Osmangazi Journal of Educational Research **Volume 8(1), Spring 2021**

RESEARCH Open Access

Suggested Citation: Sivri, H., & Şahin, S. (2021). Adopting learner-centered education and perceptions of school effectiveness. *Osmangazi Journal of Educational Research*, *8*(1), 48-76.

Submitted: 22/04/2021 **Revised:** 08/05/2021 **Accepted:** 17/05/2021

Adopting Learner-Centered Education and Perceptions of School Effectiveness

***Hakan Sivri, **Semiha Şahin**

Abstract. Learner-centered educational practices and school effectiveness are among the remarkable emerging research areas of educational realms. In this study, it is aimed to describe the relationship between administrators' and teachers' adoption of learner-centered psychological principles and their perceptions about the effectiveness of their schools. The study includes the characteristics of quantitative research methods. Utilizing the survey model, the sample of the study consisted of 429 participants including 364 teachers and 65 school administrators from 32 public secondary schools. The data of the study were gathered through "Learner-Centered Educational Principles Adoption Scale" and "Effective School Scale". Depending on the distribution of the data gathered, parametric and non-parametric analyzes were executed. The results revealed that administrators and teachers adopted learner-centered psychological principles at high level. It was explored that there was a significant and positive linear relationship between the participants' adopting learner-centered approach and their perceptions about the effectiveness of their schools. The results finally suggested that the participants' perceptions of school effectiveness varied significantly depending on their commitment to learner-centered understanding. It can be interpreted that school administrators and teachers as the key practitioners of educational policies bear a certain level of readiness for adapting to the change efforts centering the learner in educational processes. The findings in this respect can guide policy-makers, administrators, and teachers in their efforts to increase school effectiveness through a learner-centered perspective.

Keywords. Learner-centeredness, learner-centered education, school effectiveness, administrators.

***** Dr. Instructor, Dokuz Eylul University, Institute of Educational Sciences, İzmir, Turkey

e-mail: hakansivri@gmail.com

****** Assoc. Prof. Dr., Dokuz Eylul University, Faculty of Education, İzmir, Turkey

e-mail: ssahin66@gmail.com

Learner-centeredness and school effectiveness are among the noteworthy concerns of emerging educational realms in the global world. Over the years, educational research and teacher training methods have paid ample attention on what teachers do in the classroom, what they teach, and how they should teach. However, recent research and discussions have indicated the educational models relying on "one size fits all" approach have been changing (McCombs & Vakili, 2005).

Although the emerging paradigm derives from the conventional educational models, it differs in adhering to the individual's developmental level and motivation for learning (Lu & Han, 2018; Pirhonen & Rasi, 2017). Taking into account the learners' needs and learning processes, this perspective fundamentally attempts to offer a comprehensive learning model for learners in a holistic way (McCombs & Vakili, 2005), which can be recognized as learner-centeredness. It has been revealed that learners' performances are not independent of their developmental stages, motivational needs, and social interaction, even if it also relies on factors such as instructional programs, content and assessment (Tangney, 2014). Therefore, it is often emphasized that learners' needs, preferences, and opinions equally matter for effective learning (McCombs, 1997; Smyth, 2006).

Parallel to learner-centered approach, the idea of effective schooling is founded on the idea that each and every student can learn if proper conditions and environments are provided. In this context, Creemers and Kyriakides (2007) argue that what is meant by school effectiveness is the effects of environmental factors such as school's educational policy, climate and mission on learners' cognitive and emotional performance. As can be understood from these views, the relationship between inputs and outputs lies at the basis of school effectiveness (Harris, 2005).

Effective schools are learner-centered schools (Bestepe, 2009) and it has been emphasized that the initial findings of effective school research are based on learner-centered understanding and foundations (Lezotte, 2000). In this respect, although not particularly intended to examine the theoretical structures of learner-centered schooling, school effectiveness studies have confirmed and validated the practices of learner-centered psychological principles emerging in effective classrooms and school settings (Creemers & Kyriakides, 2007; Harris, 2005; Levine & Lezotte, 1990; Lezotte, 2000; Sisman, 2011).

In 1990, Turkey took important steps towards reforms and improvement in national education through the National Education Development Project (NEDP) signed with the Word Bank.

Curriculum Laboratory Schools Model (CLSM) was created in order to increase the "quality and effectiveness in primary and secondary education", which is one of the main objectives of NEDP, and placed the learner and learner needs at the center of the school (MONE, 2007). In the model, learner-centered education is considered essential. All educational, training and administrative services in the school were to be organized according to this principle (MONE, 1999).

Recent efforts for school effectiveness in Turkey have focused on to redesign programs and curricula in line with more learner-centered and constructivist approaches to facilitate the effective participation of young people in an innovative economy and a democratic society (Bulut, 2008). Aligned with a learner-centered approach, the "Learner-Centered Educational Model" developed by the Ministry of National Education (MONE) in 2007 revealed the steps that each school needed to take in order for a learner-centered and effective school system to become functional and sustainable. In this model, the instructional contents and objectives were considered to be planned by addressing to students' needs and interests and they were structured in accordance with the spiral approach starting from primary school to secondary education. Methods and techniques were constructed in such a way that students had the opportunity to express themselves by performing individual and teamwork. With this model, it was aimed to give students the opportunity to evaluate both themselves and their peers (MONE, 2007). In the following years, however, the proposed model was dropped off without a chance to be put into practice, and the question to what extent it has been embraced and practiced by the key practitioners, and how it has affected the perceptions of effectiveness in schools still remains unclear. In this regard, this study stemmed from the lack of any thorough investigation upon the relationship between embracing learner-centered understanding and perceptions about school effectiveness in Turkish context. Thus, the uniqueness of the findings is expected to bring about more insights to the literature and to those researching in the related areas.

Learner-Centered Psychological Principles

In 1990, the American Psychology Association (APA) gathered in a working group and constructed the Learner-Centered Psychological Principles (McCombs & Whisler, 1997), which were re-introduced as four factors and fourteen principles (APA, 1997). As research suggests, those four factors are recognized under four headings as: *Cognitive and metacognitive, motivational and affective, developmental and social, and individual differences*, and these factors are explored to have significant influences upon learning, motivation and achievement in schools (Alexander, 2006;

Alexander & Murphy, 1994; 1998; APA, 1993; 1997; Lambert & McCombs, 1998; Smyth, 2006; Zimmerman, 2000). Briefly and concisely, it is possible to group these principles as in below:

Table 1.

Learner-Centered Psychological Principles

Cognitive and Metacognitive Factors	**Motivational and Affective Factors**	**Developmental and Social Factors**	**Individual Differences**
1. Nature of the learning process	7. Motivational and emotional influences on learning	10. Developmental influences on learning	12. Individual differences in learning
2. Goals of the learning process	8. Intrinsic motivation to learn	11. Social influences on learning	13. Learning and diversity
3. Construction of knowledge	9. Effects of motivation on effort		14. Standards and assessment
4. Strategic Thinking			
5.Thinking about thinking			
6.Context of learning			

APA generated these principles through meticulous and comprehensive research, and proved to concern all learners from all stakeholders in the education system to all members of the society (Alexander & Murphy, 1998; APA, 1997; Locke & Latham, 1990). Thus, through a comprehensive point of view, the learner-centered principles constitute a perspective and a conceptual model to be addressed in educational reforms and school improvement efforts for supporting educational processes seeking to facilitate learning, motivation, and performance (Alexander, 2006; Lambert & McCombs, 1998; Sivri & Sahin, 2018).

McCombs and Whisler (1997) shed light on the fundamentals of learner-centeredness suggesting that each and every student is unique and therefore, in order for facilitating learners' participation in their own learning processes, their uniqueness should be addressed. Indeed, in learner-centered models, students actively participate in learning processes, shifting the focus of attention from the teacher, who are conventionally tasked to simply transfer information, to the learner who actively constructs his or her own learning experiences (Barr & Tagg, 1995; Incik & Tanriseven, 2012; Tangney, 2014). The learner, in this model, designs and controls what he or she learns through critical and creative thinking, and makes an effort to improve in the subject matters at which he or she feels incompetent (Bulut, 2008; Weimer, 2002).

School Effectiveness

Effective schools are defined by Berdnard (1938, as cited in Balci, 2011) as the effectiveness of organizations, by Hoy and Feldman (1987) and Karsli (2004) as the level of reaching the goals and the capacity to adapt to the environment, and by Hendrix and McNichols (1984) as reaching the necessary resources. In the early periods of effective school studies, research aimed at determining how to increase students' academic achievement throughout their lives were not satisfactory enough. Likewise, initially when the literature started to develop, it was put forward that the variables for the school did not make a difference for student performance, in fact, socio-economic variables had a striking effect on student achievement (Coleman et al., 1966; Jencks et al., 1972).

The foundations of the early studies are that learners' socio-economic status and family characteristics actually are the main predictors of their performance in schools (Averch et al., 1972; Coleman et al., 1966; Jencks et al., 1972; Purkey & Smith, 1983). However, effective schooling movement has developed further through the following studies, and the pursuit of excellence in education has begun with the approach that schools do matter for student performance and achieving educational goals (Brookover et al., 1979; Creemers & Kyriakides, 2007; Edmonds, 1979; Granvik-Saminathen, 2018; Harris, 2005; Karsli, 2004). The underlying notion of the developing school effectiveness field is that within appropriate environment and conditions provided, each and every student can learn, albeit at different levels and through different methods (Sammons, 2009). Also, the relationships established with school stakeholders and parents particularly function as a mutual support network in establishing effective schools (Abdulkadiroglu, 2020; Sun et al., 2007). Obviously, seeking effectiveness in schools has been initially based more on outside of school factors and then school wide factors.

Researchers have come up with many influential lists of school characteristics through meta-analyzes facilitating the emergence of dynamic factors and classify the relative success of these factors (Kondakci & Sivri, 2014; Kyriakides et al., 2010; Teddlie & Reynolds, 2000; Sun, Creemers, & Jong, 2007). These models have two distinctive features. First, the dynamic nature of a school is that it identifies its weaknesses and helps it take action to improve its teaching and learning environment accordingly (Creemers & Kyriakides, 2007). Second, these models show that the impact of school wide factors on student achievement has multiple levels. The achievement orientation and strong school leadership have often been put forward as key predictors of student performance (Hallinger, 2011; Jacobson, 2011; Leithwood & Mascall, 2008; Sammons et al., 2011).

In effective schools, all teachers can teach, all students can learn, all students can have high expectations from educational processes, and all low performing students can improve their performances (Bishara, 2017; Ozgenel, 2020). In addition, effective schools can offer alternative options to those who want to achieve more, and effective schools are those which are able to facilitate learner to acquire life skills and improve them (Bellei, 2020). On the other hand, Burusic, Babarovic and Velic (2016) point out that researchers in the field of educational effectiveness quite often discussed socially delicate issues such as the question whether education should aim at excellence, or whether the primary goal of education is to reduce educational inequality and achieve educational equity.

Learner-Centeredness and School Effectiveness

Cognitive and meta-cognitive learner-centered instructional variables are known to be above average in terms of positive learning outcomes, positive relationships, impartiality, empathy and critical thinking and learning compared to other innovative teaching models (Doyle, 2011). That is, learning practices based on learner-centered principles are designed to address to learners' needs and interests throughout the learning processes (Choi, Lee, & Kim, 2019; McCombs & Whisler, 1997; Smyth, 2006; Weinberger & McCombs, 2001). For this reason, learner-centered practices have focused on increasing learners' knowledge and understanding as well as their problem-solving skills. Hence, learner-centered practices addressing to the knowledge, skills, and attitudes learners bring in the classroom contribute positively to learners' academic performances as well as their social skills (Weinberger & McCombs, 2001). Further, McCombs and Miller (2008) reveal the practices contributing to school effectiveness as; (1) establishing positive relationships with students and creating a positive learning environment, (2) supporting students' initiatives and creating compelling learning opportunities, (3) supporting students' higher-level thinking and learning skills, (4) addressing individual and developmental differences.

Lu and Hand (2018) figured out that in learner-centered classrooms addressing to learners' motivation in learning practices played one of the main factors that increase achievement and effectiveness. Cornelius-White's (2007) comprehensive meta-analysis also found out that learner-centered instructional practices have noteworthy impacts on student participation, satisfaction, motivation to learn, and students' attitude towards learner-centered classes. Thus, it was revealed that learner-centered instruction has a confirmed correlation (r = .31) with school performance and effectiveness (Cornelius-White, 2007, p.127). Similarly, it was demonstrated that students' use of

self-produced materials (in the form of video production) in the classroom, directing their learning activities in the lessons, increased their motivation towards the learning practices throughout the lessons (Pirhonen & Rasi, 2017).

Benninga, Berkowitz, Kuehn and Smith's (2006) findings constitute another perspective of the correlation between the adoption of learner-centered understanding and practices in classes and school performance. They revealed certain features of effective schools matched with those in schools where learner-centered principles were prevalent. These schools (1) had a clean, hygienic and safe learning environment, (2) promoted model behaviors, equity, equality, and respect, (3) allowed students to contribute consistently to the school and its community, (4) supported an inclusive school community and positive social relationships. In addition, learner-centered cultural factors such as academic expectations, support based on trust and respect for students, addressing to students' expectations, dialogue and sharing responsibilities have been found to have a strong positive relationship with sustainable school effectiveness (Lee & Louis, 2019).

Carter (2000) explained in his study that in an effective school with a lower socio-economic status there was a strong set of beliefs directing the participants' performance in accordance with learner-centered psychological principles. Among these beliefs, commitment and determination to personalize learning for each student regardless of race or income level were observed to be significant (Tangney, 2014). Additionally, it was explored that individuals felt more positive about their skills in terms of general ability or creativity as their experiences with their teachers got more learner-oriented (Altay et al., 2016; Lu & Han, 2018; McCombs, Daniels & Perry, 2008).

The purpose of this study was to examine the relationship between school administrators' and teachers' adoption of learner-centered psychological principles (LCPP) and their perceptions about the effectiveness of their schools. Accordingly, answers to the following questions were sought:

1. What are the participants' levels of adopting learner-centered psychological principles (LCPP) and their perceptions of school effectiveness?

2. Is there a significant relationship between the participants' levels of adopting learner-centered educational approach and their perceptions about school effectiveness?

3. Do the participants' levels of adopting learner-centered educational approach significantly predict their perceptions of school effectiveness?

Method

Research Model

This study bears the features of quantitative research design with a correlational approach, aiming to determine the existence and degree of a correlation between variables (Fraenkel & Wallen, 2000; Karasar, 2005). In the studies adopting this particular approach, the phenomena, individuals or objects are subjected to relational analyses in their own natural conditions (Balci, 2004; Karasar, 2005). Hence, correlation and multiple regression models were utilized by gathering data through the Learner-centered Psychological Principles Adoption and Effective School Scales. The scores obtained from the scales were utilized as the dependent variables, while the participants' job descriptions and their professional characteristics (branch, education level, professional seniority) constituted the independent variables.

Study Group

The population of this study included 6536 teachers and 586 administrators working in 235 public secondary schools in Bursa Metropolitan Province. While sampling, a list of these schools was drawn and taken as clusters. Adhering to impartiality by means of random cluster sampling, 3617 participants (3370 teachers and 247 administrators) from 79 secondary schools were selected. The random cluster sampling method was preferred for ensuring that all the members in all clusters in the universe had equal chance of being selected (Karasar, 2005). Finally, sufficient and valid data were obtained from a total of 429 participants (364 teachers and 65 administrators) from 32 public secondary schools in the initially drawn list (table 2). The participants (241 female and 188 male) had work experiences ranching form 1 year to 26 and more years, and 82 % of them had undergraduate degrees. While determining this sample size with 5% error margin, it was benefited from the sufficient sample size calculation tables of Cohen, Manion and Morrison (2002) and Krejcie and Morgan (1970) in order to confirm the generalizability of the results obtained (Balci, 2004).

Table 2.

Participants

Variable	Level	f (n)	%	Valid %	Cumulative %
Job	Administrator	65	15.2	15.2	15.2
	Teacher	364	84,8	84,8	100
	Total	429	100	100	
Gender	Female	241	56.2	56.2	56.2
	Male	188	43.8	43.8	100
	Total	429	100	100	
Educational Level	Institute of Education	21	4,9	4.9	4.9
	College	15	3,5	3.5	8.4
	Undergraduate	355	82.8	82,8	91.1
	Graduate	38	8.9	8.9	100
	Total	429	100	100	
Work Experience	5 yrs and less	59	13.8	13.8	13.8
	6-10 yrs	67	15.6	15.6	29.4
	11-15 yrs	119	27.7	27.7	57.1
	16-20 yrs	85	19.8	19.8	76.9
	21-25 yrs	58	13.5	13.5	90.4
	26 yrs and more	41	9.6	9.6	100
	Total	429	100	100	
Branch	Turkish Studies	78	18.2	18.2	18.2
	Math	55	12.8	12.8	31.0
	Social Sciences	33	7.7	7.7	38.7
	Foreign Languages	59	13.8	13.8	52.4
	Science	38	8.9	8.9	61.3
	Religion Studies	30	7.0	7.0	68.3
	Physical Training	23	5.4	5.4	73.7
	Musical Studies	14	3.3	3.3	76.9
	Visual Arts	13	3.0	3.0	80.0
	Others	86	20.0	20.0	100
	Total	429	100	100	

Data Collection Tools

The data of the study were obtained through two separate scales as well as a personal information form. The first one of the scales was "Learner-Centered Psychological Principles Adoption Scale" developed by Sivri and Sahin (2018) with the purpose of determining how much school administrators and teachers adopt the learn-centered psychological principles in their schools. Then, in order to find out their perceptions about the effectiveness of their own schools, the same participants of the first scale were also subjected to the "Effective School Scale" developed by Sisman (1996).

The factor analysis results in the development stage of "Learner-Centered Psychological Principles Adoption Scale" explained .53,03 of the total variance (Sivri & Sahin, 2018). It was found that the participants' views varied around 4 factors as: "Cognitive and metacognitive, motivational and affective, developmental and social, and individual differences", indicating

statistically significant CFA (Confirmatory Factor Analysis) results. The Cronbach's Alpha internal consistency coefficient of the scale, consisting of 4 factors and 26 items, was found .88. Regarding the factors, the coefficient appeared to be as .91, .62, .64, .65 respectively. When the Spearman-Brown's two halves test correlation coefficient (.87, .64, .67, .52, .85 in total) was examined, it was figured out that the scale had an adequate internal consistency (Sivri & Sahin, 2018).

The participants were also subjected to the "Effective School Scale" developed by Sisman (1996) to determine the perceptions of principals and teachers in secondary schools about the effectiveness of their schools. Sisman (1996) first started to develop this scale in Eskisehir province through examining the data collection tools and the variables in these tools throughout the related research. In terms of the validity and reliability, the author executed the factor analysis and determined 6 factors, which explained .74,07 of the total variance. The Cronbach's Alpha coefficient was found .93 overall, indicating high level of reliability (Buyukozturk, 2007). The coefficient observed for the factors of the scale were; .94 for effective school principal, .91 for effective teacher, .92 for effective student, .91 for effective school programs and instructional process, .94 for effective school culture and atmosphere, and .87 for effective school environment and parents. Following the analyses, the final version of the scale consisted of a total of 56 items in 5-point Likert type with 10 items in the principal dimension, 10 items in the teacher dimension, 8 items in the student dimension, 10 items in the school programs and instructional process dimension, 10 items in the school culture and atmosphere dimension, and 8 items in the school environment and parents dimension. (Sisman, 1996). Though developed in 1996, the instrument still maintains its validity and currency among contemporary Turkish studies with its content and comprehensiveness (Abdurrezzak & Ugurlu, 2019; Bozaslan & Kaya, 2012; Cakir & Kesme, 2018; Ozgenel, 2020).

Process

During the data collection phase, after acquiring the necessary permissions from official authorities, the researchers visited the selected schools in person and applied the research instruments to the randomly selected subjects with the convenience of availability. Available and voluntary subjects at each school were asked to mention their opinions filling out the two scales with a personal information form.

While collecting data, it was ensured by the researchers that the participants reflected their views with their free will, avoiding the issues that might affect or direct the participants. Lastly,

possible missing data throughout the instruments, even if small amount, and the fact of obtaining only available and voluntary participants' views can be stated among the limitations of this study. Also, it should be noted that this study is subjected to the natural limitations of quantitative researching.

Data Analysis

Calculating the arithmetic mean and the standard deviations for each scale, normalcy of distribution analysis of the scores was calculated. It is possible to check whether the data obtained from the subjects normally distributed in three ways; (1) testing through Kolmogorov-Smirnov and Shapiro-Wilk analyses (Buyukozturk, 2007), (2) measuring and observing the skewness and kurtosis values being within ± 1.5. (Tabachnick & Fidell, 2013), and (3) detecting and removing outlier scores from the data set (Karasar, 2007). The distribution of the scores obtained from the scales was checked by Kolmogorov-Smirnov (z = .032, p> .05; z = .024, p> .05) and Shapiro-Wilk tests (z =.997, p> .05; z = .998, p> .05) with a .05 degree of significance and the results indicated normal distribution (Buyukozturk, 2007). The values obtained from the skewness and kurtosis tests were found within ± 1.5 as -.037 / -. 113 and +.018 / -.175 respectively, and performing outlier control on the basis of participants pointed to a normal distribution of the scores (Tabachnick & Fidell, 2013).

Throughout the analyses, researchers utilized the parametric tests (independent samples t-test), correlation tests for the relationship between the means (dependent variables) obtained from two separate scales, and finally regression analysis for the cause-effect relationship between the two dependent variables. Moreover, the mean scores obtained from the two scales were interpreted as 1.00-1.80 very low, 1.81-2.60 low, 2.61-3.40 medium, 3.41-4.20 high and 4.21-5.00 very high.

Results

The Adoption Levels of Learner-Centered Psychological Principles and Perceptions about School Effectiveness

The researchers analyzed the collected data to explore the participants' levels of adopting learner-centered psychological principles and their perceptions about the effectiveness of their schools. Hence, the first analysis revealed the participants' adoption levels of the principles ($\bar{X}$ = 3.95, Sd = .371). The findings suggested that the participants adopted the learner-centered psychological principles at high level in all dimensions of the scale (table 3).

Table 3.

Adoption Levels of Learner-Centered Psychological Principles

Scale	Factors	Number of Items	Min.	Max.	X̄	Sd
LCPPA	Cognitive and metacognitive	14	3.06	4.62	4.10	.842
	Motivational and emotional	5	2.62	4.44	3.51	.977
	Developmental and social	4	3.36	4.44	4.05	.877
	Individual Differences	3	3.46	4.17	3.90	.857
	Total	26	2.62	4.62	3.95	.371

Findings in Table 3, where the Kolmogorov-Smirnov (z = .032, p> .05) and Shapiro-Wilk (z = .997, p> .05) tests showed normal distribution, suggested that the participants adopted learner-centered principles at the highest level in cognitive and meta-cognitive dimension ($\bar{X}$ = 4.10) and at the lowest in motivation and emotional dimension ($\bar{X}$ = 3.51).

Table 4.

Perceptions about the Effectiveness of Their Schools.

Scale	Factors	Number of Items	Min.	Max.	X̄	Sd
Effective School	Principals	10	3.60	4.18	3.92	.097
	Teachers	10	3.05	4.14	3.65	1.040
	Students	8	3.03	3.50	3.24	.972
	Programs and Instructional Process	10	3.47	3.83	3.64	.964
	School Culture and Atmosphere	10	3.65	3.92	3.73	.954
	School Environment and Parents	8	2.84	4.20	3.44	1.040
	Total	56	2.84	4.20	3.62	.024

The data scores obtained from the Effective School Scale were calculated to examine the perceptions of the principals and teachers (Table 4) about the effectiveness of their schools. The findings indicated that principals and teachers found their schools highly effective ($\bar{X}$ = 3.62, *Sd* = .024).

Kolmogorov-Smirnov (z = .024, p> .05) and Shapiro-Wilk (z = .998, p> .05) tests pointed out that the data had normal distribution. Accordingly, examining the table above revealed that the participants perceived the effectiveness of their schools the highest level at the Principals ($\bar{X}$ = 3.92) and the lowest at the Students ($\bar{X}$ = 3.24) dimensions.

The Relationship between Adopting of the Learner-Centered Psychological Principles and School Effectiveness Perceptions

The Pearson Product-Moment Correlation test was utilized to determine the relationship between the participants' levels of adopting learner-centered principles and their perceptions about the effectiveness of their schools. When the correlation coefficient obtained from the test is examined closely (table 5), it is figured out that there is a positive but low but significant relationship between the variables (r = .226; p <.01).

The fact that the relationship being in positive direction means that the dependent variables and school effectiveness variables correlate in the direction of increase or decrease. This suggests that there is a linear relationship between the variables of the participants' adopting of learner-centered psychological principles and their perceptions about the effectiveness of their schools with an explanatory coefficient of R^2=.05. On the other hand, it is seen that the Cognitive and Meta-cognitive dimension of LCPPA Scale has a slight but positive correlation with the School Environment and Parents dimension of the Effective School Scale (r = .095; p <.05). In addition, the highest correlation between the dimensions of the two scales appear to be between the Individual Differences and the Teachers (r = .309; p <.05).

Table 5.

Pearson Product-Moments Correlation Test Results for the Relationship Between Adopting Learner-Centered Principles and Perceptions about School Effectiveness

Scales and dimensions	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***
1. Cognitive and Meta-cognitive	-		.									
2. Motivational and Emotional	.413**	-										
3. Developmental and Social	.582**	.183**	-									
4. Individual Differences	.567**	.162**	.474**	-								
5. Adoption Levels of Learner-centered Psychological Principles (Total)	.870**	.560**	.632**	.634**	-							
6. Principals	.246**	.030	.253**	.299**	.192**	-						
7. Teachers	.191**	-.081	.231**	.309**	.150**	.446**	-					
8. Students	.066	-.072	.109*	.164**	.088	.326**	.427**	-				
9. Prog. and Inst. Process	.220**	-.024	.278**	.303**	.212**	.316**	.502**	.477**	-			
10. School Culture and Atmosphere	.196**	-.028	.236**	.256**	.165**	.574**	.487**	.506**	.610**	-		
11. School Environment and Parents	.095*	-018	.160**	.179**	.097*	.365**	.334**	.528**	.435**	.555**	-	
12. School Effectiveness (Total)	.250**	-061	.305**	.359**	**.226****	.661**	.714**	.693**	.702**	.818**	.670**	-

**p<.01, *p<.05

The Predictive Power of Adopting Learner-Centered Psychological Principles upon School Effectiveness Perceptions

The findings of the simple linear regression and multiple regression analyses shed light on the relationship between the dependent and the independent variables. In this sense, the data obtained from the Effective School Scale constituted the dependent variable of the simple linear regression analysis, while the independent variables were acquired through the Learner-centered Psychological Principles Adoption Scale. The findings of the test indicated that adopting learner-centered psychological principles was a significant predictor of the perceptions about school effectiveness (Table 6). Within the scope of multiple regression analysis though, the dependent variables were comprised by the data acquired through the Effective School Scale and its dimensions (Principal,

Teachers, Students, Programs and Instructional Process, School Culture and Atmosphere, and School Environment and Parents), and the independent variables obtained through the dimensions of the Learner-centered Psychological Principles Adoption Scale.

Table 6.

Simple linear regression test results for adopting learner-centered psychological principles as predictor of perceptions of school effectiveness

Variables	**B**	**SE**	**β**	**R^2**	**t**	**p**
Constant (School Effectiveness)	2.428	.251	-	-	9.686	.000
Level of Adopting Learner-centered Psychological Principles	.302	.063	.226	.051	4.784	.000*
R=.226 R^2=.051						
$F_{(1,427)}$=22.890 *p<.01						

The table 6 results revealed that the level of adopting learner-centered psychological principles had a significant and positive effect on the perceptions about school effectiveness (*R*= .22, R^2= .05, *p*<01). Accordingly, there is significant relationship between the participants' levels of adopting learner-centered psychological principles and their perceptions about the effectiveness of their schools (*F* (1,427) = 22,890, *p* <.01).

Upon the simple linear regression analysis results across the scales indicating a positive cause and effect relationship, a multiple regression analysis was executed in order to figure out the details of the correlations amongst the factors of Learner-centered Psychological Principles Adoption Scale (Cognitive and Meta-cognitive, Motivational and Emotional, Developmental and Social, and Individual Differences) and the factors of the Effective School Scale (Principals, Teachers, Students, Programs and Instructional Process, School Culture and Atmosphere, School Environment and Parents). The findings were represented in the tables below respectively.

Table 7.

Regression Test Results for Principals

Variables	**B**	**SE**	**β**	**Paired r**	**Partial r**	**t**	**p**
Constant (Principal)	2.156	.332	-	-	-	.393	.000
Cognitive and Metacognitive	.142	.107	.089	.031	.042	.867	.185
Motivational and Emotional	-.082	.069	-.060	.039	.052	1.081	.234
Developmental and Social	.148	.074	.116	.006	.008	.169	.046*
Individual Differences	.224	.063	.204	.026	.034	.707	.000*
R=.332 R^2=.11							
$F_{(5,423)}$=13.098 *p<.01							

The results in table 7 suggested that the dimensions of the first scale (LLCPPA), which were found to significantly predict the perceptions about school effectiveness, had predictive correlation with the Principal factor as well (R= .33, R^2= .11, p<01). Accordingly, there is a moderate but a significant relationship between the dimensions of LCPPA Scale and the participants' perceptions towards principals concerning school effectiveness (F (5,423) = 13.098, p <.01). Additionally, according to standardized regression coefficients, the relative effect sizes of predictor variables on Principals were β=.224 for the Individual Differences, β = .148 for the Developmental and Social, β=.089 for the Cognitive and Meta-cognitive, β=-0.82 for the Motivation and Emotional factors.

Table 8.

Regression Test Results for Teachers

Variables	**B**	**SE**	**β**	**Paired r**	**Partial r**	**t**	**p**
Constant (Teachers)	2.440	.329	-	-	-	7.426	.000
Cognitive and Metacognitive	.077	.106	.048	.033	.035	.730	.466
Motivational and Emotional	-.220	.068	-.163	-.147	-.156	-3.247	.001*
Developmental and Social	.144	.073	.113	.089	.095	1.966	.050
Individual Differences	.280	.062	.255	.204	.214	4.502	.000*
R=.356	R^2=.127						
$F_{(5,423)}$=15.432	*p<.01						

The findings represented in table 8 indicated that the participants' levels of adopting learner-centered psychological principles were positively and significantly correlated with the Teachers factor of the Effective School Scale (R = .35, R^2 = .12, p. <01). According to the multiple regression results, there was an apparent relationship between the independent variables and the participants' perceptions towards the Teachers dimension in terms of school effectiveness (F (5,423) = 15,432, p. <.01). When the results were analyzed in depth, the relative effect sizes of the predictor variables on the Teachers factor were measured as β=.255 for the Individual Differences, β = .113 for the Developmental and Social, β=.048 for the Cognitive and Meta-cognitive, β=-163 for the Motivation and Emotional factors, with respect to the standardized regression coefficients.

Table 9.

Regression Test Results for Students

Variables	**B**	**SE**	**β**	**Paired r**	**Partial r**	**t**	**p**
Constant (Students)	2.829	.358	-	-	-	7.911	.000
Cognitive and Metacognitive	-.035	.115	-.021	-.014	-.015	-.303	.762
Motivational and Emotional	-.142	.074	-.101	-.091	.093	-1.919	.046*
Developmental and Social	.082	.080	.062	.049	.050	1.028	.305
Individual Differences	.186	.068	.164	.131	.133	2.756	.006*
R=.199	R^2=.039						
$F_{(5,423)}$=4.354	*p<.01						

Table 9 also indicated a significant predicting power of Learner-centered Psychological Principles Adoption Scale on the Students dimension of the Effective School Scale (R=.19, R^2=.03**,** p<01). The findings pointed out a significant relationship between the independent variables and the participants' perceptions towards the Students dimension of school effectiveness (F (5,423) = 4.354, p<.01). According to the standardized regression coefficients, the relative effect sizes of the predictor variables on the Students were measured as β = .164 for the Individual Differences, β = .062 for the Developmental and Social, β = -. 021 for the Cognitive and Meta-cognitive, β =.- 101 for the Motivation and Emotional factors.

Table 10.

Regression Test Results for Program and Instructional Process

Variables	**B**	**SE**	**β**	**Paired r**	**Partial r**	**t**	**p**
Constant (Prog.and Ins. Process)	2.208	.300	-	-	-	7.366	.000
Cognitive and Metacognitive	.063	.097	.043	.030	.032	.652	.515
Motivational and Emotional	-.133	.062	-.108	-.098	-.104	-2.151	.032*
Developmental and Social	.199	.067	.170	.135	.143	2.969	.003*
Individual Differences	.216	.057	.216	.173	.182	3.806	.000*
R=.353 R^2=.125							
$F_{(5,423)}$=15.097 *p<.01							

The regression test results for the Programs and Instructional Process (table 10) pointed out that the factors of LLCPPA scale had predicted Programs and Instructional Process dimension of Effective School Scale in a significant measure (R=.35, R^2=.12**,** p<01). The findings of multiple regression test suggested a significant relationship between the participants' levels of adopting learner-centered psychological principles and their perceptions related to the Programs and Instructional Process dimension in terms of the effectiveness of their schools ($F_{(5,423)}$=15.097, p<.01). Besides, the standardized regression coefficients indicated that the relative effect sizes of the predictor variables on the Programs and Instructional Process dimension were β=.216 for the Individual Differences, β=.170 for the Developmental and Social, β=-.043 for the Cognitive and Meta-cognitive, β=.-108 for the Motivational and Emotional dimensions.

Table 11.

Regression Test Results for School Culture and Atmosphere

Variables	B	SE	β	Paired r	Partial r	t	p
Constant (School Culture and Atmosphere)	2.355	.341	-	-	-	6.913	.000
Cognitive and Metacognitive	.102	.110	.063	.043	.045	.933	.352
Motivational and Emotional	-.148	.070	-.107	-.097	-.101	-2.099	.036*
Developmental and Social	.180	.076	.138	.109	.114	2.364	.019*
Individual Differences	.192	.064	.172	.138	.143	2.982	.003*
R=.303 R^2=.092							
$F_{(5,423)}$=10.737 *p<.01							

The regression test results in table 11 also revealed a significant predicting effect on the participants' perceptions towards the School Culture and Atmosphere of school effectiveness (R=.30, R^2=.09**,** p<01). The test results pointed to a significant relationship between the independent variables (Cognitive and Meta-cognitive, Motivational and Emotional, Developmental and Social, and Individual Differences) and the participants' perceptions towards the School Culture and Atmosphere dimensions of school effectiveness ($F_{(5,423)}$=10.737, p<.01). The standardized regression coefficients revealed that the relative effect sizes of the predictors on the School Culture and Atmosphere dimension were measured as β=.172 for the Individual Differences, β=.138 for the Developmental and Social, β=.063 for the Cognitive and Meta-cognitive, and β=.-107 for the Motivational and Emotional factors.

Table 12.

Regression test results for school environment and parents

Variables	B	SE	β	Paired r	Partial r	t	p
Constant (School Environment and Parents)	2.599	.372	-	-	-	6.991	.000
Cognitive and Metacognitive	-.075	.120	-.044	.004	.004	-.629	.530
Motivational and Emotional	-.068	.077	-.047	-.016	-.016	-.890	.374
Developmental and Social	.167	.083	.120	.104	.102	2.006	.046*
Individual Differences	.184	.070	.155	.130	.128	2.613	.009*
R=.209 R^2=.044							
$F_{(5,423)}$=4.836 *p<.01							

The regression test results for the School Environment and Parents also reported (table 12) that the participants' levels of adopting learner-centered psychological principles had significantly predicted their perceptions towards the School Environment and Parents dimension of school effectiveness (R=.20, R^2=.04**,** p <01). The results also signified a relationship between the independent variables (Cognitive and Metacognitive, Motivational and Emotional, Developmental and Social, and Individual Differences) and the participants' perceptions towards the School Environment and Parents dimension of The Effective School Scale ($F_{(5,423)}$=4.836, p<.01). The standardized regression coefficients indicated that the relative effect sizes of the predictors on the School Environment and Parents dimension were measured as β=.155 for the Individual Differences, β=.120 for the Developmental and Social, β=-.044 for the Cognitive and Meta-cognitive, and β=.-047 for the Motivational and Emotional factors.

Discussion and Conclusion

The results revealed that the participants of this study adopted the learner-centered psychological principles at high-level. This result concurs with Maden, Durukan and Akbas' (2011) study which explored significantly high adoption level of learner-centeredness amongst primary school teachers. This finding can be interpreted as promising since teachers and principals as two main stakeholders demonstrate their predisposition to the learner-centered paradigm in educational realm. It has been demonstrated that the participants are prone to activities that would stimulate curiosity at school environments, requiring creativity and productivity in terms of learning. In this sense, it shows that this finding stands compatible with the research in the literature conducted on learner-centered understanding (Cornelius-White, 2007; Incik & Tanriseven, 2012; Maden, Durukan & Akbas, 2011; McCombs & Lauer, 1997; MONE, 1995). As it can be referred, administrators and teachers have at least a certain level of readiness for the Learner Centered Application Model, which the MONE initiated in 2007 and though did not insistently keep on the agenda in the following years. The idea that the learner-centered understanding is highly embraced by administrators and teachers leads to the interpretation that teachers and administrators in the field can adapt more easily and smoothly to the applications centering the learner in educational processes. This means change and improvement efforts towards learner-centered models could be exposed with less resistance by administrators and teachers in similar contexts. This result is also aligned with Cornelius-White's (2007) comprehensive meta-analysis, demonstrating that the majority of practitioners in the educational fields believe that the practices in the classroom should be designed with a learner-centered approach.

Regarding the participants' perceptions about school effectiveness, the results indicate that the schools covered in this study have features of effectiveness referring to the salient characteristics of effective schools. Indeed, numerous studies revealed that the perceptions of principals, teachers, students and parents about the effectiveness of their schools successfully reflect the current effectiveness status (Bas-Collins, 2002; Bestepe, 2009; Catton, 1995; Cubukcu & Girmen, 2006; Levine & Lezotte, 1990; Sheerens, 1992). Hence, it is revealed in this study that the participants find their schools highly effective, and this could in fact be a reference to the effectiveness of the schools covered in this study (Cubukcu & Girmen, 2006; Maden, Durukan, & Akbas, 2011; Sisman, 1996; 2011). Zigarelli's longitudinal study (1996) on effective schools is supportive of the findings of this study regarding that administrators, teachers, school atmosphere, school environment and supportive parents are amongst the most salient predictors of school effectiveness. Moreover, revealing that the school culture and environment as a powerful component follow right after the administrators in the perception of schools' sustainable effectiveness coincides with the findings of Lee and Louis' (2019) study, which examines the sustainable achievement and effectiveness of schools. Balci (1993) and Sisman (1996) also point out that the least effective school characteristic is the parental support in effective school research, while the findings of this study has contrarily found the student profile as the least contributing factor to school effectiveness. Parallel to the previous studies, the findings indicate that the school environment and parents are regarded as the second least significant factor in effectiveness just after the students (Turhan, Sener & Gunduzalp, 2017). This suggests that student characteristics, albeit the overemphasis in the literature, are not in fact perceived as the most crucial part of the equation in school effectiveness efforts.

Another outcome of this study indicates a significant correlation between the adoption of learner-centered practices and school effectiveness perceptions, which overlap with the findings of Benninga et al. (2006). Benninga et al. (2006) report that certain features of effective schools have been revealed to be consistent with the dynamics in schools where learner-centered understanding is dominant. These salient characteristics are stated as; these schools (1) have a clean, hygienic and safe learning environment, (2) support and encourage model behaviors, equity, equality, respect, (3) consistently contribute to the school community, and (4) support an inclusive school community and positive social relationships within this community.

A significant, positive and linear relationship, albeit at a lower level, between adopting learner-centered understanding and school effectiveness perceptions maintains a consistency with

McCombs and Miller's (2008) research findings revealing that learner-centered practices have impact on school performance and effectiveness. Doyle's (2011) research, furthermore, reinforces the relation between learner-centered relationships, teacher and student behavior, school effectiveness and academic achievement. In fact, there are parallel studies emphasizing the correlation between practices based on the understanding of learner-centered instruction in the classroom and school effectiveness by contributing to learners' academic achievement (Carter, 2000; Weinberger & McCombs, 2001). Further, the comprehensive analysis by Cornelius-White (2007), exploring the relationship between the learner-centered education model and school effectiveness perceptions, substantially confirms the correlation results of this study.

The details of the relationship between adopting learner-centered principles and their perceptions about the school effectiveness have also pointed out to a regressive one. Thus, it is understood that adopting learner-centeredness in educational practices are significantly correlated with the perceptions of effectiveness. While adopting learner-centered principles bear moderate correlations with the leadership, teachers and instruction dimensions of school effectiveness, it is understood that it is slightly correlated with the school environment and parents dimensions. This result, at first sight, might seem satisfactory for the Turkish schools that endeavor to replace the traditional and teacher-oriented understanding of schooling over a period of ten years; however, it is obvious far behind both fulfilling the expectations of learners, parents, and our community, and keeping up with the educational demands of the age. Clearly, it is going to take way more miles to cover, and more improvement efforts to make for this end (Atar & Atar, 2012; Caliskan & Zhu, 2020; Frisby, Slone, & Bengu, 2017; Incik & Tanriseven, 2012; Kaymakamoglu, 2018; Maden, Durukan, & Akbas, 2011). Moreover, Yilmaz (2009) point out the structural problems of educational system and teacher training in Turkey at the top of the barriers obstructing learner-centered improvements. In fact, even in the leading countries or regions in this issue, there are still difficulties in transitioning from teacher-centered instruction to learner-centered practices, and the most important of these are the difficulties of developing learners' self-regulation skills and taking responsibility for the learning (Blumberg & Pontiggia, 2011; Choi, Lee & Kim, 2019; Reigeluth et al., 2015).

The implications of the study suggest that school reform and improvement efforts based on learner-centered understanding could contribute positively to the effectiveness of schools. In this context, the study of McCombs et al. (2008) suggest that the more individuals come across with learner-centered practices, the more attention and awareness they display in personal development

and academic participation. Further, some outstanding studies put forward that individuals perceive their skills more positively in terms of general capacity or creativity as their experiences with their teachers get more learner-centered (Altay et al., 2016; Lu & Han, 2018; McCombs et al., 2008).

Consequently, this study explores that both administrators and teachers adopt learner-centered principles at a high level as well as finding their schools highly effective. The consensus could hint the co-operability between the two major stakeholders of schooling for the future efforts of improvements and reforms towards more learner-centered and effective schools. The results also indicate that having learner-centered perspectives about educational practices could predict the perceived effectiveness of the schools, which could be proposed among the characteristics of school effectiveness. In fact, although there are other variables being indicators of school effectiveness, it would be insightful if there were ample amount of investigations unraveling the effectiveness standards. The findings in this regard underline the need of more progress in Turkish schools to increase the implementations of learner-centered instructional practices. Hence, the implications of this study can guide policy-makers, administrators, and teachers for the efforts to increase school effectiveness through a learner-centered perspective.

Recommendations

Prospective studies could be conducted with an experimental research model to investigate the implications of school effectiveness, for instance, by providing awareness training to school administrators and teachers as to treatment and control groups in similar contexts within the scope of learner-centered psychological principles. Also, through more studies on similar issues, prospective teachers and administrators can raise awareness for overcoming potential barrier stages in front of them by adopting learner-centered understandings and obtaining the necessary skills especially during teacher training stages. In addition, other variables that might affect school effectiveness can be examined in depth with qualitative and longitudinal studies. Lastly, compelling the entire school community to go beyond their comfort zones, strengthening learners' ideas, needs, skills, and preferences, and thriving for increasing school effectiveness could be strategic ways for change and effectiveness efforts in schools.

About Authors

First Author: Hakan Sivri holds a PhD degree on Educational Administration and Supervision from Dokuz Eylul University. He works as an instructor in a public institution and as a visiting instructor at National Defence University. He continues his academic research on school effectiveness, effective school leadership, and school performance. Dr. Sivri is the corresponding author and can be contacted at: hakansivri@gmail.com

Second Author: Semiha Şahin works an Associate Professor of Educational Administration and Supervision at Dokuz Eylul University, Institute of Educational Sciences. Her research focuses on organizational culture, teacher education, and educational leadership.

Conflict of Interest

It has been reported by the authors that there is no conflict of interest.

Funding

No funding was received

Ethical Standards

Ethics Committee Approval was granted for the study by Dokuz Eylul University Institute of Educational Sciences and can be presented if required

ORCID

Hakan Sivri https://orcid.org/0000-0002-6730-9243

Semiha Şahin https://orcid.org/0000-0002-1135-0327

References

Abdulkadiroglu, A., Pathak, P. A., Schellenberg, J., & Walters, C. R. (2020). Do parents value school effectiveness?. *American Economic Review*, *110*(5), 1502-39.

Abdurrezzak, S., & Ugurlu, C., T. (2019). A study of validity and reliability of school effectiveness scale. *Inonu University Journal of the Faculty of Education (INUJFE), 20*(1), 69-82.

Alexander, P. A., & Murphy, P. K. (1994). The research base for APA's learner centered principles. *Invited symposium paper presented at the annual meeting of the American Educational Research Association*, New Orleans.

Alexander, P. A. (2006). *Psychology in learning and instruction*. Upper Saddle River, NJ: Pearson.

Alexander, P. A., & Murphy, P. K. (1998). The research base for APA's Learner-Centered Psychological Principles In B. L. McCombs & N. Lambert (Eds.), *Issues in school reform: A sampler of psychological perspectives on learner-centered schools*. Washington, DC: APA Books.

American Psychology Association, Task Force on Psychology in Education. (1993). *The learner centered psychological principles: Guidelines for school redesign and reform*. Washington, DC: American Psychological Association and the Mid-continent Regional Educational Laboratory.

American Psychology Association, Board of Educational Affairs. (1997). *Learner centered psychological principles: Framework for school reform and design*. Retrieved from https://www.apa.org/ed/governance/bea/learner-centered.pdf on 23.01.2018.

Altay, B., Ballice, G., Bengisu, E., Alkan-Korkmaz, S., & Paykoc, E. (2016). Embracing student experience in inclusive design education through learner-centered instruction, *International Journal of Inclusive Education, 20*(11), 1123-1141.

Atar, H. Y., & Atar, B. (2012). Examining the effects of Turkish education reform on students' TIMSS 2007 science achievements. *Educational Sciences: Theory and Practice*, *12*(4), 2632-2636.

Averch, H. A., Carroll, S. J., Donaldson, T. S., Kiesling, H. J., & Pincus, J. (1972). *How effective is schooling? A critical review and synthesis of research findings*. Santa Monica, Calif.: Rand.

Balci, A. (1993). *Etkili okul: Kuram, uygulama ve araştırma [Effective school: Theory, practice and research]*. Ankara: Yavuz Dağıtım.

Balci, A. (2004). *Sosyal bilimlerde araştırma: Yöntem teknik ve ilkeler [Research in social sciences: Method, technique and principles]*. Pegem A Yayıncılık.

Balci, A. **(**2011). *Etkili okul ve okul geliştirme [Effective school and school improvement]*. Ankara: Pegem A Yayınları.

Barr, R. B., & Tagg, J. (1995). From teaching to learning: A new paradigm for undergraduate education. *Change*, *27*(6), 13-25.

Bas-Collins, A. (2002). School-based supervision at a private Turkish school: A model for improving teacher evaluation. *Leadership and Policy in Schools*, *1*(2), 172-190.

Burusic, J., Babarovic, T., & Velic, M. S. (2016). School effectiveness: An overview of conceptual, methodological and empirical foundations. *School Effectiveness and Educational Management, 5*(26).

Bellei, C., Morawietz, L., Valenzuela, J. P., & Vanni, X. (2020). Effective schools 10 years on: Factors and processes enabling the sustainability of school effectiveness. *School Effectiveness and School Improvement*, *31*(2), 266-288.

Benninga, J. S., Berkowitz, M. W., Kuehn, P., & Smith, K. (2006). Character and academics: What good schools do. *Phi Delta Kappan*, *87*(6), 448-452.

Bestepe, İ. (2009). Etkili okulun egitim-ogretim sureci ve ortami boyutlarının nitelikleri [The qualities of the instructional process and environment dimensions of effective schools]. *Electronic Journal of Social Sciences*, *8*(29), 76-83.

Bishara, S. (2017). School effectiveness and student achievement. *International Journal of Contemporary Research and Review*, *8*(2), 20171-20188.

Blumberg, P., & Pontiggia, L. (2011). Benchmarking the degree of implementation of learner-centered approaches. *Innovative Higher Education*, *36*(3), 189-202.

Bozaslan, H., & Kaya, A. (2012). Sufficiency levels of primary schools according to effective school criteria (Sanliurfa province sample). *Procedia-Social and Behavioral Sciences*, *46*, 980-986.

Brookover, W. B., Beady, C., Flood, P., Schweitzer, J., & Wisenbaker, J. (1979*). School social systems and student achievement: Schools can make a difference*. New York: Praeger.

Bulut, İ. (2008). Yeni ilkogretim programlarında ongorulen ogrenci merkezli uygulamalara iliskin ogretmen gorusleri (Diyarbakir ili örnegi) [Teacher opinions regarding student-centered practices envisaged in new primary education programs (Diyarbakir province sample)]. *Educational Administration: Theory and Practice*, *14*(4), 521-546.

Buyukozturk, S. (2007). *Sosyal bilimler için veri analizi el kitabi [Handbook of data analysis for social sciences]*. Ankara: Pegem Akademi.

Carter, S. (2000). No excuses: Lessons from 21 high-performing schools. *The Heritage Foundation*, Washington, DC.

Choi, J., Lee, J. H., & Kim, B. (2019). How does learner-centered education affect teacher self-efficacy? The case of project-based learning in Korea. *Teaching and Teacher Education*, *85*, 45-57.

Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education*. London: Routledge.

Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research*, *77*(1), 113-143.

Creemers, B., P. & Kyriakides, L. (2007). *The dynamic of educational effectiveness*. London: Routhledge.

Caliskan, A., & Zhu, C. (2020). Organizational culture and educational innovations in Turkish higher education: Perceptions and reactions of students. *Educational Sciences: Theory and Practice*, *20*(1), 20-39.

Cakir, R., & Kesme, C. (2018). Examination of vocational high schools' effectiveness levels in terms of European Union project numbers. *Universal Journal of Educational Research*, *6*(10), 2341-2351.

Cubukcu, Z. & Girmen, P. (2006). Ortagretim kurumlarının etkili okul olma ozelliklerine sahip olma duzeyleri [Secondary schools' levels of obtaining effective school characteristics]. *Journal of Social Sciences***,** (16), 121-136.

Doyle, T. (2011). *Learner-Centered Teaching: Putting the Research on Learning into Practice*. Sterling, VA: Stylus Publishing.

Edmonds, R. (1979). *A discussion of the literature and issues related to effective schooling*. Volume 6. St. Louis, MO: CEMREL, Inc.

Fraenkel, J.,R. & Wallen, N., E. (2000). *How to design and evaluate research in education*. New York: McGraw-Hill.

Frisby, B. N., Slone, A. R., & Bengu, E. (2017). Rapport, motivation, participation, and perceptions of learning in US and Turkish student classrooms: a replication and cultural comparison. *Communication Education, 66*(2), 183-195.

Granvik Saminathen, M., Brolin Laftman, S., Almquist, Y. B., & Modin, B. (2018). Effective schools, school segregation, and the link with school achievement. *School effectiveness and school improvement, 29*(3), 464-484.

Hallinger, P. (2011). Leadership for learning: lessons from 40 years of empirical research. *Journal of Educational Administration, 49(2)*. 125-142.

Harris, A. (2005). Contemporary perspectives on school effectiveness and school improvement. In Harris, A. & Bennet, N. (eds.), *School Effectiveness and School Improvement: Alternative Perspective*. London: Continuum.

Incik, E. Y., & Tanriseven, I. (2012). The views of education faculty instructors and teacher candidates on student-centered education (Mersin University sample). *Mersin University Journal of Education Faculty, 8*(3), 172-184.

Jacobson, S. (2011). Leadership effects on student achievement and sustained school success. *International Journal of Educational Management, 25*(1), 33-44.

Johnson, D. W., & Johnson, R. T. (1990). Social skills for successful group work. *Educational leadership, 47*(4), 29-33.

Kaymakamoglu, S., E. (2018). Teachers' beliefs, perceived practice and actual classroom practice in relation to traditional (teacher-centered) and constructivist (learner-centered) Teaching. *Journal of Education and Learning, 7*(1), 29-37.

Karasar, N. (2005). *Bilimsel arastirma yontemi. (15. Baskı) [Scientific research method. (15th Edition)]*. Ankara: Nobel Yayın Dagitim.

Kondakci, Y., & Sivri, H. (2014). Salient characteristics of high-performing Turkish elementary schools. *Journal of Educational Administration, 52*(2), 254-272.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement, 30*(3), 607-610.

Lambert, N. M., & McCombs, B. L. (1998). *How students learn: Reforming schools through learner-centered education*. American Psychological Association.

Lee, M., & Louis, K. S. (2019). Mapping a strong school culture and linking it to sustainable school improvement. *Teaching and Teacher Education,* 81, 84-96.

Leithwood, K. & Mascall, B. (2008). Collective leadership effects on student achievement. *Educational Administration Quarterly, 44*(4), 529-561.

Levine, D., & Lezotte, L.,W. (1990). *Unusually effective schools: A review and analysis of research and practice*. National Center for Effective Schools Research and Development, Madison, WI.

Lezotte, L., W. (2000). *Leading indicators of effective schools*. Okemos, MI. Effective Schools Products, Ltd.

Locke, E. A., & Latham, G. P. (1990). Work motivation and satisfaction: Light at the end of the tunnel. *Psychological science, 1*(4), 240-246.

Lu, M., & Han, Q. (2018). Learner-centered flipped classroom teaching reform design and practice-taking the course of tax calculation and declaration as an example. *Journal of Educational Sciences: Theory and Practice, 18*(6), 2661-2676.

Maden, S., Durukan, E., & Akbas, E. (2011). Ilkogretim ögretmenlerinin ögrenci

merkezli ögretime yönelik algıları [Primary school teachers' perceptions of student centered teaching]. *Mustafa Kemal University Journal of Social Sciences Institute*, *8*(16), 255-269.

McCombs, B. L. (1993). Learner-centered psychological principles for enhancing education: Applications in school settings. Penner, Louis A. (Ed); Batsche, George M. (Ed); Knoff, Howard M. (Ed); Nelson, Douglas L. (Ed). *The challenge in mathematics and science education: Psychology's response*. Washington, DC, US: American Psychological Association, xvi, 379 pp. http://dx.doi.org/10.1037/10139-009

McCombs, B. L. (1997). Self-assessment and reflection: Tools for promoting teacher changes toward learner-centered practices. *Nassp Bulletin*, *81*(587), 1-14.

McCombs, B., L. (1999). *The Assessment of learner-centered practices (ALCP): Tools for teacher reflection, learning, and change.* Denver, CO: University of Denver Research Institute.

McCombs, B. L., Daniels, D. H., & Perry, K. E. (2008). Children's and teachers' perceptions of learner-centered practices, and student motivation: Implications for early schooling. *Elementary School Journal*, *109*(1), 16-35.

McCombs, B. L. & Whisler, J. S. (1997). *The learner-centered classroom and school: Strategies for increasing student motivation and achievement*. San Francisco: Jossey-Bass.

McCombs, B., & Lauer, P. (1997). Development and validation of the learner-centered battery: Self-assessment tools for teacher reflection and professional development. *The Professional Educator, 20*(1), 1-21.

McCombs, B. L., Lauer, P. A., & Peralez, A. (1997). *Researcher test manual for the learner-centered battery (grades 6-12 version). A set of self-assessment and reflection tools for middle and high school teachers.* Aurora, Colorado: The Mid-continent Regional Educational Laboratory. Retrieved from http://eric.ed.gov/?id=ED422377 on 21.02.2016.

McCombs, B. L. (2004). *The case for learner-centered practices: Introduction and rationale for session.* Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

McCombs, B. L., & Vakili, D. (2005). A learner-centered framework for e-learning. *Teachers College Record*, *107*(8), 1582-1600.

McCombs, B. L., Daniels, D. H., & Perry, K. E. (2008). Children's and teachers' perceptions of learner-centered practices, and student motivation: Implications for early schooling. *The Elementary School Journal*, *109*(1), 16-35.

McCombs, B. L., & Miller, L. (2008). *The school leader's guide to learner-centered education: From complexity to simplicity*. Corwin Press.

Ministry of National Education. (1995). *Ogretmen değerlendirme [Teacher evaluation]*. Ankara: Milli Egitim Basımevi.

Ministry of National Education. (2007). *Ogrenci merkezli egitim uygulama modeli [Learner-centered education application model]*. Ankara: Milli Egitim Basımevi.

Ozgenel, M. (2020). An organizational factor predicting school effectiveness: School climate. *International Journal of Psychology and Educational Studies*, *7*(1), 38-50.

Pirhonen, J., & Rasi, P. (2017). Student-generated instructional videos facilitate learning through positive emotions. *Journal of Biological Education, 51*(3), 215-227.

Reigeluth, C. M., Aslan, S., Chen, Z., Dutta, P., Huh, Y., Lee, D., & Watson, W. R. (2015). Personalized integrated educational system: Technology functions for the learner-centered paradigm of education. *Journal of Educational Computing Research*, *53*(3), 459-496.

Sammons, P. (2009). The dynamics of educational effectiveness: A contribution to policy, practice and theory in contemporary schools. *School Effectiveness and School Improvement, 20*(1), 123-129. http://dx.doi.org/10.1080/09243450802664321.

Sammons, P., Gu, Q., Day, C. & Ko, J. (2011). Exploring the impact of the school leadership on pupil outcomes: Results from a study of academically improved and effective schools in England. *International Journal of Educational Management,* 25(1), 83-101.

Sivri, H. & Sahin, S. (2018). Learner-centered principles adoption scale: Study of validity and reliability. *Journal of Social and Humanities Sciences Research, 29* (5), 3427 – 3439. doi http://dx.doi.org/10.26450/jshsr.753.

Smyth, J. (2006). When students have power: student engagement, student voice, and the possibilities for school reform around dropping out of school. *International Journal of Leadership in education*, *9*(4), 285-298.

Sun, H., Creemers, B.P.M. & de Jong, R. (2007). Contextual factors and effective school improvement. *School Effectiveness and School Improvement, 18*(1), 93-122.

Sisman, M. (1996). *Etkili okul yonetimi [Effective school management]*. Eskisehir: Arastirma Raporu.

Sisman, M. (2011). *Egitimde mukemmellik arayisi: Etkili okullar [The search for excellence in education: Effective schools (2nd edition)]*. Ankara: Pegem A Yayincilik.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics, 6th ed.* Boston. Ma: Pearson.

Tangney, S. (2014). Student-centered learning: a humanist perspective. *Teaching in higher Education, 19*(3), 266-275.

Teddlie, C., & Reynolds, D., S. (2000). *The international handbook of school effectiveness research.* Pergamon, Oxford.

Turhan, M., Sener, G., & Gunduzalp, S. (2017). Turkiye'de okul etkililigi arastirmalarina genel bir bakis [An overview of school effectiveness research in Turkey]. *Turkish Journal of Educational Studies*, *4*(2), 103-151.

Weinberger, E., & McCombs, B. L. (2001). The impact of learner-centered practices on the academic and non-academic outcomes of upper elementary and middle school students. Paper presented in the Symposium, *Integrating what we know about learners and learning: A foundation for transforming PreK-20 practices*, at the annual meeting of the American Educational Research Association, Seattle, WA.

Weimer, M., (2002). *Learner-centered teaching*: *Five key changes to practice*. San Francisco, CA: Doubleday.

Yilmaz, K. (2009). Democracy through learner-centered education: A Turkish perspective. *International Review of Education, 55*(1), 21-37.

Zigarelli, M. A. (1996). An empirical test of conclusions from effective schools research. *The Journal of Educational Research, 90*(2), 103-110.

Zimmerman, B., J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology. 25*(1), 82-91.