



| Research Article / Araştırma Makalesi |

Determination of Curriculum Literacy Levels of School Administrators

Okul Yöneticilerinin Program Okuryazarlık Düzeylerinin Belirlenmesi

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Keywords

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Abstract

Purpose: This research was conducted to determine the curriculum literacy levels of school administrators.

Design/Methodology/Approach: In this research, survey model was used. The study group of this research consists of school administrators working in the city center of Kırşehir. In this context, the research was conducted with the participation of 106 school administrators. In the research, "School administrators curriculum literacy levels scale" which developed by Yar Yıldırım and Dursun (2019) was used as data gathering tool. This scale has four sub-dimensions which are: "Curriculum management skills", "Attitude", "Knowledge" and "Instructional design (project) and planning skill".

Findings: As a result of the research, it was found that the average score obtained from the school administrators participating in the research was above the middle score of the scale. In addition, it was determined that school administrators obtained above the middle score of the scale scores from the sub-dimensions of "Curriculum management skills", "Attitude", "Knowledge" and "Instructional design (project) and planning skill".

Highlights: Within the scope of the research, it can be said that school administrators perceive themselves as good curriculum literate. One of the important results obtained in the research is that it is determined that the curriculum literacy levels of school administrators do not differ significantly according to variables such as gender, age, branch, professional seniority, management seniority, educational status, school type graduated, type of school which they work at and management status.

Öz

Çalışmanın amacı: Bu araştırma, okul yöneticilerinin program okuryazarlık düzeylerini belirlemek amacıyla gerçekleştirilmiştir.

Materyal ve Yöntem: Araştırmada tarama modeli kullanılmıştır. Araştırmanın çalışma grubunu ise Kırşehir il merkezinde görev yapan okul yöneticileri oluşturmaktadır. Bu kapsamda, araştırma 106 okul yöneticisinin katılımıyla gerçekleştirilmiştir. Araştırmada veri toplama aracı olarak, Yar Yıldırım ve Dursun (2019) tarafından geliştirilen "Okul yöneticileri öğretim programı okuryazarlık düzeyleri ölçeği" kullanılmıştır. Ölçek; "Program yönetim becerisi", "Tutum", "Bilgi" ve "Öğretim tasarımı (proje) ve planlama becerisi" olmak üzere dört alt boyuttan oluşmaktadır.

Bulgular: Araştırma sonucunda, araştırmaya katılan okul yöneticilerinin ölçekten elde ettikleri ortalama puanın ölçek orta puanının üzerinde olduğu bulgusuna ulaşılmıştır. Ayrıca okul yöneticilerinin "Program yönetim becerisi", "Tutum", "Bilgi" ve "Öğretim tasarımı (proje) ve planlama becerisi" alt boyutlarında da ölçek orta puanının üzerinde puanlar elde ettikleri belirlenmiştir.

Önemli vurgular: Araştırma kapsamında, okul yöneticilerinin kendilerini iyi birer program okuryazarı olarak algıladıkları söylenebilir. Araştırmada elde edilen önemli sonuçlardan birisi de okul yöneticilerinin program okuryazarlık düzeylerinin cinsiyet, yaş, branş, mesleki kıdem, yöneticilik kıdemi, eğitim durumu, mezun olunan okul türü, çalışan okul türü ve yöneticilik durumu gibi değişkenlere göre anlamlı bir farklılık göstermediğinin belirlenmesidir.

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INTRODUCTION

In individual's life, most of behaviors are learned behaviors. These behaviors are performed through education (Senemoğlu, 2013). Thus, concept of education is available since beginning of the humankind. According to Fidan (2012), education is divided into two as Informal and formal education. Although Informal education is a process which is carried out spontaneously in life, formal education is a process that takes place in a planned way for a certain purpose. According to Bloom (2012), carrying out education in a planned way is generally the duty of schools in all societies. Planned education in school is carried out by including previously prepared certain curriculum (Fidan, 2012). Concept of curriculum is not as old as the concept of education. "Curriculum" meaning education program in English has its origin B.C 1st century. The word of "Curriculum" named after an elliptic road where horse carriages raced in Rome by Gaius Julius Caesar and his soldiers during those dates. In 21st century, this concept which educators used most and being one of the most basic school duties dated back to those dates (Oliva, 1988). The beginning of the field of curriculum is accepted as the book named "curriculum" published by Bobbitt in 1918 (Ornstein & Hunkins, 2004).

In Turkey "syllabus" was used instead of curriculum for many years (Varış, 1996). Since 1950's, the concept of curriculum was started to use (Demirel, 2015). Varış (1996) defines the concept of curriculum as "all the activities that an educational institution provides for children, youth and adults to achieve the goals of the national education and institution"; Demirel (2015) defines the concept of curriculum as "the learning experience mechanism provided to the learner through planned activities at school and outside of school". It is possible to define the concept of curriculum in the most general sense as experiences which students gain from in and out of school as a result of school guide (Oliva, 1988). A curriculum consists of some certain elements regardless of how it designs. These elements are respectively objectives, content, teaching learning process and evaluation (Taba, 1962). Therefore, a curriculum is developed by taking these four elements into consideration. According to Varış (1996) developing curriculum is not preparing published materials. Producing published materials is nothing but design as long as curriculum is not implemented (Fidan, 2012). According to Ertürk (2013), just taking account of its design is not enough for deciding about efficiency of curriculum. Because well-prepared curriculum does not mean implementing the curriculum effectively at schools (Bozkurt, 2019; Dağdeler & Arseven, 2015; Doğan, 2016; Kahramanoğlu, 2019; Yeşilyurt, 2019). In other words, published curriculum; namely formal curriculum may be different from curriculum applied in classroom. The reason of this difference results from teacher's interpretation of curriculum in consideration of their own belief, attitude, experience (Posner, 1995). For this reason, the correct implementation of a curriculum depends only on the teachers who are the implementers of the curriculum to have enough knowledge about the curriculum and to interpret the curriculum correctly (Akyıldız, 2020). In other words, teachers who are the implementers of the curriculum must be curriculum literate individuals (Akyıldız, 2020; Aslan & Gürlen, 2019; Çetinkaya & Tabak, 2019; Erdamar, 2020; Erdem & Eğinir, 2018; Kahramanoğlu, 2019).

Concept of curriculum literacy is newer than the concept of curriculum. According to Keskin (2020) the concept of curriculum literacy has been started using in field of educational science since 1980's. It is possible to define the concept of curriculum literacy as curriculum implementers have knowledge about a curriculum (Akyıldız, 2020; Aslan & Gürlen, 2019; Erdamar, 2020; Keskin, 2020), accurate interpretation of curriculum (Erdamar, 2020; Çetinkaya & Tabak, 2019; Keskin, 2020), understanding curriculum correctly (Akyıldız, 2020; Çetinkaya & Tabak, 2019; Erdamar, 2020; Kahramanoğlu, 2019; Keskin, 2020) and implementing curriculum accurately (Akyıldız, 2020; Aslan & Gürlen, 2019; Çetinkaya & Tabak, 2019; Erdamar, 2020; Gündoğan, 2019; Keskin, 2020). A curriculum literate individual should also dominate the curriculum development stages (Erdamar, 2020) and the curriculum evaluation process (Akyıldız, 2020; Erdamar, 2020). Besides, having a positive attitude towards curriculum (Keskin, 2020), adapting curriculum their own condition (Çetinkaya & Tabak, 2019; Keskin, 2020) and being able to make a plan about the curriculum (Aslan & Gürlen, 2019; Keskin, 2020) are other expected qualification for curriculum literacy.

It is not enough for teachers to be curriculum literate in the effective implementation of a curriculum. According to Erdamar (2020), the ability of a teacher to perform curriculum literacy skills depends on the school administration and therefore on the school administrators. The decisions to be taken and the measures to be followed by school administrators are very important in the implementation process of the curriculum (Rençber, 2008). Therefore, school administrators have an important role in the successful implementation of educational curriculums in schools (Ornstein & Hunkins, 2004). Because it is the school administrators who are primarily responsible for the management of the education process in a school (Sağır & Memişoğlu, 2013). Therefore, the main responsibility for the successful implementation of curriculums implemented in schools also belongs to school administrators (Acar, 2015; Aslan, 2019; Aydın, 2017; Demiral, 2009; Yar Yıldırım & Dursun, 2019). In other words, school administrators have duties and responsibilities in the successful implementation of a curriculum (Acar, 2015; Aslan, 2019; Bayrak, 2009; Can, 2007; Demiral, 2009; Dağdeler & Arseven, 2015; Doğan, 2016; Erdamar, 2020; Gülbahar, 2014; Rençber, 2008; Ural & Tüfekçi Aslım, 2013; Yar Yıldırım & Dursun, 2019; Yeşilyurt, 2019; Yıldız, 2008). In this context, school administrators should first provide the necessary environment for the successful implementation of the curriculum (Aslan, 2019; Erdamar, 2020). Administrators should inform the teachers about the curriculum, create the financial resources necessary for the implementation of the curriculum, and provide teachers with the necessary guidance during the implementation of the curriculum (Aslan, 2019). The ability of school administrators to fulfill their duties and responsibilities regarding the implementation of the curriculum depends on their curriculum literacy like teachers (Yar Yıldırım & Dursun, 2019).

It is expected from administrators being manager as well as being leader (Acar, 2015; Argon & Mercan, 2009; Demiral, 2009; Doğan, 2016; Gülbahar, 2014; Özdemir & Sezgin, 2002). Instructional leadership is one of the types of leadership administrators should have (Ayık & Şayir, 2014). Therefore, it is necessary to consider school administrators as instructional leaders at the same

time (Yalçın & Erginer, 2012). Because, administrators' basic task is to lead learning and teaching process (Özdemir & Sezgin, 2002). According to Sim (2011), administrators' instructional leadership is a key role for academic success. Harlinger and Murphy (1985) describe instructional leadership as into three dimensions; "Curriculum management", "Supporting learning environment in schools", "Determining mission". Şişman (2016) also describes instructional leadership into five dimensions and explain one of these dimensions as "Managing curriculum and teaching process". Therefore, it maybe said that implementing curriculum successfully in schools depends on administrators' realizing their instructional leadership roles (Akalin Akdağ, 2009; Can, 2017; Dağdeler & Arseven, 2015; Erdamar, 2020; Gülbahar, 2014; Küp, 2011). In a relation to management of curriculum, especially teaching and education field, Harlinger and Murphy (1985) emphasizes the requirement of act in common with teachers and states that administrators' tasks is to control and evaluate teaching, coordinate curriculum and monitor students' progress. Namely, what is desired from administrators is their leading into implementing of curriculum. According to Ornstein and Hunkins (2004), it is expected that administrators to realize the task of instructional leadership as well as curriculum leadership. School administrators must be curriculum literate in order to successfully lead the curriculum implemented in schools (Yar Yıldırım & Dursun, 2019). According to Şenay (2017) administrators' ability of leading teachers during implementing curriculum also depends on administrators' knowledge on curriculum. Administrators' lack of knowledge about curriculum might cause administrators having difficulty in fulfilling their instructional leadership role (Sezer, 2017). Thus, to implement a curriculum successfully in schools, administrators just like teachers are required to interperent curriculum accurately and have knowledge about curriculum, namely have curriculum literacy.

When researches about curriculum literacy in Turkey are examined, researches have been done since 2017. According to Keskin (2020) one of the probable reasons of this is the "concept of curriculum literacy" included in teachership undergraduate program which was updated in 2017. When recent researches is reviewed, it is determined that the researches are generally about indicating level of teacher's (Aslan & Gürlen, 2019; Erdamar, 2020; Kahramanoğlu, 2019; Keskin, 2020; Kuyubaşoğlu, 2019; Mansuroğlu, 2019; Saral, 2019) and pre-service teacher's (Aygün, 2019; Çetinkaya & Tabak, 2019; Erdem & Eğinir, 2018; Gömleksiz & Erdem, 2018; Sural & Dedeşali, 2018; Yıldız, 2019) curriculum literacy. School administrators' competencies related to the curriculum were found in most studies in the context of instructional leadership (Akman, 2015; Aydın, 2017; Aygün, 2014; Bozkurt, 2019; Önder, 2010; Sağır & Memişoğlu, 2012) and in some studies in the context of curriculum leadership (Aslan et al., 2018; Demiral, 2009; Yeşilyurt, 2019) were examined. In literature, in respect to curriculum literacy there are only two researches which examining administrators' proficiency about curriculum-applied in schools. One of these researches is a scale development study conducted by Yar Yıldırım and Dursun (2019). Other research is conducted by Aslan (2019) which is about determining administrator's perception towards curriculum literacy in primary and secondary school. As there are a few studies about defining level of administrators' curriculum literacy who are the most responsible for implementing curriculum, it is expected that this research will contribute the literature. In addition, in this study, it was tried to determine the curriculum literacy levels of school administrators working in all education levels (pre-school education, primary school, middle school and high school). This aspect of the study is considered to be valuable for the literature.

Purpose of this study is to determine administrators' curriculum literacy level. In accordance with this purpose, following questions will be answered:

1. What is the level of administrators' curriculum literacy?

2. Is there a significant difference administrators' curriculum literacy level in comparison with variables about gender, age, branch, professional seniority, management seniority, educational status, type of school graduated, type of school-worked, administrative status?

METHOD

Design of Study

The research was designed as survey model. Survey model is carried out to determine certain group's specific properties (Büyükoztürk et al., 2014). As this study is carried out to determine administrator's curriculum literacy level, survey model is preferred.

Study Group

The study group of research consists of the school administrators that work in city center of Kırşehir. While study group were consisted, a specific sample method was not used and it was tried to reach all of study group. Accordingly, the scale was given to 160 school administrators to fill on a volunteer basis. 114 of these scales given to school administrators were completed and delivered to the researchers. Out of 114, 8 missing and mistaken scales were excluded. In this context, study group of research consists of 106 administrators. Participants' demographic information related to gender, age, branch, professional seniority, management seniority, educational status, and type of school graduated, type of school-worked, administrative status, and school status were given in Table 1.

Table 1. Administrators' demographic information

Variables	Group	f
Gender	Man	82
	Woman	24
Age	25-29	2
	30-34	8
	35-39	29
	40-44	33
	45 and over	34
Branch	Primary school teacher	76
	Branch teacher	30
Professional senitory	1-4 year	2
	5-9 year	8
	10-14 year	29
	15 year and over	67
Management senitory	1-4 year	31
	5-9 year	31
	10-14 year	22
	15 year and over	22
Educational status	Associate degree	3
	Undergraduate	82
	Postgraduate	18
	Doctorate	3
Type of school graduated	Faculty of Education	76
	Faculty of Science and Literature	26
	Other faculty	4
Type of school	Pre-school	11
	Primary school	24
	Secondary school	21
	High School	50
Administrative status	Headmaster	17
	Head assistant principal	4
	Assistant principal	85
School status	Public school	100
	Private school	6

Data Collection Instrument

In the research, "School administrators curriculum literacy level scale" developed by Yar Yildirim and Dursun (2019) was used to determine the curriculum literacy levels of school administrators. For the purpose of using scale, required permission was taken from related author via e-mail. The scale is five-point likert scales involving "Strongly agree (5), Agree (4), Moderately agree (3), Disagree (2) Strongly disagree (1). The highest score that can be obtained from this scale is 275; the lowest score is 55. The scale consists of four sub-dimensions, "Curriculum management skills", "Attidute" "Knowledge", "Instructional design (project) and planning skills" and 55 items. "Curriculum management skills" dimension consists of 18 items. (Sample item; "I can lead teachers for the purpose of overcoming trouble that comes out during implementing curriculum"). "Attidute" dimension consists of 15 items. (Sample item; "I care about that evaluation results obtained from curriculum have influence on process of curriculums' evaluation"). "Knowledge" dimension consists of 12 items. (Sample items; "I have knowledge about objectives of curriculum"). "Instructional design (project) and planning skills" dimension consists of 10 items (Sample items; "I can do needs analysis for the projects carried out in schools.")

Content and appearance validity were tested by way of taking nine experts' opinion by Yildirim and Dursun (2019). Scale's construct validity was determined by explanatory factor analysis (EFA) and outcoming construct was confirmed by confirmatory factor analysis. Correlation values between each dimension of the scale vary between .580 and .763, and each dimension shows signifivant correlation with each other. Scale's Cronbach alpha reliability co-efficient for "Curriculum Management Skills" is .913; for "Attidute" dimension is .932; for "Knowledge" dimension is .935 and for "Instructional design (project) and planning skills" is

.926. The total reliability coefficient for all dimensions of the scale was calculated as .89. In this study, the reliability coefficient of the scale was determined as .97.

Data Analysis

Within the scope of the research, the mean score and standard deviation values were calculated to determine the curriculum literacy levels of school administrators. Whether the curriculum literacy levels of school administrators show a significant difference according to gender, branch, professional seniority, educational status, type of school graduated, and administrative status variables were analyzed by independent groups t test. Whether the curriculum literacy levels of school administrators differ significantly in terms of age, management seniority, and the type of school which they work at was tested with Anova analysis.

FINDINGS

Findings about First sub-problem

In relation to study's first sub- problem, mean and standart deviation scores about administrator's curriculum literacy level are shown in Table 2.

Table 2. Descriptive statistical results about administrator's curriculum literacy level

Dimension	n	\bar{X}	sd	Min	Max
Curriculum management skills	106	71.52	10.13	52	90
Attitude	106	60.57	9.19	41	75
Knowledge	106	47.74	6.93	32	60
Instructional design (project) and planning skills	106	39.80	5.68	28	50
Total	106	219.65	27.61	165	272

When the lowest, middle and highest scores that can be obtained for each dimension of the scale are calculated, It is determined that for the curriculum management skills the lowest score is 18(18x1), middle score 54(18x3), the highest score 90(18x5); for the attitude dimension, the lowest score is 15(15x1), middle score 45(15x3), the highest score 75(15x5); for the knowledge dimension, the lowest score is 12(12x1), middle score 36(12x3), the highest score 60(12x5); for the instructional design (project) and planning skills, the lowest score is 10(10x1), middle score 30(10x3), the highest score 50(10x5). Total score that we can obtain from scale is the lowest score 55(55x1), middle score 165(55x3), the highest point is 275(55x5). When table 2 is examined, it is observed that for the "Curriculum management skills" sub-dimension, mean score is 71.52; for the "Attitude" sub-dimension, mean score is 60.57. Besides, for "Knowledge" sub-dimension, calculated mean score is 47.74, for "instructional design(project) and planning skills" sub-dimension, mean score is 39.8. Total mean score obtained from the administrators' curriculum literacy scale is 219.65. In respect to these data, it is stated that in both all sub-dimensions and also total, mean score obtained was above the middle score of the scale.

Findings about second sub-problem

Regarding to study's second sub-problem, it was indicated in the following sub-titles whether administrator's curriculum literacy level show significant difference in terms of different variables.

a. Findings about gender variable

The analysis results of independent group t test were shown in table 3 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to gender variable.

Table 3. Independence group t test results about administrator's curriculum literacy for gender.

Dimension	Gender	n	\bar{X}	sd	df	t	p
Curriculum management skills	Man	82	71.81	10.49	104	-.540	.590
	Woman	24	70.54	8.91			
Attitude	Man	82	60.34	9.23	104	.483	.630
	Woman	24	61.37	9.18			
Knowledge	Man	82	48.1	7.05	104	-1.00	.320
	Woman	24	46.5	6.52			
Instructional design (project) and planning skills	Man	82	39.7	5.87	104	.315	.753
	Woman	24	40.12	5.09			
Total	Man	82	219.97	28.11	104	-.223	.824
	Woman	24	218.54	26.37			

When table 3 is examined, it is seen that there is no significant difference between men and women administrator's mean score obtained from total and all sub-dimension. Thus, it may be said that there is no significant difference administrator's curriculum literacy level according to gender.

b. Findings about age variable

In this study, as there are limited administrators between aged 25-29 years and 30-34 years, administrator's age ranges were divided into 3 age groups as in 25-39 years, 40-44 years, and 45 years and over. Anova analysis test results were shown in table 4 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to age variable.

Table 4. Anova analysis results about administrator's curriculum literacy for age

Dimension	Age	Source of Variance	SS	df	MS	F	p
Curriculum management skills	25-39	Between groups	244.326	2	122.163	1.194	.307
	40-44	Within groups	10538.089	103	102.312		
	45 and over	Total	10782.415	105			
Attitude	25-39	Between groups	36.267	2	18.133	.211	.810
	40-44	Within groups	8835.629	103	85.783		
	45 and over	Total	8871.896	105			
Knowledge	25-39	Between groups	140.229	2	70.114	1.470	.235
	40-44	Within groups	4911.894	103	47.688		
	45 and over	Total	5052.123	105			
Instructional design (project) and planning skills	25-39	Between groups	42.866	2	21.433	.658	.520
	40-44	Within groups	3355.973	103	32.582		
	45 and over	Total	3398.840	105			
Total	25-39	Between groups	884.150	2	442.075	.575	.564
	40-44	Within groups	79167.935	103	768.621		
	45 and over	Total	80052.085	105			

When table 4 is examined, it is seen that there is no significant difference between different aged group of administrators whose mean score obtained from total and all sub-dimension. So, it may be said that there is no significant difference administrator's curriculum literacy level according to age.

c. Findings about branch variable

The analysis results of independent group t test were shown in table 5 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to branch variable.

Table 5. Independence group t test results about administrator's curriculum literacy for branches

Dimension	Branch	n	\bar{X}	sd	df	t	p
Curriculum management skills	Primary school teacher	30	70.86	6.46	104	-.421	.675
	Branch teacher	76	71.78	11.28			
Attitude	Primary school teacher	30	59.40	7.17	104	-.826	.411
	Branch teacher	76	61.03	9.88			
Knowledge	Primary school teacher	30	47.26	4.77	104	-.445	.658
	Branch teacher	76	47.93	7.64			
Instructional design (project) and planning skills	Primary school teacher	30	39.53	4.39	104	-.304	.762
	Branch teacher	76	39.91	6.15			
Total	Primary school teacher	30	217.06	17.94	104	-.604	.547
	Branch teacher	76	220.67	30.64			

When table 5 is examined, it is seen that there is no significant difference primary school and branch teacher- administrator whose mean score obtained from total and all sub-dimension. Thus, it may be said that there is no significant difference administrator's curriculum literacy level according to branch.

d. Findings about seniority year variables

In this study, as there are limited administrators who have 1-4 and 5-9 seniority years, administrator's seniority years ranges were divided into 2 groups as in 1-14 years and 15 years and over. The analysis results of independent group t test are shown in

table 6 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to seniority year's variable.

Table 6. Independence group t test results about administrator's curriculum literacy for seniority years

Dimension	Seniority years	n	\bar{X}	sd	df	t	p
Curriculum management skills	1-14 years	39	72.64	10.23	104	.861	.391
	15 years and over	67	70.88	10.09			
Attitude	1-14 years	39	60.64	8.27	104	.056	.956
	15 years and over	67	60.53	9.74			
Knowledge	1-14 years	39	47.71	6.37	104	-.031	.975
	15 years and over	67	47.76	7.29			
Instructional design (project) and planning skills	1-14 years	39	40.30	5.01	104	.697	.488
	15 years and over	67	39.50	6.06			
Total	1-14 years	39	221.30	26.59	104	.470	.640
	15 years and over	67	218.68	28.33			

When table 6 is examined, it is seen that there is no significant difference between administrator having different seniority years whose mean score obtained from total and all sub-dimension. That is why, it may be stated that there is no significant difference administrator's curriculum literacy level according to seniority years.

e. Findings about management seniority variable

Anova analysis results of test were shown in table 7 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to management seniority variable.

Table 7. Anova analysis results about administrator's curriculum literacy for management seniority

Dimensions	Management seniority	Source of Variance	SS	df	MS	F	p
Curriculum management skills	1-4 year	Between Groups	571.720	3	190.573	1.904	.134
	5-9 years	Within groups	10210.695	102	100.105		
	10-14 years	Total	10782.415	105			
	15 years and over						
Attitude	1-4 years	Between groups	218.678	3	72.893	.859	.465
	5-9 years	Within groups	8653.218	102	84.835		
	10-14 years	Total	8871.896	105			
	15 years and over						
Knowledge	1-4 years	Between groups	305.297	3	101.766	2.187	.094
	5-9 years	Within groups	4746.826	102	46.538		
	10-14 years	Total	5052.123	105			
	15 years and over						
Instructional design (project) and planning skills	1-4 years	Between groups	220.233	3	73.411	2.356	.076
	5-9 years	Within groups	3178.607	102	31.163		
	10-14 years	Total	3398.840	105			
	15 years and over						
Total	1-4 years	Between groups	3015.968	3	1005.323	1.331	.268
	5-9 years	Within groups	77036.117	102	755.256		
	10-14 years	Total	80052.085	105			
	15 years and over						

When table 7 is examined, it is seen that there are no significant difference administrators having different management seniority years whose mean score obtained from total and all sub-dimension. Thus, it may be said that there is no significant difference administrator's curriculum literacy level according to management seniority years.

f. Findings about educational status variable

In this study, as there are a few graduated associated degree or doctorate degree, administrator's educational status grouped in two as associated degree/undergraduate and postgraduate/doctorate degree. In other words, administrators were divided in two groups as in graduated from postgraduate and not graduated from postgraduate. The analysis results of independent group t test are shown in table 8 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to educational status variable.

Table 8. Independence group t test results about administrator's curriculum literacy for educational status

Dimensions	Educational Status	n	\bar{X}	sd	df	t	p
Curriculum management skills	Associate degree / Undergraduate	85	71.44	9.87	104	-.165	.869
	Postgraduate/doctorate	21	71.85	11.37			
Attitude	Associate degree / Undergraduate	85	61.04	9.13	104	1.063	.290
	Postgraduate/doctorate	21	58.66	9.39			
Knowledge	Associate degree / Undergraduate	85	47.61	6.89	104	-.397	.692
	Postgraduate/doctorate	21	48.28	7.25			
Instructional design (project) and planning skills	Associate degree / Undergraduate	85	39.85	5.51	104	.206	.837
	Postgraduate/doctorate	21	39.57	6.49			
Total	Associate degree / Undergraduate	85	219.96	26.74	104	.234	.815
	Postgraduate/doctorate	21	218.38	31.55			

When table 8 is examined, no significant difference is seen between graduated postgraduate and non-postgraduate administrators' mean score obtained from both total and all sub-dimension. Thus, it may be said that there is no significant difference administrator's curriculum literacy level according to educational status.

g. Findings about type of school graduated variables

In the study, as there are a few faculties except education faculty and faculty of science and literature which administrators graduated, Administrators' graduated school type is divided into two as an education faculty and other faculty. That is to say, The group of administrators who graduated from science and literature faculty was involved in the group of other faculties-graduated. The analysis results of independent group t test were shown in table 9 to determine whether the level of school administrator's curriculum literacy significantly differs accordingly to type of school graduated variable.

Table 9. Independence group t test results about administrator's curriculum literacy for type of faculty graduated

Dimensions	type of school graduated	n	\bar{X}	sd	df	t	p
Curriculum management skills	Faculty of education	76	72.39	10.06	104	1.408	.162
	Other faculties	30	69.33	10.14			
Attitude	Faculty of education	76	61.27	9.02	104	1.253	.213
	Other faculties	30	58.80	9.51			
Knowledge	Faculty of education	76	47.92	7.20	104	.414	.680
	Other faculties	30	47.30	6.29			
Instructional design (project) and planning skills	Faculty of education	76	40.05	5.86	104	.721	.473
	Other faculties	30	39.16	5.25			
Total	Faculty of education	76	221.64	28.08	104	1.186	.238
	Other faculties	30	214.60	26.13			

When table 9 is examined, no significant difference is seen between faculty of education and other faculty-graduated administrators' mean score obtained from both total and all sub-dimension. That is why, it may be stated that there is no significant difference administrator's curriculum literacy level according to type of faculty administrators graduated.

h. Findings about type of school-worked

The analysis results of Anova test were shown in table 10 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to type of school variable.

Table 10. Anova analysis results about administrator's curriculum literacy for type of school-worked

Dimensions	Type of school	Source of variance	SS	df	MS	F	p
Curriculum management skills	Pre-school	Between groups	116.856	3	38.952	.373	.773
	Primary school						
	Secondary school	Within groups	10665.559	102	104.564		
	High School	Total	10782.415	105			
Attitude	Pre-school	Between groups	210.524	3	70.175	.826	.482
	Primary school						
	Secondary school	Within groups	8661.372	102	84.915		
	High School	Total	8871.896	105			
Knowledge	Pre-school	Between groups	175.589	3	58.530	1.224	.305
	Primary school						
	Secondary school	Within groups	4876.534	102	47.809		
	High School	Total	5052.123	105			
Instructional design (project) and planning skills	Preschool	Between groups	53.494	3	17.831	.544	.654
	Primary school						
	Secondary school	Within groups	3345.345	102	32.798		
	High School	Total	3398.840	105			
Total	Preschool	Between groups	1558.148	3	519.383	.675	.569
	Primary school						
	Secondary school	Within groups	78493.937	102	769.548		
	High School	Total	80052.085	105			

When table 10 is examined, no significant difference is seen between different type of schoolworking administrators' average score obtained from both total and all sub-dimension. That is why, it may be stated that there is no significant difference administrator's curriculum literacy level according to type of school.

i. Findings about administrative status

In the study, as there are a few administrators who are worked as head assistant principal, administrator's management status is divided into two group as headmaster and assistant principal. That is to say, school administrators who are worked as head assistant principals are also in the same group with school administrators who are assistant principals. The analysis results of independent group t test were shown in table 11 to determine whether the level of school administrators' curriculum literacy significantly differs accordingly to management status variable.

Table 11. Independence group t test results about administrator's curriculum literacy for administrative status

Dimension	administrative status	n	\bar{X}	sd	df	t	p
Curriculum management skills	Headmaster	17	69.76	9.26	104	-.782	.436
	Assistant principal	89	71.86	10.30			
Attitude	Headmaster	17	59.35	9.50	104	-.597	.552
	Assistant principal	89	60.80	9.16			
Knowledge	Headmaster	17	49.64	5.46	104	1.237	.219
	Assistant principal	89	47.38	7.15			
Instructional design (project) and planning skills	Headmaster	17	39.47	4.36	104	-.261	.795
	Assistant principal	89	39.86	5.92			
Total	Headmaster	17	218.23	21.94	104	-.230	.819
	Assistant principal	89	219.92	28.66			

When table 11 is examined, no significant difference is seen between in charge of headmaster and assistant principal administrators' average score obtained from both total and all sub-dimension. That is why, it may be stated that there is no significant difference administrator's curriculum literacy level according to administrative status.

DISCUSSION, RESULT AND SUGGESTIONS

As a result of the research, it was found that the average score obtained by the school administrators participating in the study was above the middle score of the scale. Therefore, it can be said that school administrators have high curriculum literacy levels.

In other words, it can be stated that school administrators perceive themselves as good curriculum literate. This finding can be interpreted as school administrators perceive themselves as competent enough to fulfill their duties and responsibilities for the effective implementation of curriculums in their schools. In other words, it can be stated that school administrators think that they can lead the curriculums implemented in their schools successfully. Similar results were obtained in the studies which can be found in the literature. In the study conducted by Demiral (2009), it was found that school administrators generally perform the duties required by curriculum leadership. In the study conducted by Aslan et al. (2018), it was concluded that school administrators' perceptions of curriculum leadership are high. In addition, findings similar to this study were obtained in studies conducted with teachers in the literature. In studies conducted with primary, middle and high school teachers by Keskin (2020) and Kuyubaşoğlu (2019), it was determined that teachers considered themselves sufficient in terms of curriculum literacy. In the study conducted by Aslan and Gürten (2019) with middle school teachers, it was concluded that teachers are highly curriculum literate. In the study conducted by Erdamar (2020) with classroom teachers, it was found that teachers' perception of curriculum literacy is high.

Participating administrators' curriculum literacy level being high in the research shows that administrator have sufficient skills and knowledge in terms of curriculum. It can be stated that this skill and knowledge administrator acquire have been gaining from pre-service training or in-service training. That is to say, there are two probable reason why administrators' literacy level is high. One of this reason can be connected with qualification of administrators' education in undergraduate degree. In this sense, It can be said that administrator participating in the research educated well enough to develop their curriculum literacy level during undergraduate years. In literature, studies conducted with preservice teacher also offer findings which prove this opinion. In conducted studies, it was concluded that preservice teacher's curriculum literacy was good level (Aygün, 2019), high level (Sural & Dedeali, 2018) and sufficient level (Çetinkaya & Tabak, 2019; Erdem & Eđmir, 2018; Gömleksiz & Erdem, 2018). One of the probable reasons why administrators' curriculum level is high might be correlated with the in-service education qualification which administrator gets during performing their duty. Accordingly, it may be stated that their in-service education activities contributed their curriculum literacy level. Findings have been found in studies in literature which supports this opinion. In the studies conducted with primary and secondary school teacher by Aslan (2019), it was concluded that administrators who educated in-service education had higher perception towards curriculum literacy. In studies conducted by Erdamar (2020) and Keskin (2020), it was defined that the teachers who attended in-service education had also higher perception towards curriculum literacy than teachers who did not attend in-service education.

One of the important findings obtained within the context of the research is that determining the curriculum literacy levels of school administrators did not show a significant difference according to variables such as gender, age, branch, professional seniority, management seniority, educational status, type of school graduated, type of school which they work at and administrative status. This finding can be interpreted that administrator's curriculum literacy level does not change according to their demographic properties. This also applies to all sub-dimensions in the scale. In other words, the scores obtained by the school administrators in the "curriculum knowledge", "attitude", "instructional design (project) and planning skill" and "curriculum management skill" sub-dimensions in the scale did not differ significantly according to the variables. Similar findings were obtained in the studies found in the literature. Aslan (2019) determined that school administrators' perceptions of curriculum literacy did not differ significantly according to gender, branch, management status, education status and professional seniority variables. Again, Aslan et al. (2018), in their study, determined that school administrators' perceptions of curriculum leadership did not differ significantly according to gender, education status, branch and management status; Demiral (2009) found that professional seniority and managerial seniority had no effect on curriculum leadership behaviors. Besides, in literature, similar findings were also obtained in the studies conducted with teachers. In most of studies in literature, it is stated that variables such as gender (Aslan & Gürten, 2019; Keskin, 2020; Mansurođlu, 2019), age (Mansurođlu, 2019), branch (Aslan & Gürten, 2019; Erdamar, 2020; Kahramanođlu, 2019; Mansurođlu, 2019), professional seniority (Aslan & Gürten, 2019; Erdamar, 2020; Kahramanođlu, 2019; Keskin, 2020; Mansurođlu, 2019), educational status (Erdamar, 2020; Mansurođlu, 2019), type of school graduated (Aslan & Gürten, 2019; Keskin, 2020), type of school which they work (Keskin, 2020) did not make difference in teachers' perception of curriculum level.

In the study, it was found that mean score obtained from administrators' curriculum literacy scale's "knowledge" sub-dimension is above the middle score of the scale. Thus, it can be said that average score obtained from administrators' "knowledge" dimension is high. This finding can be interpreted as administrators are knowledgable about curriculum development and the curriculum elements including objectives, content, teaching and learning process and evaluation. First of all, administrators should have enough knowledge to lead curriculum implementing in schools. Because administrators cannot supply necessary support and guidance for an issue which administrators does not have any knowledge about. In this regard, administrators being well-informed about curriculum in schools is pretty valuable for implementing curriculum successfully in schools. It can be said that implementing curriculum successfully in schools will affect positively schools' academic success. As a matter of fact that conducted studies shows that schools' academic success is high where administrators are well-informed about curriculum (Cotton, 2003). In study conducted by Dađdeler & Arseven (2015), similar findings also were obtained, and It was stated that administrators thought themselves as a well-informed about curriculum. Similar findings were still obtained in the study conducted by Gündođan (2019) and it was stated that teachers generally had enough knowledge about curriculum.

It was determined in the study that mean score obtained from administrators' curriculum literacy scale's "attitude" sub-dimension is above the middle score of the scale. Thus, it can be said that average score obtained from dimension about administrators' attitude is high. This finding can be explained that administrators are aware of responsibilities and duties for implementing curriculum successfully at schools and eager for fulfilling these responsibilities and duties. Besides, it can be said that administrators appreciate curriculum and have positive opinion for curriculum. After all, it is not expected that administrators who have negative opinion for curriculum and does not appreciate curriculum do not supply necessary support during implementing curriculum. In this respect, administrators' positive attitude for curriculum will also contribute positively to implement curriculum successfully. Similar findings were also obtained from studies conducted with teachers. Accordingly, it was determined that teachers had a positive attitude for curriculum (Gündoğan, 2019) and appreciated the curriculum (Keskin,2020).

It was determined in this study that mean score obtained from administrators' curriculum literacy scale's "curriculum instructional design (project) and planning skill" sub-dimension is above the middle score of the scale. Thereby, it can be said that mean score obtained from dimension about administrators' curriculum Instructional design (project) and planning skill is high. Implementing the curriculum successfully in schools depends on well-planned the process. If there is no well-working plan about how curriculum is applied, the possibility of facing the problems which effects negatively implementing of problem during process will also increase. In this context, high capacity of administrators' planning skills will effect positively the process of implementing curriculum. Similar findings were obtained by in the study conducted by Can (2007) and It was stated that elementary school administrators were enough sufficient to plan the process of implementing curriculum with teachers at the beginning of term. Also, in the study conducted with teachers by Ergüneş and Mercan (2011), teachers were stated that primary school administrators were sufficient enough to plan the process of education. Besides, in the study conducted with by Aslan and Gürlen (2019) it was determined that teachers' capacity of planning was high.

It was determined in the study that mean score obtained from administrators' curriculum literacy scale's "curriculum management skill" sub-dimension is above the middle score of the scale. Thereby, it can be said that mean score obtained from dimension curriculum management skill is high. Similar results were obtained in the studies conducted in the context of instructional leadership regarding the managing curriculum and teaching process, which is considered a sub-dimension of instructional leadership in the literature. In the study conducted by Akman (2015), it was determined that school principals working in high schools saw themselves at a pretty good level in terms of the management curriculum and teaching process; In the study conducted by Aygün (2014), it was found that school administrators working in high schools perceive themselves as highly competent in this dimension. Administrators, instructional leadership at schools, having high average score obtained from curriculum management skills sub-dimension also will provide them to fulfill successfully their instructional leadership role. In this regard, findings obtained from this study can interpreted that administrators will lead successfully solution of problems which comes out during implementing curriculum, be a good guidance for teacher in this process and provide necessary environment and financial resources for the effective implementation of curriculum. In other words, it can be said that administrator will perform necessary behavior for the effective implementation of curriculum. The studies conducted in the literature also support this opinion. While it was determined in the study conducted by Önder (2010) that administrators who works primary school and high school always fulfill necessary behavior for the management of curriculum and teaching process; in the study conducted by Sağır and Memişoğlu (2012), primary school administrators usually perform these behaviours. Besides, in the literature there are also many studies teacher's opinion included about what level administrators perform necessary behaviours about management dimension of curriculum and teaching process. Findings obtained from studies conducted with teachers are similar to findings obtained from studies conducted with administrators. That is to say, administrators' opinions about dimension management of implementing curriculum at schools are also supported by teachers. The study conducted with secondary school teachers in Malaysia by Sim (2011), it was determined that the teachers found administrator successful regarding management of curriculum and instruction. In the study conducted by Aksoy, 2006; Bulduklu, 2014; Daşkın, 2019; Gülbahar and Özdemir, 2019; Karaduman, 2017; Köse, 2016; Küp, 2011; Önder, 2010; Özgün, 2018; Sağır and Memişoğlu, 2012; Sucu, 2016; Tatlıoğlu and Okyay, 2012, teachers opinion contains that administrators mostly fulfill necessary behaviors for the management of curriculum and teaching process dimension.

Within the context of this research, it can be said that school administrators should be curriculum literate in order to perform their instructional leadership roles. Accordingly, studies can be carried out to statistically determine the relationship between the curriculum literacy levels of school administrators and their level of performing instructional leadership roles. In addition, this research is designed quantitatively. Qualitative studies can also be carried out to obtain more in-depth data on curriculum literacy levels of school administrators.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Statements of publication ethics

We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

Researchers' contribution rate

The study was conducted and reported with 60% contribution of the first author and 40% contribution of the second author.

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