The Teacher as an Implementer: A Systematic Review of Curriculum Literacy[1]

Uygulayıcı Olarak Öğretmen: Program Okuryazarlığı Üzerine Bir Sistematik Derleme

Suna COGMEN [iD] , Assist. Prof. Dr., Pamukkale University, sunadem@pau.edu.tr

Serap YILMAZ OZELCI [iD] , Assoc. Prof. Dr., Necmettin Erbakan University, syozelci@erbakan.edu.tr

---

[1] Part of this study was presented as an oral presentation in the 10th International Conference on Curriculum and Instruction held on 26-28 October, 2022 in Gazi University, Turkey.

Abstract. This systematic review aims to understand the concept of "curriculum literacy" in Türkiye. For this purpose, a systematic review was conducted, and the data was analyzed using PRISMA criteria. The national electronic databases (Journal Park - TUBITAK ULAKBIM, Higher Education Council Theses Centre, Scholar Google, ASOS Index, and Turkish Education Index) were selected between the years 2017 and 2022. Of 135 studies reached, a total of 62 studies were examined. The analysis delved into how curriculum literacy is conceptualized, what it is associated with, how it is defined, and how it is measured. The methodological approach, including the method, sampling, and data collection, was examined. Findings were discussed in the light of the theoretical framework. The study argues that curriculum literacy primarily emphasizes the role of teachers as implementers. The results show that in a broad context, curriculum literacy is defined as a professional skill and/or competence. Although researchers have addressed the four core elements of curriculum: objectives, content, learning experiences, and assessment, they have mainly focused on the comprehension and execution of curricula. As a result, the reviewed studies provide a framework for the importance of teachers' role in understanding, comprehending, evaluating, adapting and ultimately implementing the curriculum. Furthermore, the results show that the studies favor quantitative designs to measure levels of curriculum literacy. Future studies can carry out an in-depth examination of curriculum literacy, which is relatively a new concept, through studies with different methodological designs will help in defining, measuring and discussing the concept.
Keywords: Curriculum, Curriculum literacy, Instructional literacy, Systematic review.

Öz. Bu sistematik derleme Türkiye'de "program okuryazarlığı" kavramını anlamayı amaçlamaktadır. Bu amaçla sistematik derleme yapılmış ve veriler PRISMA kriterleri kullanılarak analiz edilmiştir. 2017-2022 yılları arasında ulusal elektronik veri tabanlarında (Dergi Park - TUBITAK ULAKBIM, YÖK Tez Merkezi, Scholar Google, ASOS Index ve Türk Eğitim İndeksi) taramalar yapılmıştır. Ulaşılan 135 çalışmadan 62 tanesi çalışma kapsamında incelenmiştir. Analizler program okuryazarlığının nasıl kavramsallaştırıldığı, ne ile ilişkilendirildiği, nasıl tanımlandığı ve nasıl ölçüldüğüne odaklanmıştır. Ayrıca çalışmalarda tercih edilen yöntem de analiz edilmiştir. Bulgular teorik çerçeve ışığında tartışılmıştır. Çalışma, program okuryazarlığının öncelikle öğretmenlerin uygulayıcı olarak rolünü vurguladığını ileri sürmektedir. Sonuçlar, geniş bir bağlamda program okuryazarlığının mesleki bir beceri ve/veya yeterlilik olarak tanımlandığını göstermektedir. Araştırmacılar eğitim programının dört temel öğesini (hedefler, içerik, öğrenme-öğretme süreçleri ve değerlendirme) ele almış olsalar da, esas olarak eğitim programının anlaşılması ve uygulanmasına odaklanmışlardır. Sonuç olarak, incelenen çalışmalar, öğretmenlerin programı anlama, kavrama, değerlendirme, uyarlama ve sonuçta uygulamadaki rolünün önemine dair bir çerçeve sunmaktadır. Ayrıca sonuçlar, araştırmacıların program okuryazarlığı düzeylerini ölçmek için nicel tasarımları tercih ettiğini göstermektedir. Gelecekte yapılacak araştırmalar, nispeten yeni bir kavram olan program okuryazarlığının farklı metodolojik tasarımlarla derinlemesine incelenmesi, kavramın tanımlanmasına, ölçülmesine ve tartışılmasına yardımcı olacaktır.
Anahtar Kelimeler: Eğitim programı, Öğretim programı okuryazarlığı, Program okuryazarlığı, Sistematik derleme.

Genişletilmiş Özet

Giriş. Program okuryazarlığı, Türkiye'de program çalışmalarında bir kavram olarak ilk kez Akınoğlu ve Doğan (2012) tarafından ortaya atılmıştır. O zamandan bu yana, literatürde bu kavram üzerine, müfredatı anlama, uyarlama, dönüştürme ve bağlamsallaştırma konusunda birincil sorumluluğu öğretmene yükleyecek şekilde çerçeveleyen önemli miktarda araştırma yapılmıştır. Bu, Türkiye'deki program geliştirme ve müfredat anlayışlarıyla da örtüşmektedir. Erdamar ve Akpınar'ın (2020) ifadesi, kavrama ilişkin genel algıyı özlü bir şekilde özetlemektedir: Müfredat okuryazarlığı, öğretmenlerin müfredatı öğrenci, ders içeriği, okul ve toplum bağlamında yorumlamasını içerir. Buna göre öğretmenlerin "uyguladıkları" programları "doğru" anlamaları çalışmaların odağı olmuştur.

Yöntem. Program okuryazarlığı kavramının Türkiye bağlamında daha derinlemesine anlaşılmasını sağlamak amacı ile gerçekleştirilen bu araştırmada yöntem olarak sistematik derleme tercih edilmiştir. Xiao ve Watson'a (2019, s. 102) göre, sistematik derleme, nihayetinde "verileri çıkarmak, analiz etmek ve sentezlemek" için bir inceleme protokolü oluşturmaktadır. Bu sistematik derleme çalışması için Page ve diğerleri (2020) tarafından özetlenen PRISMA 2020 (Sistematik İncelemeler ve Meta-Analizler için Tercih Edilen Raporlama Öğeleri) protokolü takip edilmiştir. Bu derleme araştırması ile Türkiye'de program okuryazarlığını öğretmenlerin, öğretmen adaylarının ya da okul yöneticilerinin katılımıyla ele alan araştırmaların incelenmesi ve kavramı nasıl ele aldıklarının gözlemlenmesi amaçlanmıştır. Bu amaçla 2017-2022 yılları arasında ulusal elektronik veri tabanlarında (Dergi Park - TUBITAK ULAKBIM, YÖK Tez Merkezi, Scholar Google, ASOS Index ve Türk Eğitim İndeksi) Türkçe ve İngilizce dillerinde müfredat okuryazarlığı, program okuryazarlığı ve öğretim programı okuryazarlığı anahtar kelimeleri kullanılarak taramalar yapılmıştır. Literatür taraması Ağustos ve Kasım 2022 tarihleri arasında gerçekleştirilmiştir. Her çalışma Excel'de yayın tarihi, yayın şekli (makale veya tez), problem cümlesi, amaç, yöntem/tasarım, örneklem, veri araçları, veri analizi, sonuçlar ve önerilere göre kodlanmıştır. Bunlar PRISMA kontrol listesinde de yer alan parametrelerdir. Toplam 135 çalışmaya ulaşılmıştır. Çalışmalar için önceden ölçütler belirlenmiştir. Belirlenen bu ölçütlere uymayan 73 çalışma ön inceleme sonrasında çalışma kapsamına alınmamıştır. Toplamda, "program okuryazarlığı" ile ilgili altmış iki çalışma bu çalışmaya dâhil edilmiştir (23 yüksek lisans tezi, 3 doktora tezi, 36 makale).

Bulgular. Araştırma bulguları, program okuryazarlığı kavramının tanımlanması, ilişkili değişkenler, tercih edilen araştırma yöntemleri başlıkları altında incelenmiştir. İncelenen araştırmalar, program okuryazarlığını öğretmenlerin öğretim programını uyarlama ve değerlendirme konusundaki bilgi ve becerileri olarak tanımlamakta, öğretmenin eğitim sürecindeki sorumluluklarına vurgu yapmaktadır. İncelenen çalışmalar, program okuryazarlığının programın amaçlarını anlamayı, içeriği tasarlamayı ve değerlendirme yapmayı içerdiğini işaret etmektedir.
Öğretmen öz yeterlik inançları, sınıf yönetimi becerileri ve öğretim yeterlik düzeyleri, program okuryazarlığı ile en çok ilişkilendirilen ve araştırmalarda ele alınan değişkenlerdir. Program okuryazarlığı kavramının araştırılmasında nicel araştırma yöntemlerine başvurulmakta, daha çok katılımcıların okuryazarlık düzeyleri ölçülmeye çalışılmaktadır. Bu doğrultuda ölçek geliştirme çalışmalarına da başvurulmaktadır. Nitel araştırma sayısı sınırlıdır.

Tartışma ve Sonuç. Program okuryazarlığının Türkiye bağlamında nasıl kavramsallaştırıldığını araştırıldığı bu çalışmada toplam 62 araştırma incelenmiştir. Araştırmalarda yapılan program

okuryazarlığı tanımları, öğretmenlerin program hakkındaki bilgilerini referans almakta ve bu bilgi düzeyinin beceri olarak öğretim rollerine yansıyacağına odaklanmaktadır. Örneğin, alanın öncü çalışmalarından sayılabilecek olan Bolat (2017) çalışmasında program okuryazarlığını, bir çıktıyı amacı açısından tanıma, öğrencilerin seviyelerine uygun bir amaç yazma, içeriği amaçla ilişkilendirme, amaçlarla ilgili içerik oluşturma, öğrenme ve öğretme sürecini tasarlama ve amaçlarla ilgili uygun değerlendirmeler yapma yeteneği olarak tanımlamaktadır. Benzer şekilde Erdem ve Eğmir (2018) de program okuryazarlığını, programı çevresel koşullara uyarlama becerisi olarak görmektedir. Program okuryazarlığı bilgi ve beceri olmak üzere iki boyutta incelenmektedir. İlk boyut, programı anlama, uygulama ve değerlendirme sürecine ilişkin bilgiyi içerir. İkinci boyut ise öğrenme ve öğretme sürecini tasarlama, uygulama ve değerlendirme becerilerini içerir (Akyıldız, 2020). Program okuryazarlığına ilişkin bu algı, öğretmenin müfredat geliştirmedeki rolüyle yakından ilişkilidir. Öte yandan program okuryazarlığı genellikle program yeterliliği ile eşdeğer görülmekte olup, öğretmenlerin programı anlama ve uygulama konusundaki bilgi, beceri ve tutumlarını kapsamaktadır. Bu okuryazarlık, öğretmenlerin programa olan bağlılıkları, farkındalıkları ve anlayışları ile ilişkilidir ve öz yeterlik, mesleki hazırlık ve motivasyon ile bağlantılıdır. Araştırmalar, program okuryazarlığını eleştirel düşünme, yansıtıcı düşünme, epistemolojik inançlar, bireysel yenilikçilik, 21. yüzyıl becerileri ve eğitim inançları ile ilişkilendirmiştir. Örneğin, eleştirel ve yansıtıcı düşünme, öğretmenlerin profesyonel başarısını ve müfredatı güncel ihtiyaçlara uyarlama becerisini artırıcı olarak görülmektedir.

Program okuryazarlığının uygun şekilde kavramsallaştırılması, kapsamlı araştırmaları içeren, kavramın açık ve tutarlı bir şekilde anlaşılmasını sağlamalıdır. Türkiye'deki program okuryazarlığı üzerine yapılan çalışmalar çoğunlukla tanımlayıcı nitelikteki nicel çalışmalardır. Bu durum, program okuryazarlığının Türkiye'de yeni bir kavram olması nedeniyle mevcut durumların genel bir şekilde sunulması gerekliliği ile açıklanabilir. Ancak, nitel çalışmalar durumları daha derinlemesine inceleme, tartışma ve anlama imkanı sağlar ve sosyal bilimlerde teori inşasına katkıda bulunur. Çoğu çalışma, öğretmen, öğretmen adayları, fakülte ve okul üyelerinin perspektiflerinden müfredat okuryazarlığını değerlendirmeye odaklanmaktadır, bu da kavramın genel olarak öğretmenlerin müfredat geliştirme sürecindeki rolünü sınırlı bir şekilde ele almasına neden olur. Daha fazla nitel çalışma, kavramın daha iyi anlaşılmasına ve kavramsallaştırılmasına katkıda bulunabilir.

DOKUZ EYLÜL ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ

Introduction

Curricula have instructional contents that guide educational practices with a philosophical, historical, sociological, psychological, political and economic background. Just because of this diversity of backgrounds, the curriculum has different meanings and contents in different countries. Therefore, it can have different and diverse meanings for teachers. For instance, a report on school reforms in the USA by Educational Policy Center at John Hopkins University (Steiner et al., 2018) starts with the definition of the curriculum:

"When Australians talk about "curriculum", they tend to be referring to the Australian Curriculum or its state derivatives – frameworks of standards, alongside content descriptions, general capabilities, and cross-curriculum priorities. Conversely, Americans tend to mean textbooks or other day-to-day instructional materials" (p.4).

From this perspective, when Turkish teachers discuss curriculum, they likely emphasize achieving the outcomes of the national curriculum through daily classroom practices. In Türkiye, curricula, followed and implemented by teachers, are centrally prepared by the Ministry of National Education for use throughout the country and in schools. In this sense, teachers are obliged to follow the curricula sent to them from the centre within a school year. The importance of the curriculum implementation is clearly stated by the Ministry of National Education (MoNE), in the Explanations for Secondary Education Curriculum (Ministry of National Education [MoNE], 2018): "Teachers are required to make the necessary adaptations in the process of helping learners gain curricula's outcomes" (p. 9).

Returning to the initial point, it is possible to say that the situation regarding the curriculum resembles that in American schools. At this point, it might be useful to examine the definition of the curriculum. In Türkiye, the definition of curriculum has evolved from the traditional literature rooted in the USA to a more general and inclusive one that emphasizes the dynamic circular process. Not only does the curriculum encompass course contents, but it also includes all other factors affecting the educational process, as highlighted by pioneering researchers in the field in Türkiye. For instance, Varış (1996) defines curriculum as all activities provided by an educational institution for children, youth, and adults, aimed at the realization of national education and the objectives of the institution. Similarly, Demirel (2005) offers curriculum as: "a mechanism of learning experiences provided for learners as planned activities either in or out of school" (p. 4). This approach perceives curriculum as a process and intends to develop all stages of the curriculum, including the instructional level, based on a curriculum model. This is also the curriculum development model adopted by The Ministry of National Education (MoNE) in Türkiye. In this manner, the curriculum points to not only a circle as a process but also a guide as a result.

In Türkiye, all activities related to curriculum development, implementation, monitoring and evaluation processes are carried out by Board of Education (BoE) (MoNE Regulations, 2012). Headquarters of Secondary Education, Primary Education, and Vocational and Technical Education which are the units of MoNE, take role in curriculum development process through their monitoring and evaluation departments. Although there are teachers, academics and educational unions that take

place in curriculum development groups, the main responsibility belongs to BoE in all curriculum issues (Tan-Şişman & Karsantık, 2021). Living in one of the highest centralized countries in terms of educational policies among the OECD countries (OECD, 2019), it seems that Turkish teachers are not adequately represented in curriculum development process. Previous studies on teacher autonomy, teacher agency, and roles of teachers in curriculum development reveal that teachers do not feel like a part of the process, and they define themselves solely as curriculum implementers (Tokgöz, 2013; Yurdakul et al., 2016). Likewise, in her study, Bümen (2019) states that teachers do not have the desire to implement or adapt the curricula that are prepared in a centralized manner in Türkiye. Whereas to repeat again, the curriculum serves as a guide and gives necessary flexibility in the classroom practices. Nasırcı (2022) interprets this situation as a natural consequence of the fact that since there is only one curriculum for teachers to consider for their lessons, teachers should adopt these existing curricula. Teachers bear the main responsibility for implementing the curriculum in a way that ensures successful educational outcomes. Thus, teachers are mainly responsible for implementing the curriculum at schools in Türkiye. A considerable body of literature underscores the significant role of the teacher in reaching the intended goals of the curriculum and students' achievement (Jukić Matić, 2019; Tian et al., 2022; Ünver, 2021).

In this regard, Shkedi (2009) asserts that from a teacher's standpoint, there is a three-dimensional structure of a curriculum: the formal curriculum written by the professional curriculum specialist; the perceived curriculum by the teacher, and the curriculum-in-use, which is what happens in the classroom. He adds that research found no congruence between these forms of curricula. Hence, he considers the implementation of a curriculum as the narrative of the teacher. This reminds Marsh and Willis (2007) who exemplify a Shakespeare play with the curriculum. They claim that even though the play doesn't change, each director films it from different perspectives. In this manner, teachers implement the curriculum with all their knowledge, skills, attitudes, values, and experiences. A curriculum literate teacher is able to interpret current conditions and plan in an up-to-date and flexible way instead of following a standard curriculum (Nsibande & Modiba, 2012). According to Gürbüz and Şen (2023), curriculum literacy creates a framework for teachers' perceptions, attitudes, and implementation skills and competencies. It is a measurable concept that examines the relationship between the teacher and the curriculum. Here, the term "curriculum literacy" in Turkish literature is built on this role of the teachers.

Curriculum literacy is defined as the ability to recognize, select, review and facilitate the use of quality curriculum in the "Curriculum Literacy Guide" prepared by Educationfisrt (2022). It requires teachers and teacher education programs to be intelligent users of curricula, able to both evaluate and implement curricula effectively. Curriculum literacy was first introduced by Akınoğlu and Doğan (2012) as a concept in curriculum studies in Türkiye. They listed the problems faced by teachers while implementing the curriculum as understanding the curriculum, attitude towards the curriculum and the ability to transform the curriculum into practice and proposed to name these qualities as the concept of "curriculum literacy". Since then, there has been a significant amount of research on the concept in the literature, framing it in a way that places the primary responsibility for understanding, adapting, transforming, and contextualizing the curriculum on the teacher. This aligns with understandings of curriculum development and curricula in Türkiye. Erdamar and Akpınar's (2020) statement succinctly summarizes the general perception of the concept: Curriculum literacy involves

teachers' interpretation of the curriculum within the contexts of students, course content, school, and society. Aslan (2019) stated that the concept of curriculum literacy also includes information about the process of curriculum development. Accordingly, Çetinkaya and Tabak (2019) underlines the importance of analyzing interrelations of curriculum components in curriculum literacy. On that account, teachers' "correct" understanding of the programs that they "implement", has been the focus of the studies. With the changes made by the Council of Higher Education in the programs of Faculties of Education in 2018, the inclusion of the concept in curriculum development courses has also made it valuable to be investigated within the framework of pre-service teachers. In fact, the importance of this course, which was elective at the time, was further understood and in 2020 it was started to be taught as a compulsory course in the faculties of education of some universities. However, such approaches have failed to address the ongoing circular nature of the curriculum due to the limited understanding of teachers' role as the correct and effective implementers of the curriculum in classes. While teachers have the initiative to adapt the curriculum based on varying conditions in their classes and schools, the high expectation for academic achievement and the national standardized assessment process lead teachers to adhere to the curriculum outcomes. This understanding limits the perception of curriculum as a guide on what and how to implement in classes rather than as a circular process that is open to change and transformation. Consequently, the conceptualization of curriculum literacy remains unclear in the related literature despite a considerable amount of research, especially after 2018 the year that curriculum literacy was included in teacher preparation programs. Research on the term has mostly been restricted to attempts to develop a reliable and valid instrument to assess curriculum literacy. The main participants in previous research have been primary school teachers and English Language Teaching (ELT) teachers. Researchers have used various variables and dimensions to assess the term, and there seems to be confusion regarding the term's nomenclature – sometimes it is outlined as instructional literacy. This review study aims to examine this relatively new term and to create a systematic map of the evaluation and conceptualization of curriculum literacy in Türkiye.

In this manner, a systematic investigation of curriculum literacy seems to be significant in providing a holistic and comprehensive look. The main purpose of the present study is to examine the definition and context of curriculum literacy in the Turkish literature. The research questions addressed in this review study are as follows:
1. How is the curriculum literacy defined?
2. Which variables related to curriculum literacy were focused on?
3. What methodological approaches are undertaken to examine curriculum literacy?

Methodology

A systematic review was chosen to allow a deeper insight into the term of "curriculum literacy" in Turkish context. According to Xiao and Watson (2019), a systematic review establishes a review protocol to ultimately "extract, analyze, and synthesize data" (p. 102). We followed The PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol outlined by Page et al. (2020) for the work of this systematic review. Specifically, with this review, we aimed to include a body of research that handled curriculum literacy in Türkiye with the participation of teachers, pre-service teachers, or school administrators.

Procedures of review

This review study aims to examine curriculum literacy in literature addressing Turkish context. To begin this process, the National electronic databases (Journal Park - TUBITAK ULAKBIM, Higher Education Council Theses Centre, Scholar Google, ASOS Index, and Turkish Education Index) were selected between the years 2017 and 2022. The studies with the keyword "curriculum literacy" revealed that the first study in the Turkish sample was conducted in 2010. However, since the main subject of this study is "the professional needs analysis of teachers working in unified classrooms", it is outside the scope of the current study. Since the first subsequent study was conducted in 2017, the studies between 2017 and 2022 constituted the sample of the current study. Curriculum literacy, program literacy, and instructional program literacy in both Turkish and English languages were searched as keywords. The literature review was conducted between August and November 2022.

Each study was coded in Excel according to its publication date, publication style (article or dissertation), problem statement, purpose, methodology/design, sample, data instruments, data analysis, results, and suggestions. These are the parameters also included in the PRISMA checklist. In fact, the current study was designed based on PRISMA 2020. A total of 135 studies were reached. Criteria were used to select the studies. 73 studies were not included in the scope of the study after the pre-review (see Figure 1).

Criteria for selecting the research were as follows:
(1) Research addressing the term "curriculum literacy" in educational settings.
(2) Research including the terms "program literacy," "curriculum implementation skills," "program awareness," and "program knowledge.
(3) Research analyzing the term conceptually and practically either in qualitative or quantitative ways.
(4) Research published in a peer-reviewed academic journal or research completed as a master or PhD thesis.
(5) Research conducted between January 1, 2017, and December 31, 2022.

Studies that assess the knowledge of teachers or pre-service teachers on curriculum development course content or curriculum itself either by a questionnaire or an achievement test tool were excluded. Some journal papers were published as a part of thesis or dissertation. In those cases, only theses or dissertations were included in the review.

Using the Boolean indicator "or," we searched all combinations of the following:
(a) terms describing curriculum literacy (i.e., program literacy, curriculum literacy, instructional program literacy),
(b) terms describing educators (i.e., preservice teacher, teacher candidate, teacher, education administrators),
(c) terms addressing curriculum literacy (i.e., program literacy, curriculum literacy, curriculum implementation skills, program awareness, program knowledge)

Figure 1 presents the elimination process of studies. We identified a total of 71 studies based on predefined criteria. Of these, 26 are dissertations (23 master theses and 3 Ph.D. dissertations), and 45 are full-text research studies. Nine articles are excluded due to improper criteria, leaving 36 articles included in the research. In total, sixty-two studies on "curriculum literacy" were recruited for this study (Studies used as data are shown with an asterisk (*) in the reference part; not all the studies were cited in the text). The analysis delved into how curriculum literacy is conceptualized, what it is associated with, how it is defined, and how it is measured. The methodological approach, including the method, sampling, and data collection, was examined. The findings were reported with the related literature and references. Table 1 presents information about the examined studies.

Table 1.
Information about the studies on curriculum literacy

Thesis														
Publication date	2022		2021		2020		2019		2018		2017		Total	
Publication style	MA	PhD	MA	PhD	MA	PhD	MA	PhD	MA	PhD	MA	PhD	MA	PhD
F	6	0	4	0	5	1	6	1	1	1	1	0	23	3
Total (Thesis)													26	
Articles														
Publication dates	2022		2021		2020		2019		2018		2017		Total	
F	4		15		3		9		4		1			
Total (Articles)													36	
Total	*10*		*19*		*9*		*16*		*6*		*2*		*62*	

Although there is no consistent increase in studies, from 2017 to 2022, more research has been conducted on curriculum literacy. Table 1 shows that while there were 2 studies in 2017, this number increased to 10 in 2022.

Findings

Definition of curriculum literacy

The review of 62 studies revealed that the concept of curriculum literacy is addressed as either a skill or a competency area. This skill/competency area is grounded in the four basic components of the curriculum (objectives, content, learning experiences, and evaluation) and is acknowledged as a professional skill/competence area. Table 2 shows the distribution of the studies according to the way they address the concept of curriculum literacy. What is emphasized in the studies that knowing the curriculum, understanding/interpreting the curriculum, evaluating the curriculum, and implementing the curriculum effectively are the fundamental skills and competencies of curriculum literacy (Altuncu, 2021; Dilek, 2020; Gündoğan, 2019; Güleş, 2022; Mansuroğu, 2019; Nasırcı, 2022; Yılmaz, 2021; Yüksel Güler, 2022).

Table 2.
Distribution of the studies according to the way they address the concept of curriculum literacy

Curriculum literacy as a skill	Erdem &Eğmir, 2018
Curriculum literacy as a competency area	Bolat, 2017; Keskin, 2019; Yar Yıldırım, 2018.
Curriculum literacy as both skill and competency area	Altuncu, 2021; Dilek, 2020; Gündoğan, 2019; Güleş, 2022; Mansuroğu, 2019; Nasırcı, 2022; Yılmaz, 2021; Yüksel Güler, 2022.

Sayfa | 1547

The most common definitions in the studies come from Bolat (2017), Keskin (2019) and Yar Yıldırım (2018). Interestingly, these researchers also developed the most common measurement tool used to assess the curriculum literacy levels. The definitions by these researchers are as follows:
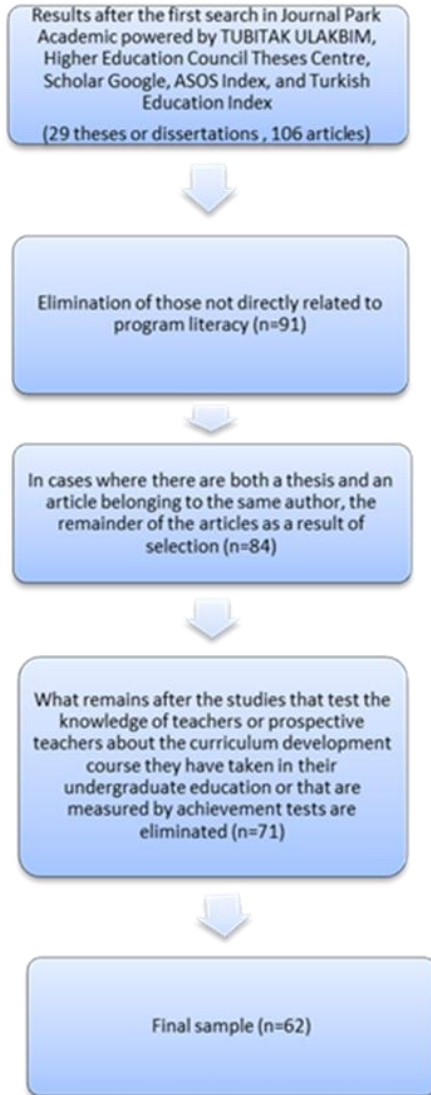

Figure 1: Process of eliminating reviewed studies

Curriculum literacy is the literacy competencies related to the objectives, content, learning-teaching processes, measurement, and evaluation elements of the curriculum that a teacher or prospective teacher should have. In other words, it is the ability to examine, correctly understand, associate, and successfully implement the basic elements of the official curriculum such as learning outcomes, learning areas and themes, activities and testing situations within the framework of the characteristics they should carry (Bolat, 2017).

Curriculum literacy can be defined as knowing curricula, developing a critical perspective towards curricula, and commenting on the implementation process (Keskin, 2019).

It means conceptual knowledge about the curriculum, understanding the relationships between concepts, management of the curriculum, making decisions and plans about the curriculum (time, method, choosing the appropriate teacher for the class, material, learning environment, etc.), talking about the curriculum (philosophy, purpose, elements, suitability for development, preparation and implementation, evaluation) (Yar Yıldırım, 2018).

Researchers interconnect curriculum literacy with curriculum development literature. Considering that teachers are primarily responsible for effective curriculum implementation, almost all studies underline the link between instructional efficiency and the teacher's curriculum literacy level. Therefore, the literature is constructed around the central role of the teacher in curriculum implementation in classrooms. In parallel with this perception, teachers' views, attitudes, and perceptions are also considered in the related literature. To conduct successful instruction, a teacher should know, understand, interpret, adapt, and evaluate the curriculum. Moreover, having a critical view and a positive attitude towards the curriculum are also underlined factors in definitions. Although some studies (Keskin, 2019) included critical literacy in the definition of curriculum literacy, many studies examined the association between a teacher's curriculum literacy and the effectiveness of the programs. In this manner, results showed that the literature on the concept focuses on the effective and correct use of the curriculum and the teacher's role in this process.

Concepts / variables associated with curriculum literacy

This review study outlined some concepts and variables associated with curriculum literacy in the studies. In Table 3, the concepts that the studies addressed together with curriculum literacy are given.

Table 3.
Concepts / Variables Associated with Curriculum Literacy

Categories	Codes	
Concepts related to teaching processes	Teaching skills	Kahramanoğlu, 2019; Çetinkaya & Tabak, 2019
	Classroom management skills	Gülpek, 2020; Tutuş, 2020; Ünal, 2022, Yüksel Güler, 2021
	Teaching competency level	Aydın & Kurt, 2022

	Level of readiness for teaching profession	Aygün, 2019
	Teaching motivation	Dağ, 2021
	Teachers' pedagogical Knowledge skills	Dilek, 2020
	Educational beliefs	Yar Yıldırım, 2021
Concepts regarding stakeholders of education	Views of school administrators	Erdamar, Akpınar, 2021
	Views of academics working in the department of C&I	Erdem Toy, 2021
Conceptions about the way program literacy is perceived	Perceptions of curriculum literacy	Altuncu, 2021; Arslan, 2019; Keskin, 2019
	Level of commitment to the curriculum	
	Applicability and functionality of curriculum literacy	Aslan, 2018; Boncuk, 2021; Güleş, 2022
	Assumption, awareness/cognitive awareness of the curriculum	Karagülle et al., 2019 Boyraz, 2021; Yıldız, 2019
Concepts related to thinking skills	Critical and creative thinking	Mansuroğlu, 2019; Özüdoğru, 2022
	Epistemological beliefs	Kahraman, 2020
Other concepts	Individual innovativeness levels	Kahraman, 2020
	21st-century skills	Kuloğlu, 2022

According to table 3, self-efficacy beliefs towards teaching, classroom management skills, and teaching competency levels were among the top-investigated variables with curriculum literacy in the studies (Aydın & Kurt, 2022; Çetinkaya & Tabak, 2019; Gülpek, 2020; Kahramanoğlu, 2019; Tutuş, 2020; Ünal, 2022, Yüksel Güler, 2021). These competencies or skills about teaching were also examined under various names. For instance, Aygün (2019) examined the relationship between curriculum literacy and the level of readiness for teaching profession. Similarly, in one study, the relationship between curriculum literacy and teaching motivation (Dağ, 2021), and in another study, the relationship between curriculum literacy and teachers' pedagogical knowledge skills (Dilek, 2020) were examined. All these results are a continuation of the emphasis on the teacher's role in implementing the curriculum. Among the 62 studies examined, in addition to teachers or pre-service teachers, there were also studies addressing the views of school administrators (Erdamar, Akpınar, 2021) and academics working in the department of curriculum and instruction (Erdem Toy, 2021) on curriculum literacy.

Studies also discussed the teachers' or pre-service teachers' perceptions of curriculum literacy (Altuncu, 2021; Arslan, 2019; Keskin, 2019) and their level of commitment to the curriculum (Aslan, 2018; Boncuk, 2021; Güleş, 2022). Among all the variables discussed, the applicability and functionality of curriculum literacy (Karagülle et al., 2019) were frequently assessed in both qualitative and quantitative ways. It is assumed that a high level of knowledge about curriculum literacy will positively affect curriculum literacy level (Şahin, 2020). In addition to this assumption, awareness/cognitive awareness of the curriculum is an important predictor of curriculum literacy level (Boyraz, 2021; Yıldız, 2019). All these results emphasize the importance of cognitive skills related to the curriculum that the teachers should follow in classrooms. In other words, studies suggest that it is important and necessary for teachers to know and understand the curriculum to implement it effectively. This suggestion also constitutes the basic understanding of curriculum literacy in studies.

In addition to variables, some studies have also associated curriculum literacy with come concepts such as critical and creative thinking (Mansuroğlu, 2019; Özüdoğru, 2022). In one study, teachers' epistemological beliefs and curriculum literacy levels were compared (Kahraman, 2020). In another study, the relationship with teachers' educational beliefs was examined (Yar Yıldırım, 2021). It is noteworthy that teachers' 21st-century skills (Kuloğlu, 2022) and individual innovativeness levels (Kahraman, 2020) were examined in relation to curriculum literacy. The ability to revise the curriculum in line with the needs of the day and to produce alternatives is considered important for curriculum literacy.

Preferred research methods examining curriculum literacy

Results showed that researchers mostly preferred quantitative methodology to examine the curriculum literacy. There seems to be a strong connection between the articulation of the purpose and preferred method. While some quantitative studies assessed the relationship between curriculum literacy and some variables, others calculated the predictive coefficients. Most quantitative studies aimed to measure the curriculum literacy levels of the participants. In qualitative studies on curriculum literacy, researchers addressed curriculum literacy as a concept and asked for the views of participants through interviews or open-ended questions. Table 4 provides an overview of preferred methodology in examined studies.

Table 4.
Methodology Preferred in the Studies

Themes	Categories	Codes	ƒ *
Method	Qualitative	Phenomenology	4 (Boyraz, 2021; Erdem & Yücel Toy, 202; Gündoğan, 2019; Sarıgöz 2021)
	Quantitative	Descriptive models, scale development (n=6)	53 (Akyıldız, 2020; Bolat, 2017; Kasapoglu 2020, Yıldırım, 2019, ets.)
	Mixed	Convergent parallel pattern	1 (Nasırcı, 2002)
		Explanatory sequential design	2 (Keskin, 2019; Yurtseven et. all, 2021)
		Quantitative (descriptive) + Qualitative (case study)	1 (Tutuş, 2021)
	Literature Review	Literature review	3 (Gündoğan, 2019; Karagülle, Varkı, Hekimoğlu, 2019, Yar Yıldırım, 2018)
	Total		64

* Frequency values are numerically more than the examined studies because in some studies there are more than one research methods in terms of research questions (etc. Gündoğan, 2019).

It is apparent from Table 4 that many studies preferred quantitative designs. The majority of dissertation studies (f=22) and articles (f=31) examined the perception, skills, or ability of curriculum literacy. Six of these studies were designed to develop a scale. Mixed-method studies (f=3) and qualitative studies (f=4) are less frequently preferred, and there were three review studies. The most commonly studied participants in curriculum literacy research are teachers and pre-service teachers. Frequency distributions for the samples are given in table 5. Teachers work in many branches, but

some studies specifically focused on physical teachers (f=1); multi-grade class teachers (f=2), Turkish Language teachers (f=3), and English Language teachers (f=1). Three studies were conducted with school administrators, one of them which examined the curriculum literacy levels of primary school teachers based on the views of school administrators.

Table 5.
Sample Preferred in the Studies

Themes	Categories	ƒ *
	Teacher Candidate	19
Sample	Teacher (Classroom, English, Preschool, Turkish, Physical Education, Special education)	39
	School Administrator (School Principal and Deputy Principal)	6
	Academics	1
Total		65

*The fact that the frequency values are higher than the sample is due to the use of more than one method   and sample level in line with the sub-objectives in the same study.

The methods preferred in the studies also determine the data collection tools. Quantitatively designed studies mostly employed scales to measure perception, competency, and skills. The "Curriculum Literacy Scale" (n=18), developed by Bolat (2017) was the most frequently used measurement tool for assessing curriculum literacy. The scale comprises 29 items and 2 sub-dimensions. In the curriculum reading sub-dimension of the scale, there are items that emphasize the correct understanding of the presented curriculum. In the writing sub-dimension, the ability to make applications in line with the objectives of the program, create new outcome statements, or design new activities is emphasized. This tool is closely connected to the four basic components of the curriculum. Its popularity among studies may be attributed to being one of the first measurement tool developed and its relative brevity compared to other tools assessing curriculum literacy. The "Curriculum Literacy Scale" developed by Arslan (2018) ranks second in terms of usage. The scale comprises 18 items and 3 sub-dimensions (curriculum knowledge, planning and implementation). This scale also includes items that test the skills of having cognitive knowledge about the curriculum, designing changes in the curriculum when needed, and effectively implementing the curriculum.

Table 6.
The data instrument tools used in the studies.

Themes	Categories	ƒ*
Quantitative Data Collection Tool	Tools grounded in basic elements of the curriculum (aims, content, learning & teaching, evaluation)	Bolat (2017) Akyıldız (2020) Kahramanoğlu (2019) Yıldırım (2019)
	Tools grounded in basic elements of the curriculum and affective dimensions of the curriculum	Yar Yıldırım (2020) Keskin (2019)
	Tools for the skills and abilities for implementing/leading/developing the curriculum	Arslan (2018) Yar Yıldırım (2018) Tan-Şişman (2021)
	Tools assessing to be a curriculum literate	Kasapoğlu (2020)

Cogmen, S. & Yilmaz Ozelci, S. (2024). The teacher as an implementer: A systematic review of curriculum literacy. *Batı Anadolu Eğitim Bilimleri Dergisi, 15*(2)*, 1538-1569.*
DOI. 10.51460/baebd.1508308

	Tools assessing the views/perceptions of the school administrators	Erdamar (2020)
Qualitative Data Collection Tool	Document analysis	Boyraz (2021)
	Semi-structured interview form	Erdem & Yücel Toy (2021)
	Classroom observation form	Sarıgöz (2021)
	Open-ended questionnaire	Yurtseven et al (2021)

* The most frequently preferred measurement tool from each type of measurement tool is included.

Table 6 indicates that quantitative data collection tools were frequently preferred (f=56). Among the qualitative data collection tools, semi-structured interview forms (n=3), observation form (n=1) and open-ended questionnaire (n=1) developed by the researcher were used. In his research Sarıgöz (2021) asked 4 open-ended questions about the meaning of curriculum, the meaning of being a curriculum literate, the importance of curriculum for learning and teaching process, and the importance of implementing the curriculum for students. In the methodology section of the study, more than one data collection tool was occasionally used from in studies defined by the researcher as qualitative phenomenology (e.g., Gündoğan, 2019; Tutuş, 2020) or phenomenological research (e.g. Boyraz, 2021; Erdamar, Akpınar, 2021). Through document analysis, observation, interviews and short-answer questionnaires, data on conceptual knowledge, perception of competence, skills and awareness of curriculum literacy were collected. Of all the qualitative data collection tools, the themes can be listed as follows: knowing, understanding, implementing, and analyzing the curriculum, awareness of the concepts of curriculum, awareness of the elements affecting the curriculum, and beliefs of teachers about curriculum. Data analysis methods also vary depending on the method preferred and the measurement tool used in research. Preferred data analysis methods are given in Table 7.

Tablo 7.
Preferred data analysis methods in the studies

Themes	Categories	Codes	*f**
Data analysis methods	Quantitative Data analysis methods	Descriptive statistics and Parametric tests (independent samples t-test, one-way analysis of variance (ANOVA) and Bonferroni tests, Pearson Correlation analysis, Multiple Linear Regression Analysis	55
		Descriptive statistics and Nan-parametric tests (Mann Whitney U test - Kruskal Wallis H test)	11
	Qualitative Data analysis methods	Descriptive analysis, Content analysis	8

*The fact that the frequency values are higher than the sample is due to the use of more than one data analysis method in line with sub-objectives in the same study.

Table 7 shows that parametric or non-parametric analysis were used in quantitative research depending on whether the data is normally distributed or not. The most complex quantitative analysis technique preferred is multiple regression analysis. Content analysis is the qualitative data analysis method used to analyze the qualitative data.

The findings regarding the results obtained in the study are given in Table 8. The results vary depending on the theoretical framework of the study, the measurement tool used, and the sample group. For example, it is not possible to reach a general judgment based on the results of studies examining gender and curriculum literacy levels. While the level of curriculum literacy increases in favour of female participants in some studies (Kahramanoğlu, 2019; Oruç, 2022; Saral, 2019), it increases in favour of male participants in some studies (Çınar, 2022; Zelyurt, 2021). Examining the seniority and the type of faculty graduated from, the results are striking at some points. For example, in some studies, curriculum literacy decreases as seniority increases (Mansuroğlu, 2019). There are also study findings that claim the opposite (Dağ, 2021; Güler, 2021, etc.). Similarly, the curriculum literacy levels of participants who graduated from the faculty of education are lower than those who graduated from other faculties (Aslan, 2018). There are also study findings that claim the opposite (Gürbüz, 2021).

Table 8.
Codes and frequencies related to the results obtained in the studies

Themes	Categories	Codes		f*
Results	Results on the relationship between curriculum literacy and some variables	Personal variables	Seniority Teaching subject School type	4(-), 2(+) 3(-), 1(+) 3(-)
		Educational variables	Class level Academic GPA Bachelor's degree Master's degree In-service education Taking curriculum development class	31 (+) 32 (+), 17 (-) 12 (+), 3 (-) 12 (+), 4 (-) 42 (+) 16(+), 3(-)
		Variables about curriculum development	Participating in curriculum development Considering the curriculum as important Benefitting from the curriculum Frequency of examining the curriculum	11(+) 17(+) 6(+) 4(+)
	Results on the levels of curriculum literacy	High (19), medium / medium and above (27), low (4)		7
	Results on other variables	Teacher's motivation	Positively low level	1
		Pedagogical knowledge and skill	Positively low level	1
		Level of individual innovation	Positively medium level	1
		Epistemological belief	Positively low level	1
		Reflective thinking	Positively low level	1

(-) negative relation, (+) positive relation

Sayfa | 1554

Results show that many of the participants see their curriculum literacy levels as medium, medium and above and sufficient (Kuyubaşıoğlu, 2019; Şahin, 2020). Another important result is the relationship between receiving in-service training and the curriculum literacy level. In many studies, participants (teachers, school administrators) who received in-service training have higher curriculum literacy level (Aslan, 2018; Aslan, 2019; Atlı et al., 2021; Aygün, 2022; Erdamar, 2020; Güleş, 2022; Keskin, 2019). Aygün (2019) found a significant relationship between curriculum literacy and the level of readiness for teaching profession. Similarly, Süğümlü (2022) stated that there is a strong positive relationship between teachers' instructional performance and curriculum literacy. Results also revealed that participating in curriculum development processes, considering the curriculum as important, and benefitting from the curriculum increase the curriculum literacy level. This highlights the significance of organizing the content of in-service and pre-service trainings.

Discussion

The current study, aimed at conducting a systematic review of research on curriculum literacy in the context of Türkiye, scrutinized a total of 62 studies (theses and articles) spanning the years 2017 to 2022. Three main research questions guided the examination of the research, and the results are discussed and presented under these research questions.

The definition of curriculum literacy

The term "curriculum literacy" was introduced by Akınoğlu and Doğan (2012), who defined it as the skills and the abilities of teachers regarding their understanding, perception, attitudes, and implementation of the curriculum. Although the ability of teachers to adapt and implement the curriculum has been discussed in the literature for a long time, research on the term has noticeably increased after 2018. This coincides with The Council of Higher Education revising teacher training curricula in the same year, with curriculum literacy being mentioned in course contents such as Curriculum Development.

In the context of the current research, the term curriculum literacy aligns with the definition by Akınoğlu and Doğan (2012) with slight differences. Almost all studies underline the primary responsibility of teachers in achieving the aims of the intended curriculum and implementing successful instruction. For example, one study defines the teacher as someone who "provides learning, transfers necessary information, organizes learning activities and guides students" (Tutuş, 2021, p.27). Many other examined studies also emphasise the implementer role of the teacher in terms of curriculum literacy (Akyıldız, 2020; Erdem & Eğmir, 2018; Esen Aygün, 2019; Gömleksiz & Erdem, 2018).

The definitions of curriculum literacy focus on the main instructional roles of the teachers regarding curriculum knowledge. For instance, Bolat (2017) defines curriculum literacy as the ability to recognize the outcome in terms of its aim, write a suitable aim for students' levels, relate the content with the aim, construct content related to aims, design the learning and teaching process, and make proper assessments and evaluations related to aims. Similarly, Erdem and Eğmir (2018) view

curriculum literacy as the skill of adapting the curriculum to environmental conditions. Curriculum literacy is examined in two dimensions: knowledge and skill. The first dimension includes knowledge about the process of understanding, implementing, and evaluating the curriculum. The second dimension includes skills in designing, implementing, and assessing the learning and teaching process (Akyıldız, 2020). This perception of curriculum literacy is closely related to the role of the teacher in curriculum development. Ornstein and Hunkins (2016) consider teachers as service representatives who support the curriculum development team in development, implementation, and evaluation. Posner (1995) suggests that curricula are the main guides for teachers who are responsible for instructional activities. On that account, teachers should lead all the elements that constitute the curriculum. Furthermore, MoNE (2017) refers to curriculum literacy among specific field instruction efficiencies: explaining the instructional program in terms of curriculum elements, relating the instructional program to other fields' instructional programs, associating the instructional process with students' characteristics, comparing various strategies, methods, and techniques in the field, and comparing the assessment and evaluation process in the field.

It is accepted that teachers have a significant role and responsibility in implementing the curriculum in the field of education. As the examined studies support, it is crucial for a teacher to know, understand, comprehend, adapt, and evaluate the curriculum to maintain successful instruction. Fullan and Pomfret (1977, as cited in Bümen et al., 2014) state that knowledge and experiences about the elements of the curriculum affect the implementation of the intended curriculum. Teachers who are aware of the curricula are more sensitive while performing them (Bay et al., 2017). However, many of the studies reveal that teachers do not have the willingness to implement the official curriculum because they lack sufficient information (Demeuse & Christine, 2016; Doğan & Semerci, 2016; Güneş & Baki, 2012; Kahraman, 2020). Consequently, knowledge about the curriculum seems vital for effective instruction. The studies reviewed treat this level of knowledge and awareness of the curriculum as a sign of curriculum literacy. However, curriculum literacy is also viewed as necessary for freeing teachers from the boundaries of guidebooks (Ben-Peretz, 1990). Ariav (1991) argues the entry level of curriculum literacy involves the selection of curriculum materials and their adaptation according to the specific needs of the learning and teaching process. Nevertheless, the higher level of curriculum literacy includes an awareness of the approaches to curriculum development.

Both the views on curriculum literacy and the studies examining the levels seem to point more to the entry level of curriculum literacy. Moreover, the definitions of curriculum literacy are based on the role of teachers as curriculum implementers. This perspective might be due to an approach that does not include the teachers in the curriculum development process and only accepts them as technicians. A study conducted by Şahin and Kumral (2013), which examines the perceptions of pre-service teachers on curriculum and their roles, finds that most participants refer to the curriculum as a mold and their roles as technicians. This ignoring approach underestimates other factors affecting education, such as economic, political, sociological, and cultural situations. The only and greatest responsibility for unsuccessful instruction might be seen as curriculum illiterate teachers. At this point, Öztürk (2012) suggests the teacher's role not only as an implementer but also as a developer of the curriculum. The difference and relationship between curriculum and instructional programs provide a complex and interrelated role for the teacher. Teachers build upon the guiding curriculum in the classrooms and use their professional skills to adapt the curriculum. This is not just the role of an

implementer but a more intense role of implementer and developer. The feedback of teachers at schools is precious for the curriculum development process. So maybe the first prerequisite competency of a teacher is to be curriculum literate not only in the way of implementing the curriculum but participating in developing the curriculum.

In summary, the studies consider curriculum literacy as a professional skill and competency, relating literacy skills to the knowledge, awareness, adaptation, and evaluation levels of the teacher, which directly links to curriculum implementation. Curriculum literacy and instructional program literacy seem to be intertwined concepts in most studies. Literacy is assessed in terms of four basic elements of the curriculum (objectives, content, learning experiences, and evaluation) and focuses on the instructional skills of the teacher. Studies examining the curriculum literacy levels of teachers or pre-service teachers in Türkiye tend to perceive curriculum literacy as the understanding and correct implementation of the existing curriculum. In other words, the term is associated with how teachers comprehend the designed curriculum and how well they reflect this comprehension in the classrooms. This reminds another concept which is curriculum fidelity defined as the closeness between design and implementation (Lee & Chue, 2013). Bümen et al. (2014) emphasize that curriculum fidelity is an indication of the faithful implementation of the curriculum in its original form. Although the effectiveness of curricula is associated with curriculum fidelity (Boncuk, 2021; Dikbayır & Bümen, 2016; Polikoff & Porter, 2014; Weare & Nind, 2011), a strict level of curriculum fidelity is criticized for limiting professional autonomy and decision-making that require higher-order thinking (Achinstein & Ogawa, 2006). Boncuk (2021) assumes that the curriculum literacy levels of teachers are an important indicator of their curriculum fidelity. In the same vein, Kahraman (2020) indicates that the main responsibility and task of teachers are to implement the curricula developed by the ministry. This approach is quite different from the perspective that Ornstein and Hunkins (2016) underline: Teachers' role is to develop, implement and evaluate the curricula" (p. 38). Remillard (2005) claims that it is impossible to address all the needs of schools and classes while developing the curricula. Correspondingly, Hewitt (2006) states that there are two indicators for the reached goals of curricula: the structural quality of the curriculum and the contextual environment where the curriculum is implemented. Again, the curriculum literacy of the teacher has come to the stage with the significance that a teacher is not merely a technician who faithfully follows the curricula prepared for schools. In this manner, many of the examined studies might have some limitations in conceptualizing curriculum literacy in a broader context of teachers' role in curriculum development. The probable explanation for this is the assertation that successfully literate teachers are grounded on a successfully implemented curriculum in the examined studies, although they accept the curriculum adaptation skills of the teachers. This manner might create a conflict in terms of teacher autonomy while comprehending and evaluating the curricula. The teacher-proof curriculum approach focuses on the successful outcomes of education (Westwood Taylor, 2013) so it underlines the greatest responsibility of teachers to implement the curriculum in the right way. Thus, it might be claimed that curriculum literacy is not merely a level to be assessed but a dynamic and interactive process to be observed. On one side, the general perspective of the examined studies on curriculum literacy might embrace the significant role of teachers who know and experience the instructional environments best with their all dimensions. On the other side, this perspective still ignores the significance of teachers' experiences in developing the curricula. In this manner, the competencies and skills referred to the curriculum literacy in related studies might be considered as the skills for the instructional program.

Focused concepts / variables associated with curriculum literacy

As mentioned earlier, curriculum literacy is often used in the sense of curriculum competence in studies, and an attempt has been made to explain it in this way. From this perspective, variables associated with curriculum literacy can be broadly grouped under two categories. The first category includes variables such as commitment to the curriculum, awareness of the curriculum, and understanding the curriculum correctly, addressing teachers' knowledge, skills and attitudes towards curriculum literacy in the theoretical dimension. The second category emphasize the role of the teacher in defining curriculum literacy, discussing teachers' cognitive skills and classroom practices related to the curriculum. In more general terms, curriculum literacy is associated with teachers' perception of self-efficacy for the teaching profession, professional readiness or professional motivation. In a limited number of studies (n=5, see results for details), curriculum literacy was associated with different variables such as critical thinking (Özüdoğru, 2022), reflective thinking (Mansuroğlu, 2019), epistemological beliefs and individual innovativeness (Kahraman, 2020), 21st-century skills (Kuloğlu, 2022) and educational beliefs (Yar Yıldırım, 2021). Although this number is quite limited, it should not be forgotten that there are studies testing the relationship between curriculum literacy and the mentioned variables after the completion of the data collection process of the current study.

The relationship between curriculum literacy and critical thinking is frequently discussed. It can be said that the basic perspective here is that the ability to revise the curriculum in line with the needs of the day and to produce alternatives is considered important for curriculum literacy. In a study conducted with teachers, Karaağaç (2023) found a positive and moderate relationship between critical thinking, problem-solving skills, and curriculum literacy. Similarly, Barut and Gündoğdu (2022) revealed that there is a moderate, positive relationship between teachers' curriculum literacy and critical thinking tendency. Mansuroğlu (2019) believes that the professional success of teachers with developed reflective thinking skills may also be improved. This result may be explained by the fact that reflective thinking skills will support teachers' professional development and help them act as a bridge between theory and practice. In his study examining the relationship between curriculum literacy and reflective thinking, he found a significant but low-level relationship between teachers' curriculum literacy and reflective thinking tendencies.

Another variable whose relationship with curriculum literacy was tested was epistemological belief. Schommer (1990) defines epistemological belief as an individual's subjective beliefs about knowledge, its source, reliability, and nature. Teachers' epistemological beliefs manifest themselves in classroom teaching practices (Koç & Memduhoğlu, 2017) or in the organization of the learning environment (Karhan, 2007). In this context, it can be thought that teachers' epistemological beliefs directly affect the educational situations step of the program. In one of the studies (Kahraman, 2020), epistemological belief and individual innovativeness perception were found to be predictors of curriculum literacy. Several studies have reported that teachers' epistemological beliefs are an important variable in terms of achieving the goals of the curriculum (Çakmak, Bulut, & Taşkıran, 2016; İçen, İlğan, & Göker, 2013; Koç & Memduhoğlu, 2017, Özeren & Akpınar, 2020). As emphasized in these recent studies in Turkish sample, curriculum literacy is related to basic thinking skills, which, in turn, are related to teacher qualifications. According to Demir (2023), there is a moderate, positive, and

significant relationship between teachers' curriculum literacy levels and their attitudes towards the teaching profession. Teachers who have positive attitudes towards their profession and self-efficacy perception, who ask, question, and strive to make sense are teachers who carry the qualities of 21st-century teachers (ISTE, 2019). Putting knowledge into action is also among the 21st-century skills directly linked to curriculum literacy. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2023) has included identification, understanding, interpretation, production, and communication skills in its definition of literacy in the transforming world order. Individuals need to be literate to be aware of their situation, to use the knowledge they have acquired in their lives, and to produce new knowledge. Based on this definition of literacy, teachers need to know and understand the current curricula to be described as curriculum literate. Recognizing and understanding are not enough. The curriculum should be interpreted from a critical point of view, opinions should be expressed, and initiatives should be taken regarding the curriculum. In summary, an individual needs to be literate to use knowledge effectively or to create products with this knowledge (Önal, 2010). In general, it is assumed that a high level of knowledge about curriculum literacy will positively affect curriculum literacy. Since 2018, MoNE has included items such as "explains the curriculum of his/her field with all its elements" and "associates the curriculum of his/her field with other curricula" in its definition of competence (MoNE, 2018). Teachers' perceptions of the curriculum bring the official curriculum and the implemented curriculum closer to each other (Eisner, 2002). On the other hand, the harmony between the official curriculum and the implemented curriculum is also an indicator of the teacher's commitment to the curriculum (Gelmez-Burakgazi, 2019). However, adherence to the curriculum requires not only adhering to it but also adapting it when necessary (Troyer, 2019).

In the light of all these evaluations, examining the relationship between a concept that is still in the conceptualization stage and skills that manifest themselves as attitudes and behaviors provides data on the applicability of the concept. The fact that teachers are seen as the implementers of the curriculum and curriculum literacy is considered within this framework has been discussed in the previous sections. As a result, the situation that emerges here is that there is a need for more studies on the "conceptualization" of the concept of curriculum literacy. Proper conceptualization of a concept will ensure that it is expressed in an understandable, clear and consistent manner. To conceptualize the concept of curriculum literacy, research findings are needed in terms of the dimensions it contains (knowledge, skills, attitudes), the areas it covers (knowledge, implementation, revision) or the concepts it is related to.

Preferred methodological approaches

The third and final question in the current review aimed to identify the methodological approaches used in studies. Studies on curriculum literacy in Türkiye are mostly quantitatively designed, primarily as descriptive studies. Considering that curriculum literacy is a newly discussed concept in Türkiye, it is understandable to present the existing situations in a general manner through descriptive research. However, qualitative studies aim to examine, discuss, and comprehend a situation with a deeper approach (Creswell, 2013). Moreover, qualitative research enables the construction of theories in social studies (Glaser & Strauss, 1967). As mentioned earlier, results suggest that curriculum literacy is conceptualized within the literature of curriculum development as an instructional/professional skill of a teacher. Most examined studies aim to assess the level of

curriculum literacy, limiting the discussion of the concept in Türkiye's mainly to the perspectives of teachers, pre-service teachers, faculty, and school members. It might be necessary to examine the curriculum literacy in the curriculum development process influenced by political and sociological aspects. In this manner, more qualitative studies would support the conceptualization and comprehension of the concept.

Another finding is that most of the studies were focused on scale development. In scale development studies, the measured variable and the structures related to this variable should be defined (Cohen & Sverdlik, 2010). In this context, to develop a scale for curriculum literacy, the concept, its sub-dimensions, if any, and the variables related to it should be defined. While this type of quantitative research has the advantage of providing generalized information, it may be insufficient to offer practical recommendations for teachers and decision makers (Yıldırım, 1999). In the scale development studies reviewed, the findings were greatly influenced by the perspective adopted in the development and implementation process. In other words, the organization/design of the research is related to the findings. Besides discussing the concept of curriculum literacy, the studies address this concept within curriculum development in general. The developed measurement tools seem to include sub-dimensions and items that aim to evaluate the teacher as an effective implementer of the curriculum (see results). The most frequently preferred scale in the examined studies is the Curriculum Literacy Scale developed by Bolat (2017), which handles curriculum literacy with the dimensions of reading and writing. The scale focuses on skills such as understanding, realizing, categorizing the curriculum as the reading level, and writing and remembering as the writing level. The scale approaches curriculum literacy as understanding and implementing the curriculum correctly, which is also supported by the MoNE: "Teachers are supposed to adapt the curriculum in the process realizing the aims" (MoNE, 2018, p .20-23).

An unexpected finding of this review is related to the sample (department/in-service or teacher candidate/faculty of education graduate/registered program development class/seniority) of the studies. In some studies, curriculum literacy levels of primary school teachers or preservice primary school teachers were found to be higher than other teaching branches (Boyraz, 2021; Şahin, 2020). Primary school teachers can have a deeper understanding of curricula by dealing with all areas in the classroom. Accordingly, some studies claim that examining and implementing the curriculum, that is, being in contact, supports curriculum literacy (Dilek, 2020; Kahraman, 2020; Keskin, 2019; Mansuroğlu, 2019; Yıldız, 2019). This may be another explanation for the curriculum literacy levels of primary school teachers.

The results related to the other variables such as class grade, enrollment in curriculum development class, being a graduate of faculty of education, having an MA degree, and participation in in-service training varied in the studies. One observation is the relationship between curriculum literacy level and being a graduate of the faculty of education. Some studies found a significant relationship (Altuncu, 2021, Tutuş, 2021) while some did not (Kahraman, 2020). This makes it impossible to generalize the results; however, it raises the question whether curriculum literacy information/skill/competency is gained in pre-service education or in-service processeses. Courses for the teaching profession, whether compulsory or selective, aim for pre-service teachers to prepare for the profession in teacher training graduate programs. The Curriculum Development in Education

course, added to the teacher training programs in 2018, is a contributing achievement for curriculum literacy. Apart from theoretical teaching profession courses, teaching practice courses are the first opportunities for pre-service teachers to experience what they have learned in theory. Knowles (1992) outlines four sources that affect the self-esteem of teachers and refers to teaching courses among these sources. Kasap (2015) also states that teaching practices are important to create an awareness of professional culture and to make it possible for the combination of theory and practice. Furthermore, pre-service teachers are supposed to utilize the knowledge, skills, and attitudes in real learning environments (Sarıtaş, 2007). When it comes to in-service training, teachers meet their educational necessities during professional life and try to adapt to the changing working situations and new teaching challenges. In this regard, there is a dual comprehension of the teaching profession, whether it is "an art" that depends on skills and learned in-service processes, or "a profession" that requires pre-service training before starting any teaching practice (Alter & Coggshall, 2009). From many perspectives, this is a dynamic process: Being a teacher or feeling like a teacher is not an ending situation but a part of an ongoing process (Beijaard et al., 2004; Friesen & Besley, 2013; Wang, 2014). Individuals develop teacher identity over time by interacting with others and reconstructing their educational backgrounds and information (Cooper & Olson, 1996 as cited in Yaşar, et al., 2013; Franzak, 2002). Thus, it seems to be a doubtful decision whether curriculum literacy is gained in pre-service education or in-service processes. Within this framework, Ünver (2021) points out that teachers can conceptualize the curriculum, comprehend the theoretical bases of the curriculum, and adopt the curriculum in case of a combination of professional and instructional skills. In other words, knowledge, skills, and attitudes toward curriculum literacy are grounded in the combination of professional and instructional skills. These results and the perspective that follows are also important in explaining the limitations of the studies examining curriculum literacy in addressing the concept.

Conclusion

In this review, our aim was to outline a systematic approach for researching on curriculum literacy in Türkiye. This study encompassed a total of 62 works (36 academic papers and 26 dissertations) published between the years 2017 and 2018. Results unmistakably indicate that, under a general and inclusive definition, curriculum literacy is perceived as a professional skill and/or competency involving the knowledge, comprehension, evaluation, and implementation the curriculum. Although this skill/competency encompasses the four fundamental elements of the curriculum (objectives, content, learning experiences, evaluation), researchers predominantly concentrate on comprehending and implementing instructional programs. The results also reveal that the studies under examination predominantly favor quantitative designs to assess the level of curriculum literacy. The Curriculum Literacy Scales developed by Bolat and Aslan stand out the most commonly used instruments. Among the 62 studies analyzed, only four are qualitative studies. These studies feature diverse samples and variables related to curriculum literacy. An aspect not addressed in this study is whether the understanding of curriculum literacy in Türkiye is related to that in other countries. The possible explanation for this omission is that, as the authors of this study, we aimed to outline an authentic profile of the concept. Consequently, we believe this study makes a valuable contribution to summarizing and outlining the relatively new term "curriculum literacy" within the Turkish context. More broadly, further studies would be worthwhile considering the following issues:

1. It is recommended that future research might conceptualize curriculum literacy as instructional literacy. This could reduce the complexity of the literature, which might be due to incorrect translations.

2. Regarding the prevalence of quantitative studies, researchers might conduct more qualitative studies to better understand, define, and conceptualize curriculum literacy.

3. More comprehensive and comparative research could be conducted, including both pre-service and in-service teachers, to analyze the determinant factors of curriculum literacy.

4. The results of the research clearly show that there is a positive relationship between teachers' curriculum literacy levels and their in-service training status. Based on this result, it is recommended to develop in-service training programs on curriculum literacy.

5. The content that enables prospective teachers' understanding of curriculum literacy during their undergraduate education could be increased and enhanced.

Kaynakça

Achinstein, B., & Ogawa, R. (2006). (In) Fidelity: What the resistance of new teachers reveals about professional principles and prescriptive educational policies. *Harvard Educational Review*. 76(1), 30–63. https://doi.org/10.17763/haer.76.1.e14543458r811864

Akınoglu, O. & Doğan, S. (2012, September, 12-14). *A new concept proposal for curriculum development in education: curriculum literacy.* [Paper presentation]. 21. International Congress of Educational Sciences. Istanbul, Türkiye.

Akyıldız, S. (2020). A conceptual analysis of curriculum literacy concept: A study of scale development. *Electronic Journal of Social Sciences*, 19(73), 315–332. https://doi.org/10.17755/esosder.554205

Alter, J., & Coggshall, J. G. (2009). Teaching as a clinical practice profession: ımplications for teacher preparation and state policy. (Issue Brief). *National Comprehensive Center for Teacher Quality*. https://files.eric.ed.gov/fulltext/ED543819.pdf

Altuncu, N. (2021). *Examining the curriculum literacy level of high school teachers: Sample of Kayseri*. (Thesis No: 694356) [Master Thesis, Erciyes University]. Turkish Council of Higher Education Theses Center.

Ariav, T. (1991). Growth in teachers' curriculum knowledge through the process of curriculum analysis. *Journal of Curriculum and Supervision,* 6(3), 183–200. https://files.eric.ed.gov/fulltext/ED299234.pdf

Aslan, S. (2018). Ortaokul öğretmenlerinin program okuryazarlık düzeyleri *(The curriculum literacy levels of secondary school teachers)*. (Thesis No: 516831) [Master Thesis, Hacettepe University]. Turkish Council of Higher Education Theses Center.

Aslan, O. (2019). *The analysis of primary and secondary school administrators' perception of curriculum literacy according to various variables*. (Thesis No: 573023) [Mater Thesis, Harran University]. Turkish Council of Higher Education Theses Center.

Aslan, S. (2019). An analysis of prospective teachers' curriculum literacy levels in terms of reading and writing. *Universal Journal of Educational Research*, 7(4), 973–979. https://doi.org/10.13189/ujer.2019.070408

Atlı, K., Kara, Ö., & Mirzeoğlu, A. D. (2021). Investigating physical education perceptions about their curriculum literacy levels according to some variables. *Gazi Journal of Physical Education and Sports Sciences*, 26(2), 281–299. https://dergipark.org.tr/en/pub/gbesbd/issue/61222/837824

Aydın, R., & Kurt, S. (2022). Examination of teachers' perceptions of self-efficiency and program literacy. Education Quarterly Reviews, 5(1), 90–117. https://doi.org/10.31014/aior.1993.05.01.422

Aygün, E. (2022). *Examination of program literacy status of special education teachers and school administrators*. (Thesis No: 762284) [Master Thesis, Kafkas University]. Turkish Council of Higher Education Theses Center.

Aygün, E. H. (2019). The prediction of the teaching readiness level of pre-service teachers in terms of curriculum literacy. *International Journal of Curriculum and Instruction Studies*, 9(2), 203–220. https://doi.org/10.31704/ijocis.2019.009.

Barut, C., Gündoğdu, K. (2023). The relationship between teachers' curriculum literacy levels and critical thinking dispositions. *Journal of Bayburt Faculty of Education*, 18(37), 198–217. doi: 10.35675/befdergi.1213781

Başar, T., & Berilgen, S. (2021). Determination of curriculum literacy levels of school administrators. *Kastamonu Education Journal*, 29(2), 348-361. https://doi.org/10.24106/kefdergi.766306

Bay, E., Kahramanoğlu, R., Döş, B., & Özpolat, E. (2017). Analysis of factors affecting commitment to the program. *Mehmet Akif Ersoy University Journal of Faculty of Education*, 1(43), 110–137. https://doi.org/10.21764/efd.02208

Ben-Peretz, M. (1990). *The teacher curriculum encounter: Freeing teachers from the tyranny of texts*. New York: State University of New York Press.

Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and teacher education*, 20(2), 107–128. https://doi.org/10.1016/j.tate.2003.07.001

Bolat, Y. (2017). Curriculum literacy concept and curriculum literacy scale. *International Periodical for The Languages, Literature and History of Turkish or Turkic*, 12(18), 121–138. http://dx.doi.org/10.7827/TurkishStudies.12103

Boncuk, A. (2021). Examining the relationship between teachers' curriculum literacy and their commitment to the curriculum. *Anatolian Turkish Journal of Education.* 3(1), 88–108. http://anadoluturkegitim.com/index.php/ated/article/view/33

Boyraz, C. (2021). Examination of pre-service primary school teachers' opinions about the elective primary school program course. *Eurasian Journal of Teacher Education*, 2(3), 142–158. https://dergipark.org.tr/en/download/article-file/2051981

Bümen, N. T. (2019). Education programs in the grip of centralism versus autonomy in Türkiye: Problems and suggestions. *Kastamonu Education Journal*, 27(1), 175–185. https://doi.org/10.24106/kefdergi.2450

Bümen, N. T., Çakar, E., & Yıldız, D. G. (2014). Adherence to the curriculum in Türkiye and factors affecting adherence. *Educational Sciences in Theory and Practice*, 14(1), 203–228. https://doi.org/10.12738/estp.2014.1.2020

Cohen, R. J., & Swerdlik, M. E. (2010). *Psychological testing and assessment: An introduction to tests and measurement* (7th ed.). New York, NY: McGraw-Hill.

Creswell, J. W. (2013). *Qualitative research methods* (6th ed.). (M. Bütün & S.B. Demir, Trans.). İstanbul: Siyasal Publishing (Original work published in 2013).

Çakmak, Z., Bulut, B. & Taşkıran, C. (2016). Investigation of pre-service social studies teachers' views on educational beliefs in terms of various variables. *Abant Izzet Baysal University Journal of Faculty of Education*, 16 (Special Issue II), 1190–1205.

Çam, O., & Bilge, A. (2013). The process of stigmatization, attitude, and belief about mental illness and patient in Türkiye: a systematic review. *Journal of Psychiatric Nursing*, 4(2), 91–102. doi: 10.5505/phd.2013.92300

Çetinkaya, S., & Tabak, S. (2019). Curriculum literacy efficiency of preservice teachers. *Ondokuz Mayıs University Journal of Faculty of Education*, 38(1), 296–309. https://doi.org/10.7822/omuefd.535482

Çıkrık, M. (2017). *The Problems of Teachers Who Work in Multigrade Classes: Examples in Denizli and Erzurum*. (Thesis No: 481787) [Master Thesis, Pamukkale University]. Turkish Council of Higher Education Theses Center.

Çınar, F. (2022). *Examination of the relationship between middle school teachers' perceived curriculum literacys and classroom management anxieties: The case of Gebze district,* (Thesis No: 775666) [Master Thesis, Sakarya University]. Turkish Council of Higher Education Theses Center.

Dağ, Ş. (2021). *Investigation of the curriculum literacy and teaching motivations of teachers,* (Thesis No: 701331) [Master Thesis, İstanbul Sabahattin Zaim University]. Turkish Council of Higher Education Theses Center.

Demeuse, M. & Christine, S. (2016). *Curriculum development in education from policy decisions to practice* (Y. Budak, Trans.). Ankara: Pegem A Publishing. (Original work published in 2013).

Demirel, Ö. (2005). *Curriculum development in education: From theory to practice*. Ankara: Pegem A Publishing

Demir, B., Yücesoy, Y., & Serttaş, Z. (2020). Program literacy levels of teacher candidates: The example of TRNC. *International Journal of Social Sciences in Turkic Cultural Geography*, 5(1), 28–37. https://dergipark.org.tr/en/download/article-file/1396216

Demir, E. & Toraman, Ç. (2021). Teachers ' levels of curriculum literacy. *Trakya Journal of Education*, 11(3), 1516–1528. https://doi.org/10.24315/tred.858813

Demir, K. S. (2023). *Investigation of the relationship between class teachers' program literacy and their attitudes to the teaching profession* (Thesis No: 783434) [Master Thesis, Sütçü İmam University]. Turkish Council of Higher Education Theses Center.

Dikbayır, A., & Bümen, N. T. (2016). Investigation of adherence to the ninth-grade mathematics curriculum. *International Journal of Curriculum and Instructional Studies,* 6(11), 17–38. https://www.ijocis.com/index.php/ijocis/article/view/166/130

Dilek, Ç (2020). *Examining the curriculum literacy levels and pedagogical knowledge and skill levels of preservice teachers*. (Thesis No: 641676) [Master Thesis, Atatürk University]. Turkish Council of Higher Education Theses Center.

Doğan, D. & Semerci, N. (2016). Administrator opinions on the problems encountered in the implementation of curriculum and solutions to problems. *Turkish Studies,* 11(9), 279–304. http://dx.doi.org/10.7827/TurkishStudies.9547

Educationfirst (2022). *Curriculum Literacy Guide*. Retrieved from https://www.education-first.com/insights/our-publications/curriculum-literacy-guide/

Eisner, E. (2002). *The tree curricula that all schools teach. In the educational imagination: on the design and evaluation of school programs* (3th ed.). Merrill Prentice Hall.

Erdamar, F. S. (2020). *The analysis of primary school teachers' curriculum literacy perceptions and primary school administrators' perceptions of teachers' curriculum literacy skills in the context of progressive philosophy*. (Thesis No: 621287) [Doctoral Dissertation, Fırat University]. Turkish Council of Higher Education Theses Center.

Erdamar, F. S., & Akpınar, B. (2020). Analysis of classroom teachers' perceptions of curriculum literacy. *Journal of Education and Training Studies*, 8(3), 21–31. https://doi.org/10.11114/jets.v8i3.4619

Erdamar, F. S., & Akpınar, B. (2021). Analysis of classroom teachers' curriculum literacy skills from the perspective of administrators. *Journal of History School*, 52(1), 1861–1884. http://dx.doi.org/10.29228/Joh.49301

Erdem, C., & Eğmir, E. (2018). Prospective teachers' levels of curriculum literacy, *Afyon Kocatepe University Journal of Social Sciences*. 20(2), 123–138. https://doi.org/10.32709/akusosbil.428727

Erdem, S., & Yücel Toy, B. (2021). Examination of curriculum literacy phenomenon from the eyes of teacher educators in the field of curriculum and instruction. *Jass Studies-The Journal of Academic Social Science Studies*, 14(87), 1–23. http://dx.doi.org/10.29228/JASSS.52822

Franzak, J. K. (2002). Developing a teacher identity: The impact of critical friends practice on the student teacher. *English Education*, 34(4), 258–280. https://www.jstor.org/stable/40173075

Friesen, M. D., & Besley, S. C. (2013). Teacher identity development in the first year of teacher education: A developmental and social psychological perspective. *Teaching and Teacher Education*, 36(1), 23–32. https://doi.org/10.1016/j.tate.2013.06.005

Gelmez-Burakgazi, S. (2019). Commitment to the curriculum: Opening the Black Box. *Başkent University Journal of Education*, 6(2), 236–249, https://buje.baskent.edu.tr/index.php/buje/article/view/189

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: strategies for qualitative research*. USA: Sociology Press.

Gökdemir, F., & Dolgun, G. (2020). Writing material & method section in qualitative, quantitative, systematic review, meta-analysis, and meta-synthesis studies. *Archives of Health Science and Research (Online),* 7(2), 189–195. https://doi.org/10.5152/ArcHealthSciRes.2020.594665

Gömleksiz, M. N., & Erdem, Ş. (2018). The views of pre-service teachers enrolled in the faculty of education and PFE program on curriculum literacy. *Jass Studies-The Journal of Academic Social Science Studies*, 73(1), 509–529. http://dx.doi.org/10.9761/JASSS7964

Güleş, E. (2022). *Examination of primary and secondary teachers' program literacy and commitment to the curriculum.* (Thesis No: 715738) [Master Thesis, Nevşehir Hacı Bektaş University]. Turkish Council of Higher Education Theses Center.

Gülpek, U. (2020). *Investigation of the physical education and sports teachers and prospective teacher's curriculum literacy and physical education efficacy levels.* (Thesis No: 627563) [Master Thesis, Bursa Uludağ University]. Turkish Council of Higher Education Theses Center.

Gündoğan, G. (2019). *A qualitative evaluation on teachers' curriculum literacy.* (Thesis No: 579025) [Master Thesis, Kahramanmaraş Sütçü İmam University]. Turkish Council of Higher Education Theses Center.

Güneş, G., & Baki, A. (2012). Primary school teachers' views on 4th grade mathematics curriculum. *Education & Science,* 37(163) 81–95. Retrieved from: http://egitimvebilim.ted.org.tr/index.php/EB/article/view/764/339

Güneş Şınego, S., & Çakmak, M. (2021). Examination of education program literacy levels of teachers. *The Journal of Kesit Academy*, 7(27), 233–256. https://doi.org/10.29228/kesit.51337

Gürbüz, Ş. (2021). *Teachers' curriculum literacy levels and curriculum fidelity*. (Thesis No: 682861) [Master Thesis, Gazi University]. Turkish Council of Higher Education Theses Center.

Gürbüz, S. & Sen, H.S. (2023). Teachers' Curriculum Literacy and Curriculum Fidelity: Differences According to Certain Variables. *International Journal of Research in Teacher Education, 14*(1), 1-23. doi: 10.29329/ijrte.2023.523.1

Hanley, T., & Cutts, L. (2013). What is a systematic review. *Counselling Psychology Review*, 28(4), 3–6. https://pure.manchester.ac.uk/ws/portalfiles/portal/32908640/FULL_TEXT.PDF

Hewitt, T.W. (2006) Understanding and shaping curriculum: What we teach and why. London: Sage Publications, Inc.

İçen, M., İlğan, A. & Göker, H. (2013). Analysis of pre-service social studies teachers' epistemological beliefs. *Anatolian Journal of Educational Leadership and Instruction*, 1(2), 2–11. https://dergipark.org.tr/tr/pub/ajeli/issue/1521/18702

Jukić Matić, L. (2019). The teacher as a lesson designer. *Ceps Journal,* 9(2), 139–160. https://doi.org/10.26529/cepsj.722

Kahraman, A. (2020). *Examination of private school teachers' levels of educational program literacy, epistemological beliefs, and individual innovativeness.* (Thesis No: 662366) [Master Thesis, İstanbul Sabahattin Zaim University].

Kahramanoğlu, R. (2019). A study on teachers' levels of curriculum literacy. *The Journal of International Social Research*, 12(65), 827–840. https://doi.org/10.17719/jisr.2019.3495

Kalkan Çelik, C. (2022). *The relationship between the learning-centered leadership and curriculum literacy of school administrators*. (Thesis No: 737975) [Master Thesis, Gazi University].

Kana, F., Aşçı, E., Kana Zorlu, H. & Elkıran, M. Y. (2018). Curriculum literacy levels of prospective Turkish teachers. *The Journal of Academic Social Science*. 6(80) 233–245. http://dx.doi.org/10.16992/ASOS.14202

Karaağaç, M. (2023). *The relationship between teachers' critical thinking and problem solving skills with curriculum literacy.* (Thesis No: 832301) [Master Thesis, Hacettepe University]. Turkish Council of Higher Education Theses Center.

Karaçam, Z. (2013). Systematic review methodology: A guide for preparing a systematic review. *Dokuz Eylül University Faculty of Nursing Electronic Journal*, 6(1), 26–33. https://dergipark.org.tr/tr/download/article-file/753523

Karagülle, S., Varki, E., & Hekimoğlu, E. (2019). An investigation of the concept of program literacy in the context of applicability and functionality of educational program. *Journal of Educational Reflections*, 3(2), 85–97. https://dergipark.org.tr/en/download/article-file/880314

Karhan, İ. (2007). *Investigation of Epistemological Beliefs of Primary School Teachers According to Their Demographic Characteristics and Their Use of Information Technologies.* (Thesis No: 219319) [Doctoral Dissertation, Yıldız Teknik University]. Turkish Council of Higher Education Theses Center.

Kasap, G. (2015). *To be determined prospective teachers' views about the classes of school experience and teaching practice.* (Thesis No: 415484) [Master Thesis, Giresun University]. Turkish Council of Higher Education Theses Center.

Kasapoglu, K. (2020). Perceived curriculum literacy scale for teachers: A scale development and validation study. *Inonu University Journal of the Faculty of Education*, 21(2), 963-977. https://doi.org/10.17679/inuefd.709688

Keskin, A. (2019). *Determining the perceptions of teachers' instructional program literacy levels.* (Thesis No: 618850) [Doctoral Dissertation, Hacettepe University]. Turkish Council of Higher Education Theses Center.

Kızılaslan Tunçer, B., & Şahin, Ç. (2019). Investigation of pre-service teachers' level of knowledge about curriculum. *Erzincan University Journal of Faculty of Education*, 21(2), 247–260. https://doi.org/10.17556/erziefd.511367

Knowles, J. G. (1992). *Models for understanding pre-service and beginning teachers' biographies: illustrations from case studies*. In I. Goodson (Ed.), Studying teachers' lives (pp. 99–152). New York: Teachers College Press.

Koç, S., & Memduhoğlu, H. B. (2017). Pre-service teachers' epistemological beliefs: A mixed method study. *Electronic Journal of Social Sciences*, 16(60), 119–134. https://doi.org/10.17755/esosder.289655

Kuloğlu, A. (2022). The relationship between 21st century learner skills and program literacy levels of preservice teachers. *International Journal of Contemporary Educational Research*, 9(3), 624–632. https://doi.org/10.33200/ijcer.1083782

Kuyubaşıoğlu, R. M. (2019). *Investigation of teacher's education program literacy qualifications.* (Thesis No: 608523) [Master Thesis, Mersin University]. Turkish Council of Higher Education Theses Center.

Lee, Y.J., & Chue, S. (2013). The value of fidelity of implementation criteria to evaluate school-based science curriculum innovations. *International Journal of Science Education*, 35(15), 2508–2537. https://doi.org/10.1080/09500693.2011.609189

Mansuroğlu, C. (2019). *The investigation of teachers' curriculum literacy and reflective thinking trends.* (Thesis No: 581221) [Master Thesis, Kahramanmaraş Sütçü İmam University]. Turkish Council of Higher Education Theses Center.

Marsh, C.J., & Willis, G. (2007). *Curriculum: Alternative approaches, ongoing issues*. USA: Pearson Prentice Hall.

Ministry of National Education Regulations. (2012). *12 years compulsory education: Questions-answers*. Retrieved from: https://www.meb.gov.tr/duyurular/duyurular2012/12Yil_Soru_Cevaplar.pdf

Ministry of National Education. (2017). *Instructional programs*. Retrieved from: http://mufredat.meb.gov.tr/Programlar.aspx

Ministry of National Education. (2018). *General competencies for teaching profession.* Retrieved from: https://oygm.meb.gov.tr/meb_iys_dosyalar/2018_06/29111119_TeachersGeneralCompetencies.pdf

Nasırcı, H. (2022). *Examination of curriculum literacy competencies of classroom teachers.* (Thesis No: 714076) [Doctoral Dissertation, Cukurova University]. Turkish Council of Higher Education Theses Center.

Nsibande, R. N., & Modiba, M. M. (2012). I just do as expected. Teachers' implementation of continuous assessment and challenges to curriculum literacy. *Research Papers in Education, 27*(5), 629-645. https://doi.org/10.1080/02671522.2011.560961

OECD. (2019). *Country note: Türkiye.* Paris: OECD. Retrieved from: https://www.oecd.org/education/education-at-a-glance/EAG2019_CN_TUR.pdf

Ornstein, A. C., & Hunkins, F. P. (2016). *Curriculum--foundations, principles, and issues.* Global edition. USA: Pearson Education Limited.

Oruç, T. (2022). *The investigation of relationship between primary school teachers's education curriculum literacy levels and teaching and learning approaches.* (Thesis No: 737419) [Master Thesis, Fırat University]. Turkish Council of Higher Education Theses Center.

Önal, İ. (2010). Lifelong learning and literacy in historical change: Türkiye experience. *Knowledge World,* 11(1), 101–121.

Özeren, E. & Akpınar, B. (2020). Investigation of Teachers' Epistemological Beliefs and Measurement and Evaluation Practices in the Context of Turkish Education System. *Journal of History School*, 48(1), 3175–3200. doi: http://dx.doi.org/10.29228/Joh.45810

Öztürk, İ. H. (2012). Teacher's role and autonomy in instructional planning: The case of secondary school history teachers with regard to the preparation and implementation of annual instructional plans, *Educational Sciences: Theory & Practice*, 12(1) 295–299. https://files.eric.ed.gov/fulltext/EJ978444.pdf

Özüdoğru, F. (2022). Analysis of the factors predicting curriculum literacy of preservice teachers. *Research in Pedagogy*, 12(1), 112–126. https://doi.org/10.5937/IstrPed22011112O

Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, (2020). T*he PRISMA 2020 statement: an updated guideline for reporting systematic reviews*. BMJ 2021;372:n71. doi:10.1136/bmj.n71

Pektaş, Ö. (2019). *Examination of teachers' awareness of curriculum.* (Thesis No: 662811) [Master Thesis, Siirt University]. Turkish Council of Higher Education Theses Center.

Polikoff, M. S., & Porter, A. C. (2014). Instructional alignment as a measure of teaching quality. *Educational Evaluation and Policy Analysis*, 36(4), 399–416. https://doi.org/10.3102/0162373714531851

Posner, G.J. (1995). *Analyzing the curriculum.* McGraw-Hill.

Remillard, J. T. (2005). Examining key concepts in research on teachers' use of mathematics curricula. *Review of Educational Research*, 75(2): 211–246. https://www.jstor.org/stable/3516049

Saral, N. S. (2019). *Exploring curriculum literacy level of English language teachers in Türkiye.* (Thesis No: 588832) [Master Thesis, Gazi University]. Turkish Council of Higher Education Theses Center.

Sarıca, R. (2021). A study on teachers' curriculum literacy. *Journal of Kırşehir Faculty of Education*, 22(1), 132–170. https://doi.org/10.29299/kefad.776214

Sarıgöz, O. (2021). The opinions of teacher candidates on educational programmes and its literacy. *Social Science Development Journal*, 6(25), 273–284. https://doi.org/http://dx.doi.org/10.31567/ssd.393

Sarıtaş, M. (2007). Evaluation of the opinions on the benefits of school experience for prospective teachers. *Journal of Uludag University Faculty of Education*. 20(1), 121–143. https://dergipark.org.tr/en/download/article-file/153310

Shkedi, A. (2009). From curriculum guide to classroom practice: teachers' narratives of curriculum application. *Journal of Curriculum Studies*, 41(6), 833–854. https://doi.org/10.1080/00220270902927030

Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. *Journal of Educational Psychology*, 82(1), 498–504. https://doi.org/10.1037/0022-0663.82.3.498

Steiner, D., Magee, J., Jensen, B., & Button, J. (2018). *Curriculum literacy in schools of education? The hole at the center of American teacher preparation*. Retrieved from: https://jscholarship.library.jhu.edu/bitstream/handle/1774.2/62968/curriculum-literacy-in-schools-of-education-final-2911-1.pdf?sequence=1

Sural, S., & Dedebali N. C. (2018). A study of curriculum literacy and information literacy levels of teacher candidates in department of social sciences education. *European Journal of Educational Research*, 7(2), 303–317. https://doi.org/10.12973/eu-jer.7.2.303

Süğümlü, Ü. (2022). Investigation of the relationship between curriculum literacy and teacher performance. *International Journal of Psychology and Educational Studies,* 9(4), 1342–1355. https://dx.doi.org/10.52380/ijpes.2022.9.4.948

Şahin, A. İ. (2020). *An investigation of primary school teacher candidate's curriculum literacy.* (Thesis No: 644183) [Master Thesis, Kastamonu University]. Turkish Council of Higher Education Theses Center.

Şahin, A., & Kumral, O. (2013). Pre-Service teachers' images of school curriculum and their curricular roles. *Mediterranean Journal of Educational Research,* 7(14), 19–32.

Ünver, G. (2021). Teacher training for curriculum studies*. Teacher Education and Instruction*, 2(2), 30–55. https://dergipark.org.tr/tr/pub/jnate

Tan-Şişman, G. (2021). Acquisition of the curriculum development knowledge in pre-service teacher education. *Pegem Journal of Education and Instruction*, 11(1), 355–400. https://doi.org/10.14527/pegegog.2021.010

Tan-Şişman, G. & Karsantık, Y. (2021). Curriculum development in Singapore and Turkiye: Reflections of administrative structure and educational reforms. *Bartın University Journal of Faculty of Education, 10*(1), 109-130. https://doi.org/10.1016/buefad.704869

The International Society for Technology in Education (ISTE). (2019). *ISTE Standarts for Educators*, Retrieved form:https://iste.org/standards/educators

Tokgöz, Ö. (2013). *Transformation of centralized curriculum into teaching and learning processes: Teachers' journey of thought curriculum into enacted one* (Merkeziyetçi öğretim programının öğrenme ve öğretme

sürecine dönüştürülmesi: Tasarlanan programın uygulama yolculuğu). (Thesis No: 345161) [Doctoral Dissertation, Middle East Technical University]. Turkish Council of Higher Education Theses Center.

Tian, X., Bao, L., Li, T., & Gu, Y. (2022) Teacher becoming curriculum designer: professional teaching and learning in china's early childhood education. *Frontiers in Psychology,* 13(873044). https://doi.org/10.3389/fpsyg.2022.873044

Tutuş, F. (2021). *English teachers' curriculum literacy levels and views on English language teaching.* (Thesis No: 687258) [Master Thesis, Fırat University]. Turkish Council of Higher Education Theses Center.

Troyer, M. (2019) Teachers' adaptations to and orientations towards an adolescent literacy curriculum*, Journal of Curriculum Studies*, 51(2), 202–228, doi: 10.1080/00220272.2017.1407458

United Nations Educational, Scientific and Cultural Organization (UNESCO, 2023) *Message from Ms Audrey Azoulay, Director-General of UNESCO, on the occasion of International Literacy Day.* Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000386707_eng?posInSet=2&queryId=N-78769467-b842-49ca-92ae-cdb295c4ec26

Ustabulut, M. Y. (2021). Curriculum literacy levels of instructors teaching Turkish as a foreign language. *Fırat University Journal of Social Sciences*, 31(3), 1235–1243. https://doi.org/10.18069/firatsbed.941957

Ünal, Ö. (2022). *The relationship between self-efficacy, class management skills, and curriculum literacy levels of teachers working in special education schools.* (Thesis No: 723821) [Master Thesis, İstanbul Sabahattin Zaim University]. Turkish Council of Higher Education Theses Center.

Yaşar, M., Karabay, A., & Bilaloğlu, R. G. (2013). "Am I a teacher now?" Pre-service teachers' views on the factors that affect the formation of teaching identity. *Turkish Studies - International Periodical for the Languages, Literature and History of Turkish or Turkic*, 8(7) 269–282. https://www.acarindex.com/pdfler/acarindex-1412a1f2-dd23.pdf

Yar Yıldırım, V. (2018). *Developing and evaluating in-service training curriculum for school administrators' curriculum literacy.* (Thesis No: 493983) [Doctoral Dissertation, Gaziosmanpaşa University]. Turkish Council of Higher Education Theses Center.

Yar Yıldırım, V. (2020). Development of teachers' curriculum literacy scale: validity and reliability study. *Inonu University Journal of the Faculty of Education,* 21(1), 208–224. https://doi.org/10.17679/inuefd.590695

Yar Yıldırım, V. (2021). The impact of teacher idealism on curriculum literacy: the role of believing in education as a mediator variable. *International Journal of Curriculum and Instruction*, 13(2) 1548–1563. https://files.eric.ed.gov/fulltext/EJ1292330.pdf

Yıldırım, İ. (2019). Development of curriculum literacy scale: validity and reliability study. *Harran Maarif Journal*, 4(2), 1–28. https://doi.org/10.22596/2019.0402.1.28

Yıldırım, A. (1999). Basic features of qualitative research methods and their place and importance in educational research. *Education and Science*, 23(112), 7–17.

Yıldırım, A., & Şimşek, H. (2013). *Qualitative research methods in social sciences.* Ankara: Seçkin Publishing.

Yıldız, S. (2019). The relationship between pre-service teachers' cognitive awareness perceptions of curriculum development and curriculum literacy, *International Social Sciences Studies Journal*, 5(44), 5177–5191. http://dx.doi.org/10.26449/sssj.1767

Yılmaz, G. (2021). *Examining the relationship between curriculum literacy levels, curriculum orientations and curriculum fidelity levels of teachers.* (Thesis No: 676822) [Master Thesis, Gaziantep University]. Turkish Council of Higher Education Theses Center.

Yurdakul, S., Gür, B. S., Çelik, Z., & Kurt, T. (2016). Teaching profession and the status of the profession. Ankara: Eğitim-Bir-Sen Strategic Research Center.).Retrieved from: http://www.ebs.org.tr/ebs_files/files/yayinlarimiz/mesleginstatusu_web.pdf

Yurtseven, N., Doğan, S. & Çelik, İ. (2021). Designer teacher scale: a scale development and validation study based on exploratory mixed research method. *Gazi University Gazi Faculty of Education Journal*, 41(3), 1489–1523.

DOKUZ EYLÜL ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ

Yüksel Güler, Ş. (2021). *The relationship between preschool teachers' curriculum literacy, self- efficiency beliefs and classroom management skills.* (Thesis No: 681722) [Master Thesis, Kahramanmaraş Sütçü İmam University]. Turkish Council of Higher Education Theses Center.

Wang, X. (2014). Investigation on the professional identity of senior high school English teachers. *Journal of Language Teaching and Research,* 5(4), 769–774. https://doi.org/10.4304/jltr.5.4.769-774

Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools: what does the evidence say? *Health Promotion International,* 26(1), 29–69. https://doi.org/10.1093/heapro/dar075

Westwood Taylor, M. (2013) Replacing the 'teacher-proof' curriculum with the 'curriculum-proof' teacher: Toward more effective interactions with mathematics textbooks. *Journal of Curriculum Studies,* 45(3), 295–321. https://doi.org/10.1080/00220272.2012.710253

Zelyurt, H. (2021), An analysis of prospective teachers' curriculum literacy levels in terms of various variables. *The Asian Institute of Research Education Quarterly Reviews*, 4(3) 334–341. https://doi.org/10.31014/aior.1993.04.03.342