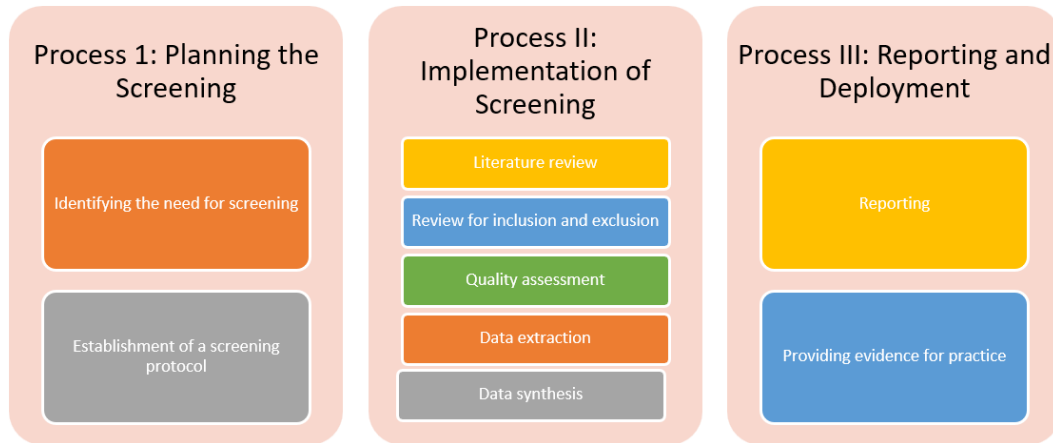
1.4. How is the distribution according to the sub-qualification areas specified in the “General Qualifications for the Teaching Profession” of MoNE (2017)?

1.5. How is the distribution according to the sub-dimensions of 21<sup>st</sup> century skills?

1.6. How is the distribution according to literacy types?

## 2. Method

A systematic literature review was used in this study, which aimed to analyse the studies on current and prospective social studies teachers' general competencies for teaching profession, 21<sup>st</sup> century skills and literacy skills. The purpose of a systematic literature review is to conduct a comprehensive search for existing studies on a topic. This search ultimately results in a systematic, transparent and reproducible presentation of results and findings (Siddaway et al., 2019). A systematic literature review requires a systematic process to be followed, which depends on standardized guidelines. When conducting a progressive literature review, the results of the review are filtered. The broadest literature related to the research topic is tried to be obtained (Snyder, 2019). The research was conducted by adhering to the procedure in Figure 1.



**Figure 1.** Steps of systematic literature review (Tranfield et al., 2003).

The review protocol was created by interviewing three experts in the field. “General Qualifications for the Teaching Profession” (MoNE, 2017), “The Partnership for 21<sup>st</sup> Century Learning” (P21, 2009), “Multiple Literacies for Social Studies I, II” (Gençtürk & Karatekin, 2013; Gençtürk Güven & Karatekin, 2021) and “2024 Education Model Social Studies Curriculum” (MoNE, 2024) were determined as the protocols that were the source for determining the key concepts. Considering the relevant literature and basic texts, 36 key concepts related to “Teacher Competencies” were identified. These key concepts were searched for related studies by using “YÖK Thesis” and “TR Index” databases.

Within the framework of the protocols that were the source of the scanning process, the concepts of “Social Studies Teacher”, “Prospective Social Studies Teacher” and the sub-concepts of “Competence/21<sup>st</sup> century skills/literacy” were reviewed separately and related studies were reached. The sub-key concepts included in the review were “Field knowledge”, “Field education knowledge”, “Legislation knowledge”, “Education and training planning”, “Creating learning environments”, “Managing teaching and learning process”, “Assessment and evaluation”, “Communication and collaboration”, “Personal and professional development”, “Critical thinking and problem solving skills”, “Creative thinking and innovation implementation skills”,

“Communication skills”, “Collaboration skills”, Information literacy”, “Information communication technologies literacy”, “Flexibility and adaptability”, “Entrepreneurship and self-orientation”, “Social and intercultural skills”, “Productivity and accountability”, “Cultural literacy”, “Visual literacy”, “Digital literacy”, “Water literacy”, “Spatial literacy”, “Financial literacy”, “Moral literacy”, “Natural disaster literacy”, “Civic literacy”, “History literacy”, “Geography literacy”, “Political literacy”, “Environmental literacy” and “Forest literacy” were determined as “self-efficacy”. Studies whose full texts could not be accessed and studies outside the identified competency areas were excluded.

The review process was completed between October 7-21, 2024. As a result of the review, 7 of the 197 studies were excluded from the study in accordance with the exclusion

criteria. It was determined that 72 of the studies were related to the self-efficacy beliefs of social studies teachers/prospective teachers and 33 of them were conducted with mixed subject groups including social studies teachers/prospective teachers. Since the aim of this study was to reveal a holistic view of the studies covering competency areas, studies with self-efficacy and sampling variation were included in the review.

### 3. Findings

In this section, the general characteristics of the studies obtained from the literature review, research approaches/methods and types of publications, teaching profession general competencies, 21<sup>st</sup> century skills and literacy skills are presented.

**Table 1.** General characteristics of the studies included in the study.

Year	f	%	f	%	f	%	f	%
1999	-	-	1	1	-	-	1	0.5
2003	-	-	-	-	1	4.8	1	0.5
2006	2	2.9	1	1	-	-	3	1.6
2008	1	1.4	2	2	1	4.8	4	2.1
2009	1	1.4	-	-	1	4.8	2	1.1
2010	3	4.3	2	2	-	-	5	2.6
2011	1	1.4	2	2	4	19.0	7	3.7
2012	2	2.9	2	2	-	-	4	2.1
2013	5	7.2	4	4	-	-	9	4.7
2014	3	4.3	1	1	1	4.8	5	2.6
2015	3	4.3	4	4	-	-	7	3.7
2016	4	5.8	2	2	1	4.8	7	3.7
2017	6	8.7	8	8	1	4.8	15	7.9
2018	2	2.9	5	5	2	9.5	9	4.7
2019	8	11.6	16	16	3	14.3	27	14.2
2020	5	7.2	6	6	-	-	11	5.8
2021	5	7.2	5	5	2	9.5	12	6.3
2022	6	8.7	16	16	2	9.5	24	12.6
2023	8	11.6	15	15	1	4.8	24	12.6
2024	4	5.8	8	8	1	4.8	13	6.8
<b>Total</b>	<b>69</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>21</b>	<b>100</b>	<b>190</b>	<b>100</b>

According to Table 1, 100 of the 190 studies involving social studies teachers and pre-service teachers were master's theses, 69 were articles and 21 were doctoral dissertations. When we look at the distribution of the studies by years, it is seen that the first article was published in 2006, the first master's thesis in 1999, and the first doctoral study in 2003. It was determined that the most scientific publications in this field were made in 2019 and the least in 1999 and 2003. In 2019 and later, it was determined that there was an increase in the number

of studies conducted. While the highest number of publications in master's studies was in 2019, the least studies were conducted in 1999 and 2014. In addition, no study on the subject was found in 2003 and 2009. In doctoral studies, it was determined that the highest number of publications were made in 2011, and no studies were conducted in 1999, 2006, 2010, 2012, 2013, 2015 and 2020. In 2019 and afterwards, it was determined that doctoral studies on the subject increased, albeit partially. In article studies, the highest number of publications were made

in 2019 and 2023. Since 2006, articles have been published every year.

**Table 2.** Distribution of studies by research approach/method and type.

Approach	Method	Article	f	Master's	f	PhD	f
Quantitative	Screening/Descriptive Screening	S4, S5, S9, S14, S15, S23, S26, S27, S29, S31, S32, S39, S40, S41, S46, S47, S48, S52, S65, S66, S70, S99, S101, S102, S103, S113, S114, S117, S118, S119, S121, S153, S152, S156, S160	35	S1, S3, S8, S13, S19, S20, S24, S33, S34, S36, S56, S58, S59, S74, S76, S80, S82, S87, S90, S92, S94, S97, S107, S108, S109, S112, S123, S136, S139, S141, S143, S144, S146, S147, S162, S165, S166, S167, S170, S171, S173, S174, S175, S176, S177, S178, S182, S184, S185	49	S7, S10, S17, S21, S85, S127, S129	7
		Relational Screening	10	S6, S12, S25, S42, S43, S45, S62, S63, S75, S79, S81, S89, S96, S98, S110, S125, S128, S130, S133, S137, S142, S163, S164, S179, S180, S181, S186	27	S53, S64, S78, S93, S2	5
		Scale Development	4	S30, S50, S105, S157			
		Cross-Sectional Survey	3	S72, S150, S158	1	S126	
		Experimental	1	S187	2	S38, S140	
		Causal Comparison			1	S55	
		<b>Total</b>			<b>53</b>		<b>80</b>
Qualitative	Case Study	S104, S120, S154, S155, S159, S169, S188, S190	8				
	Document Analysis	S122	1			S145	1
	Phenomenology	S161	1	S134	1		
<b>Total</b>			<b>10</b>		<b>1</b>		<b>1</b>
Mixed	Unspecified	S51	1	S44, S124	2	S22	1
	Exploratory Sequential Pattern	S67, S69, S151	3	S57, S77, S83, S86, S88, S111, S131, S135, S138	9	S18, S84, S132, S183	4
	Variation Design			S95	1	S37	1
	Screening-Case Study			S54	1		
	Simultaneous Nested Design			S35, S61, S168	3		
	Explanatory Sequential Pattern			S91	1		
	Quasi-Experimental Design + Case Study	S100	1				
	Proximal Parallel Pattern	S116	1	S60	1	S73, S172	2
Embedded Pattern	S149	1					
<b>Total</b>		<b>7</b>			<b>18</b>		<b>8</b>

The findings regarding the research approach of the analysed scientific studies are presented in Table 2. When the distribution of the studies according to research approach/method and type is examined, it was determined that most of the studies were master's theses ( $f=99$ ), followed by articles ( $f=70$ ) and doctoral studies ( $f=21$ ). Considering the

approaches of the studies on teacher competencies, it was understood that quantitative studies ( $f=144$ ) were the most prominent, followed by mixed ( $f=34$ ) and qualitative studies ( $f=12$ ). It was determined that qualitative studies on the subject were insufficient. In the qualitative research approach, the most case study ( $f=8$ ), in the quantitative research approach, the most

survey/descriptive survey (f=91) and relational survey (f=41) studies were conducted, while in the mixed approach, the most studies were conducted with exploratory sequential design

(f=16). It was determined that scale development studies were conducted only in articles (f=4) and there was no scale development studies in master's and doctoral programs.

**Table 3.** Distribution of studies according to sample/study group and data collection tools.

Sample/ Study Group	Data Collection Tool	Article		Master's Degree		Doctoral Thesis	
		Code	f	Code	f	Code	F
Social Studies Teacher Candidate	Personal Information Form - Scale	S40, S41	2	S3, S56, S76, S79, S89, S92, S108, S110, S123, S124, S162, S163, S174, S179, S182	15	S53	1
	Self-Efficacy Scale			S5	1		
	Scale	S14, S32, S52, S68, S72, S103, S106, S114, S115, S160	10	S13, S38, S55, S62, S75, S82, S96, S97, S98, S109, S125, S133, S144, S171, S176, S184	16	S7, S10, S64, S127	4
	Scale/Daily	S116	1				
	Scale/Semi-structured Interview Form	S149	1				
	Interview Form - Daily Forms					S145	1
	Demographic Information Form - Scale			S126	1		
	Scale - Achievement Test			S147	1		
	Observation Form / Evaluation Form	S9	1				
	Survey					S21	1
	Scale/Information Form/Interview Form	S51	1	S60, S111	2	S183	1
	Scale-Interview Form	S67	1	S35, S77, S83, S135, S95	5	S132, S172	2
	Semi-structured Interview Form	S120	1	S134	1		
	Measurement and Evaluation Literacy Inventory			S59	1		
	Literacy Inventory Perception Scale	S102	1				
	Scale-Literacy Test-Measurement Questions			S90	1		
	Literacy Test, Assessment Form, Observation Form, Interview Form	S100	1				
	Self-Assessment Form	S122	1				
	Literacy Inventory	S101	1				
	Scale Development	S105, S157	2			S129	1
	Scale-Interview Form-Personal Information Form			S54	1		
	Scale-Digital Proficiency Test			S140	1		
	Knowledge Test-Scale			S12, S43	2		
	Scale - Interview Form - Document Analysis					S18	1
<b>Total</b>			<b>24</b>		<b>48</b>		<b>12</b>

Table 3. (continued).

Sample/ Study Group	Data Collection Tool	Article		Master's Degree		Doctoral Thesis	
		Code	f	Code	f	Code	F
Social Studies Teacher	Questionnaire/Observation Form			S1	1		
	Observation Form			S4	1		
	Survey	S26, S49, S117, S119	4				
	Scale/Survey			S142	1		
	Personal Information Form-Scale	S152	1	S19, S42, S45, S87, S136, S137, S141, S148, S177	9	S17	1
	Scale	S29, S31, S47, S66, S113, S150, S153, S156, S158, S187, S189	11	S20, S63, S80, S94, S107, S128, S139, S146, S164, S165, S166, S167, S170, S178, S185, S186	16		
	Scale - Interview Form	S151	1	S57, S61, S88, S91, S138, S168	6	S22, S37	2
	Demographic Information Form-Scale			S130, S143, S173, S180	4		
	Demographic Information Form-Interview Form- Event Texts Form			S169	1		
	Interview	S154, S161, S188	3				
	Observation / Interview	S104, S190	2				
	Semi-structured Interview Form	S155, S159	2				
	Scale-Concept Test			S33	1		
	Scale Development	S50	1			S93	1
	Personal Information Form-Scale-Interview Form			S131	1	S84	1
	Survey-Interview Form			S34, S86	2		
Total			25	43		5	
<b>General Total</b>			<b>49</b>	<b>91</b>		<b>17</b>	

The findings regarding the distribution of the analysed scientific studies according to the sample/study group and data collection tools are presented in Table 3. When the distribution of the studies according to the data collection tools was analysed, it was determined that the data collection tools varied. Among these tools, “Likert-type scale” tools for different competence/literacy areas were found to be prominent. It was observed that this data collection tool was primarily preferred in master's theses (f=16). It was followed by article studies (f=10) and doctoral studies (f=4). Secondly, “scale/personal information form” was the most frequently used data collection tool. It was noteworthy that there were mostly master's studies (f=15), while articles and doctoral studies were very few.

In the studies conducted with social studies teachers, it was determined that scales were mostly used as data collection tools. It was determined that these scales, which were developed for different competency areas, were mostly used in master's theses (f=38), followed by articles (f=14) and doctoral studies (5). Among the data collection tools collected with this study group, the second most common data collection tool was a combination of personal information form/scale. It was determined that master's studies (f=9) ranked first, while the number of articles and doctoral studies using these data collection tools together was limited.

**Table 4.** Distribution of studies according to the sub competency areas specified in MoNE (2017) “General Qualifications for the Teaching Profession”.

Teacher Competency Area	Article	f	Master's	f	PhD	f
	Code		Code		Code	
Field Knowledge	S52, S5, S14	3	S34, S38, S43, S54, S57, S61, S62, S77, S83, S91, S94, S96, S126, S135, S144, S166, S170, S179	18	S37, S53	2
Field Education Knowledge	S4, S41, S49, S103, S104, S119, S160, S188	8	S75, S86, S107, S128, S141, S168	6	S17, S64, S84, S132	4
Legislation Knowledge			S169, S174	2		
Education and Training Planning			S177	1		
Creating Learning Environments					S172	1
Managing the Teaching and Learning Process	S9, S29, S47, S113, S117, S122, S150	7	S1, S13, S167	3		
Measurement and Evaluation	S26, S32, S100	3	S33, S59, S80	3		
National, Spiritual and Universal Values			S35, S89, S176	3		
Approach to the Student	S189	1				
Communication and Cooperation	S102	1				
Personal and Professional Development	S31, S67, S114, S120, S148, S149, S152, S187, S190	9	S42, S45	2		
<b>Total</b>		<b>32</b>		<b>38</b>		<b>7</b>

The findings regarding the distribution of the analysed scientific studies according to the teaching proficiency areas are presented in Table 4. A total of (f=77) studies related to the key concepts of MoNE (2017) “General Competencies for Teaching Profession” were reached. According to these findings, it was determined that the most studies related to teaching competency areas were conducted in the field of field knowledge (f=23) and field education knowledge (f=18). Among the studies conducted in this field, it was seen that one study was conducted on the key concepts of “education and training planning”, “creating learning environments”,

“approach to students” and “communication and cooperation”. At the same time, it was determined that S47 and S189 were also included in the “communication and cooperation” category in Table 5. There were no articles on the key concepts of legislative knowledge, educational planning, creating learning environments, national, spiritual and universal values. There were no master's studies on the key concepts of creating learning environments, approach to students and communication and cooperation. Doctoral studies are related to the key concepts of field knowledge, field education knowledge and creating learning environments.

**Table 5.** Distribution of studies according to 21<sup>st</sup> century skills sub-dimensions.

21 <sup>st</sup> century skills	Article		Master's Degree		PhD	
	Code	f	Code	f	Code	f
<b>Critical Thinking, Problem Solving Skills</b>	S153	1	S20	1	S7	1
<b>Creative thinking and Innovation Implementation Skills</b>						
<b>Communication Skills</b>	S189	1				
<b>Collaboration Skills</b>	S47	1				
<b>Information Literacy</b>			S56, S110	2		
<b>Media Literacy</b>	S115	1	S76, S98, S124, S125, S136	5		
<b>Information and Communication Technologies Literacy</b>	S40, S155	2	S3, S55, S63, S88, S97, S133, S137, S142, S143, S162, S184, S185, S186	13	S18, S129	2
<b>Flexibility and Adaptability</b>						
<b>Entrepreneurship and Self-Direction</b>						
<b>Social and Intercultural Skills</b>	S159	1	S82, S163	2		
<b>Productivity and Accountability</b>					S172	1
<b>Leadership and Responsibility</b>						
<b>Total</b>		<b>7</b>		<b>23</b>		<b>4</b>

The findings regarding the distribution of the analysed scientific studies according to 21<sup>st</sup> century skills are presented in Table 5. It was determined that most of these studies were master's theses (f=23), followed by articles (f=7) and doctoral studies. When the distribution according to 21<sup>st</sup> century skills sub-dimensions was examined, it was determined that most of the studies conducted were related to “information and communication technologies literacy” (f=17) and “media

literacy” (f=6) skills. Considering the type of these studies, it was determined that most of them were master's theses (f=18), articles (f=3) and doctoral studies (f=2). In contrast to these skills, there were no studies on “creative thinking and innovation implementation skills”, “flexibility and adaptability”, “entrepreneurship and self-direction” and “leadership and responsibility” skill areas.

**Table 6.** Distribution of studies according to literacy types.

Areas of literacy	Article		Master's		PhD	
	Code	f	Code	f	Code	f
<b>Health Literacy</b>	S151	1				
<b>Program Literacy</b>	S99	1				
<b>Legal Literacy</b>	S154	1	S60, S138	2	S145	1
<b>History Literacy</b>	S161	1				
<b>Assessment and Evaluation Literacy</b>	S101, S102	2				
<b>Digital Literacy</b>	S156	1	S92, S95, S123, S131, S140, S146, S164, S165, S171, S178, S180, S182	12		
<b>Media Literacy</b>	S115	1				
<b>Pedagogical Literacy</b>			S139	1		
<b>Technology Literacy</b>			S111	1		
<b>Geography Literacy</b>			S90	1	S10	1
<b>Ecological Literacy</b>			S147	1	S21, S78, S183	3
<b>Financial Literacy</b>			S87	1		
<b>GeoSpatial Literacy</b>			S134	1		
<b>Political Literacy</b>			S173	1		
<b>Total</b>		<b>8</b>		<b>21</b>		<b>5</b>

The distribution of the analysed scientific studies according to literacy types is given in Table 6. It was determined that 14 different literacy types were examined in a total of 34 studies conducted according to literacy areas. When the distribution of these studies according to the type of publication was examined, it was determined that there were mostly master's theses ( $f=21$ ), followed by articles ( $f=8$ ) and doctoral studies ( $f=5$ ). According to these findings, it was determined that most studies were conducted on the concept of “digital literacy” ( $f=13$ ). There were no articles on pedagogical, technology, geography, ecology, financial, spatial, political literacy; no master's thesis on health, curriculum, history, assessment and evaluation, media literacy; and no doctoral study on health, curriculum, history, assessment and evaluation, digital, media, pedagogical, technology, financial, spatial, political literacy.

#### 4. Discussion and Conclusion

Within the scope of this research, a total of 190 national scientific studies that met the inclusion criteria were analysed based on a search of databases using keywords related to 21<sup>st</sup> century skills/literacy/self-efficacy skills and teacher competencies identified by social studies teachers and candidates. Of these studies, 100 were master's theses, 69 were articles, and 21 were doctoral theses. The analysis revealed that the first study related to teacher competencies was conducted in 1999. The current study was found to be a quantitative study using a descriptive survey method conducted with social studies teachers. It was determined that the year with the most scientific studies was 2019, while the years with the fewest were 1999 and 2003. In particular, it was determined that there was an increase in the number of studies conducted on teacher competencies in 2019 and thereafter. This situation may be related to the publication of the MoNE's “General Competencies of the Teaching Profession” and “Education Vision Document” (MoNE, 2017, 2023). It can be said that the publication of these frameworks has increased the research trend on teacher competencies.

When the studies included in the research on teacher competencies were examined according to the research approach, it was seen that quantitative (144) studies stood out. In addition, mixed (34) and qualitative (12) studies were also found. In quantitative research approaches, survey/descriptive survey and correlational survey studies were encountered as research methods, while scale development, cross-sectional survey, experimental, and causal comparison methods were also preferred. When looking at other systematic review studies on teacher competencies, it is seen that quantitative studies are also predominant. Saykal and Uluçınar Sağır (2021) examined 525 studies published between 2000 and 2020 on teacher competencies and TPACK and found that quantitative methods were predominant, while mixed and qualitative approaches were limited in number. Other studies examining master's and doctoral theses in the field of teacher competencies have also

determined that descriptive and correlational survey methods are predominantly used (Gündoğdu et al., 2015; Kazu & Çam 2019). It can be said that quantitative studies are conducted with larger sample groups and produce generalizable results for the problem situation, which is effective in this preference. However, the availability of quantitative measurement tools for teacher competencies and the ability to complete the data collection and analysis processes of the study in a shorter time are also considered to be effective in determining the research approach. In studies where a mixed research approach was preferred, it was observed that the explanatory sequential design was used most frequently. This design allows for a more in-depth analysis by supporting quantitative findings with qualitative data (Creswell, 2017). In qualitative research methods, it has been determined that case studies are given the most weight. Such studies aim to reach more comprehensive interpretations regarding teachers' competencies (Yıldırım & Şimşek, 2016), but the small number of qualitative studies limits the depth of analysis in the field (Kazu & Çam, 2019). Kaşkaya (2012), on the other hand, emphasizes the need to use both qualitative and quantitative studies together, particularly emphasizing the adoption of qualitative approaches.

When examining the distribution of studies according to sample/study group, it was determined that the largest number of studies were conducted with social studies teacher candidates (84). This situation shows that there is a strong tendency to seek the opinions of teacher candidates, especially in the areas of teacher competencies, self-efficacy, 21<sup>st</sup> century skills, and literacy. The majority of postgraduate theses on teacher competencies have stated that the sample group consists of teacher candidates (Gündoğdu et al., 2015). Focusing on teacher candidates in research is important in terms of providing feedback on the education system and taking preventive measures against possible problems at an early stage (Kaşkaya, 2012). However, it is also thought that the ease of access to teacher candidates as a sample group is a contributing factor. In studies conducted with social studies teacher candidates and social studies teachers, scales and personal information forms/scales were more commonly used as data collection tools. These tools mostly consist of scales adapted to areas such as teacher competence perception, digital literacy, and communication skills (Gündoğdu et al., 2015; Saykal & Uluçınar Sağır, 2021).

When the studies were examined according to the sub-competence areas specified in the general competences of the teaching profession, it was determined that most of the studies were conducted in the competence area of subject knowledge and subject education knowledge. This situation can be attributed to the traditional tendency in Turkey to train subject-specific technical teachers (Tingil et al., 2023). In the studies examined, it was found that there were no articles in the areas of legislation knowledge, educational planning, creating learning environments, and national, spiritual, and universal

values, and no master's theses in the areas of approach to students, communication and cooperation, and creating learning environments. In the areas of managing the teaching and learning process, measurement and evaluation, national, spiritual, and universal values, approach to students, communication and collaboration, personal and professional development, legal knowledge, and educational planning. This result indicates that these competency areas are still open to development in terms of academic research.

When examining the types of studies according to the sub-dimensions of 21<sup>st</sup> century skills, it was determined that master's degree studies (23) were predominant (Ayaz et al., 2015). At the same time, it was found that these studies focused on the competence area of "information and communication technology literacy." Within the scope of digital transformation in education, initiatives such as strengthening the technological infrastructure in schools in line with the requirements of the 21<sup>st</sup> century and the era, preparing digital teaching materials and making them available to teachers, and developing and implementing systems such as e-learning, e-school, EBA, etc. can be said to have been effective in this result (Karoğlu et al., 2020). However, it is noteworthy that no studies have been conducted in the areas of creative thinking and innovation application skills, flexibility and adaptability, entrepreneurship, and self-direction.

When looking at the distribution of studies according to literacy types, it is seen that master's studies (21) are predominant. Most of these master's studies are related to the field of digital literacy. This situation can be explained by the fact that digital transformation is being promoted in all areas in Turkey. No articles were found related to pedagogical literacy, geographical literacy, ecological literacy, financial literacy, spatial literacy, or political literacy, and only one study was found for each of the other literacy areas. It is thought that researchers' tendency to focus on popular and widespread research areas may have contributed to this result.

Considering the results of teacher competency studies conducted with social studies teachers/social studies teacher candidates, the following recommendations can be made:

- It is considered important that future studies on 21<sup>st</sup> century skills focus on sub-skills such as creative thinking and innovation, flexibility and adaptability, entrepreneurship, leadership, and self-direction to reflect a holistic perspective on social studies teacher competencies.

- No studies related to moral literacy, forest literacy, visual literacy, cultural literacy, and sustainability literacy, etc. were found in the literature on social studies teacher competencies. Studies can be conducted to contribute to the literature on these areas of literacy.

- It has been observed that studies related to the sub-competency areas of general teacher competencies, particularly

the subject knowledge and subject education knowledge competency area, have been given more attention. However, all sub-competencies are equally important. Different studies can be conducted on these teacher competency areas.

### Compliance with Ethical Standards

This type of study does not require ethical committee approval.

### Conflict of Interest

The authors have no conflict of interest to declare.

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