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Investigation of Transport-Related Problems in Bussing in the Context of the Opinions of School Administrators[1]

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Abstract

This study seeks to investigate the problems caused by transport in bussing in terms of the opinions of the school administrators. The study is based on a quantitative method and a descriptive survey model. The population of the study consists of school administrators (317) working in schools (197 schools in total) transporting students in different neighborhoods in Siirt in the 2019-2020 academic year. Population count was taken as the basis in this study instead of using sampling as a method. "The Transport-related Bussing Problems Scale" was applied to participants in this study. Data collected via Google Form applications were examined by using descriptive analysis and difference tests. According to results and based on the opinions of the school administrators, some lack of security (failure to fast seat belts and remaining standing during the journey, picking up passengers other than students, inadequate information about first aid, etc.) and communication problems were observed in the transport (an argument with on-duty teachers, failure to offer punctual service, conflict with parents, etc.). It was also observed that there was a considerable difference in transport-related problems in terms of managerial position, years of service in management, total experience in bussing, and settlement.

Keywords: School Administrators, bussing, problems confronted by school administrators

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Introduction

Education is the primary service that ensures the development of countries as well as a living construct. It differs from case to case and always needs improvement and change. This calls for different practices in measures taken for education by countries. Educational practices need to be evaluated in a multi-dimensional way to meet the needs. The flexibility of the education system to developments and challenges is important in this regard. Despite the efforts of countries, millions of people are left out of the education and training system. Facts of life and geographical conditions are crucial in this context.

Bearing in mind that education is the indicator of the welfare levels and development of countries, increased quality of education depends on an increased schooling rate, protection of the equality of opportunity among citizens, and access to schools. A great number of measures are taken to meet such expectations. Bussing (also known as bussed education) is among the relevant practices.

Bussing is defined as the practice of daily transport of students to schools and institutions, known as transport centers, which are determined by the National Education Directorates so that they can continue their education (Regulation on Access to Education by Transport, 2014). In Turkey, compulsory education was gradually modulated to 12 years in 2012, including a four-year education for primary school, secondary school, and high school (Official Gazette, 2012). Although compulsory education is in effect, there are no schools in all settlements due to the high additional costs. The inadequacies in access to schools have once again demonstrated the importance of bussing.

The geographical conditions signal the dispersed settlements and scattered population reality. The scattered population hinders the establishment of schools in the settlements. Thus, people living in dispersed settlements fail to benefit from education and training activities sufficiently. The Ministry of National Education is working on different solutions so that all children can benefit from education and training equally. One of them is the "Bussing Model" (Kavak, 1997). The transport of students, namely bussing, can be defined as ensuring that students, who live in a dispersed settlement with a small population or receive their education in inconvenient schools, are transported to the schools in the centers selected by the commissions set up by the Directorate of National Education (Küçüksüleymanoğlu, 2006).

Bussing is aimed at reaching all students within the scope of compulsory education in Turkey. Another reason for bussing is the requirement to overcome the problems such as lack of teachers, schools, insufficient number of classes and materials, and/or inconvenient school environment. It is possible to list the reasons for the introduction of bussing under 6 headings (Seçer and Yanpar Yelken, 2009). Among these are the dissemination of education, dispersed settlements, internal migration, efforts to increase the quality of education, the idea of reducing costs, and equality of opportunity in education.

The contributions of UNESCO in the international arena have allowed the Bussing System to be implemented in many countries including the USA, Australia, and New Zealand while the system was launched in Turkey in the second half of the 1989-1990 academic year. A total of five training centers, three in Kırıkkale and two in Kocaeli, were established. As the relevant centers were found to be successful, a total of 77 centers have also been put into practice in Van, Kocaeli, Eskişehir, Çankırı, Konya, Kırklareli, Çanakkale, Antalya, and Balıkesir provinces as of the 1990-1991 academic year (Büyükkaragöz and Şahin, 1995). Today, the practice is widespread and takes place wherever it is needed.

Following the adoption of eight-year compulsory education, bussing was launched by the General Directorate of Primary Education of the Ministry of National Education to provide education for all students, incorporate students in dispersed and small settlements into primary education, and ensure that students in multi-grade classes received education and training of a higher quality (Kavak, 1997). The main purpose of the bussing system is to expand education throughout the country as well as to provide educational justice among students (Ağırkaya, 2010).

Following the pilot schemes, A. Ekrem YANGIN, the General Director of Primary Education, made the following statements: Equality of opportunity was ensured with the help of bussing and the students in this sense had access to schools where they could receive normal education. As the multi-grade class

practice came to an end in the relocated places, there was also a decrease in the amount of teacher shortage. The enrolment rate increased, especially for female students. A qualified environment was provided in education with the success of students increasing after bussing. Children transported to schools had the opportunity to be engaged in culturally and socially advanced environments, thus exhibiting more positive behaviors regarding cleanliness, clothing, and health. Bussing also resulted in the end of the construction of schools and public houses in small settlements. No funds were allocated to the schools that were closed once bussing was launched (Yangın, 1991).

It is an inevitable fact that bussing has positive aspects, though it also brings with it some challenges. Among these are physical inadequacy and lack of equipment in schools designated as transport centers (Özgün, 2007). Most of the students included in the bussing system have nutrition-related problems, which mainly occur during lunch. The food served for the students is insufficient while the dining area is deprived of suitable conditions (Özgün, 2007). Students are forced to travel standing up when commuting to schools as the local people also use the transport services. Most of the roads are in bad condition and the climatic conditions also hinder transport (Yeşilyurt et al., 2007). Headaches, stomachs, and some psychological disorders occur in students while traveling (Arı, 2003). Students also experience problems in adapting to school and the environment. Guidance teachers are not appointed to help students having problems (Yeşilyurt et al., 2007). Students have difficulty focusing on their first lessons in the morning (Arı, 2003). Bussing vehicle drivers do not have sufficient education (Recepoğlu, 2006). Parents report that their kids are not able to come together with their teachers, so they fail to establish healthy communication with their teachers (Işık & Şentürk, 2003). One of the criticisms leveled at the bussing system is that the stakeholders were not consulted sufficiently before the practice was launched. School administrators report that the opinions of teachers and parents were not taken into account before the implementation of bussing (Işık & Maya, 2003). While the company officials participating in transport tenders, especially in rural areas, participate in the tenders with vehicles with a high number of vehicle seats, they are observed to carry out transport with vehicles with a low number of seats after the tender (Ülker, 2009). Such challenges pose an obstacle to the healthy and regular functioning of bussing. Bussing will be more functional and healthier and provide maximum benefit if such challenges are revealed and analyzed and realistic solutions are found (Recepoğlu, 2009).

Launched to ensure that all individuals benefit from education and training activities with equal opportunities, bussing also brought with it several problems (Altunsaray, 1996; Bilek and Kale, 2012; Cinoğlu, Demir and Öztürk, 2014; Kaya and Aksu, 2009). ; Kayhan, 2014; Kefeli, 2005; Küçükoğlu and Küçükoğlu, 2006; Yalçın, 2006; Yeşilyurt, Orak, Tozlu, Uçakand Sezer, 2007; Yurdabakan and Tektaş, 2012). Studies in Turkey demonstrate that these problems are generally based on teacher-parent or teacher-student communication, health problems, transport, nutrition, course situations, and problems experienced by students in terms of adaptation (Arı, 2000; Küçüksüleymanoğlu, 2006).

Bussing has some aspects that are different from normal education. These aspects can be listed as transport drivers, service, dining halls, diets, and school layout. Schools, where students are transported, have some positive and negative aspects for transported students and other students. To successfully implement bussing, it is necessary to comprehensively determine and examine the negativities that may arise. Thus, the problems experienced in bussing could be solved (Bilek and Kale, 2012).

In the 2019-2020 academic year, while 754555 students in 42210 schools benefited from 12095 relocated schools and relocated unschooled settlements in primary schools across Turkey, 9454 students in 142 schools benefited from 368 relocated schools and relocated unschooled settlements in primary schools in Siirt. While 397965 students benefited from 5103 secondary schools throughout Turkey, 3206 students benefited from 37 secondary schools in Siirt. While 99810 students benefited from 7553 schools providing education within the scope of special education practice throughout Turkey, 262 students benefited from transport services to five special education schools in Siirt (Meb, 2019).

The fact that millions of students are educated and trained as part of the system makes it important to investigate transport-related problems in bussing and bring these problems to light, taking into account the opinions of school administrators who are the main actors of the system in the capacity of administrators and supervisors. The national literature (Karakütük, 1996; Büyükboyacı, 1998; Bulut, 2003; Kabaş, 2006; Özgün, 2007; Kolcu, 2011 and Uslu, 2017) reveals some studies on bussing with

samples selected from mostly students and parents. It is observed that while dealing with the problems of the transport system, transport-related problems are not included in detail. The significance of the present study increases as it is aimed at offering solutions for related problems. In addition, the CFA (Confirmatory Factor Analysis) was not performed since all participants in the population were reached during the scale development stage, which was considered as the limitation of the study.

The research objective

This study was designed to shed light on the level of transport-related problems in bussing and whether the level of these problems differs statistically in terms of some variables based on the perceptions of school administrators. To achieve the main goal of the research, the sub-problems determined by taking into account the opinions of school administrators are listed as follows.

Based on the opinions of the school administrators,

1- What is the level of transport-related problems in bussing?
2- Is there a significant difference in the opinions of school administrators in terms of their managerial position, their years of service in management, their total experience in transported schools, the level of the school, the number of busses used for transport to the school, and the settlement of the school?

Method

Research Model

This study was designed with a survey model, which is one of the quantitative research methods. A survey model is a form of research aimed at determining the current status and characteristics of past or present practices. The event, object, or individual that is been the subject of the research is explained in its own terms. No additions, deletions, or changes are made to its characteristics. What the researcher wants to obtain is there and included in it. The research solely should observe and determine what is desired to be achieved (Karasar, 2009).

Population

The population consists of school administrators working in 197 education institutions included in the bussing system in Siirt in the 2019-2020 academic year. Since the entire population was accessible, a separate sample group was not formed and the relevant population was accepted as the population count. The objective is to obtain information about the population. There is no need to create a sampling when all the units in the population can be reached. Reaching all units in the population and collecting information is called the population count (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, and Demirel, 2018). Information about the population of the research is given in Table 1.

Table 1.
Number of Schools included in the Bussing System in Siirt

Primary Schools	Secondary Schools	Total
142	37	179

Personal information about the school administrators participating in the research is given in Table 2.

Table 2.
Personal information about the school administrators participating in the research

Variable	Category	N	%
Managerial Position	School Administrator	157	49.5
	Deputy Principal	160	50.5
Years of service	1-3 years	163	51.4
	4-6 years	73	23
	7 years and over	81	25.6
Total Experience in the bussing system	1-3 years	140	44.2
	4-6 years	102	32.2
	7 years and over	75	23.7
Level of the school	Primary school	201	63.4
	Secondary school	116	36.6
Number of vehicles	1-5	149	47
	6-10	65	20.5
	11 and over	103	32.5
Settlement	Village	159	50.2
	District	102	32.2
	City Centre	56	17.7
Total		317	100

Information related to the managerial position highlights that 157 (49.5%) are school administrators while 160 (50.5%) are deputy principals. 163 (51.4%) have an experience of one to three years in management with 73 (23%) having an experience of four and six years and 81 (25.6%) having an experience of seven years or more. Considering experience in bussing, 140 (44.2%) have an experience of one to three years, 102 (32.2%) an experience of four to six years, and 75 (23.7%) an experience of seven years and more. The level of the school is primary school for 201 (63.4%) and secondary school for 116 (36.6%). Considering the number of transport vehicles, 149 are offered (47%) with one to five transport services, 65 (20.5%) with six to ten transport services, and 103 (32.5%) with 11 or more transport services. Finally, and based on settlements, 159 (50.2%) work in villages, 102 (32.2%) work in district centres, and 56 (17.7%) work in city centres.

Data Collection Tool

The "Transport-Related Bussing Problems Scale" developed by the researcher was applied as a data collection tool. The measurement tool consists of two parts. The first part contains questions to determine the personal information of school administrators while the second part contains a total of 20 items related to transport-related problems in bussing. Items 3, 11, 13, and 19 of the scale were coded as reversed items. The level of participation in the judgments in the measurement tool was graded from 1 to 5. Accordingly, 1 represents “I strongly disagree” and 5 represents “I totally agree”.

While preparing the scale, an item pool was created by taking into account the previous studies on bussing. While creating the item pool, school administrators working in institutions where bussing is available were interviewed. Graduate theses on the issue were reviewed. The item pool was enriched through the scrutiny of documents related to transport, drivers, and bussing including news, reports, research, etc. Then the problem sources of the measurement tool were categorized in the form of themes/dimensions. Relevant items were collected and studied under the categories. The first draft of the measurement tool included 33 items. Expert opinion was obtained from two faculty members in the field of educational sciences. In this context, five items were revised and the questions in the measurement tool were reduced to 31 items. The assessment tool was examined by a language expert along with their opinions. Once the expert opinions were completed, the scale was applied to 10 school administrators, and the final form of the measurement tool was made ready for application without negativity.

Six questions were added to the personal information form to identify the participants in the measurement tool. These questions are comprised of variables including managerial position, years of service in the management, the level of the school, the number of vehicles, the settlement, and the experience of the administrators in bussing.

While developing the measurement tool, 6 sub-dimensions were planned for the item pool stage. These are security, student, finance, management, comfort, and communication problems. For example, there were items such as "transport drivers have knowledge about first aid responses in case of possible accidents" in safety-related problems or "transport drivers pay attention to the cleanliness of vehicles" in comfort-related problems. However, the exploratory factor analysis revealed a single factor structure and thus, the dimensions were excluded. The necessary information is presented in Table 3.

To ensure the validity of the measurement tool, expert opinions, which were deemed sufficient, were taken for form validity and content validity. However, an exploratory factor analysis was performed to test the construct validity. In this case, Kaiser Mayer Olkin (KMO) values and Bartlett's Sphericity tests were taken as the basis to provide the necessary conditions for factor analysis. The KMO value was .95 and the Barlett Sphericity value was significant ($p<.01$). The number of samples (317 participants) included in the study was considered sufficient.

There is an ongoing debate on the number of participants to make sense of the statistical analyzes of the data obtained as a result of the practice and to clarify the factor loads. The opinions that emerged as a result of the debates are evaluated in three categories. These are item/observation number ratios, absolute observation numbers, and expected factor/observation number ratios (Yurdugül, 2005). Absolute observation widths of 300 participants in factor formations are considered "good" (Comfrey and Lee 1992). It is sufficient for the observation number ratios to be 10 times the number of items (Osborne and Costello, 2004). Therefore, there was no inconvenience in the factor analysis.

To test the construct validity of the scale, items below .30 were removed from the measurement tool after checking the item-total correlation. Then the factors were checked. It was observed that six dimensions emerged when the factors were first released, but it was difficult to justify the dimensions with the information from the literature. When the structure was re-evaluated based on the single-factor structure, it was seen that the explained variance exceeded 50%. As a result, items with factor loadings below .30 were also excluded from the process and a single factor structure was found to be valid. The final version of the measurement tool was accepted as a 20-item and single-factor scale. Detailed information about the validity of the scale is given in Table 3.

Table 3.
Exploratory Factor Analysis and Item Total Correlation Results for the Validity and Reliability of the Scale

Item Number	Item Total Correlation	Loading Value	Items
1	.676	.561	Transport drivers have knowledge about first aid responses in possible accidents.
2	.632	.583	Transport drivers make sure that children wear seat belts during transport.
3	.393	.327	Transport drivers pick up passengers other than students on transport vehicles.
4	.663	.563	Transport drivers have the maturity to transport children.
6	.505	.368	Parking spaces for transport vehicles are convenient.
6	.694	.621	The safety measures of the transport vehicles are sufficient.
7	.739	.662	Transport drivers are kind to students.
8	.573	.447	Transport drivers are sensitive to the timetable.
9	.707	.624	Transport drivers consider the developmental stages of students.
10	.712	.645	Transport drivers are aware of the service they provide.
11	.366	.311	Persons other than the drivers determined by the national education also use the transport vehicle.
12	.539	.419	The control of the transport drivers works well.
13	.323	.300	During the journey, students transported remain standing.
14	.671	.578	Transport drivers pay attention to the cleanliness of transport vehicles.
15	.752	.677	Transport drivers take into account seasonal conditions in the vehicle.

Table 3 continuing

16	.663	.554	Transport vehicles have sufficient comfort for bussing
17	.726	.640	Transport drivers use proper language around students.
18	.565	,354	School administrators appreciate transport drivers in their work.
19	.395	,303	Transport drivers have problems with on-duty teachers.
20	.679	,604	Transport drivers communicate well with parents.
Explained variance= 50,377			KMO= ,948
Total Cronbach-Alpha = ,944			Barlett Sphericity Test = p=.00 p<.01)

Table 3 reveals that the load values of the factors of the items range between .30 and .67. The item-total correlations of the items range between .32 and .75. The Cronbach Alpha internal consistency coefficient calculated from the scores obtained from the scale items is .94. A reliability coefficient ratio of 60 and above in measurement tools is an indication that the relevant scale is a reliable measurement tool (Can, 2017). The values indicate that the "Transport-Related Bussing Problems Scale" is reliable and valid.

Data Collection

Before the data collection process for the study, an application was made to the Social Sciences Institute of Siirt University to obtain the necessary approvals. Ethics Committee Decision was taken by Siirt University with the session date of 04.05.2020 and the session number of 33. Once the approval dated 26.02.2020 and numbered 4168599 was obtained from the Siirt Provincial Directorate of National Education through the Institute, the schools offering to buss were visited one by one to give the administrators brief information about the research. Then, data collection began by directly reaching the participants through face-to-face interviews voluntarily. However, following the breakout of the first Covid-19 case in Turkey on 11.03.2020, schools were suspended as of 16.03.2020. After 23.03.2020, schools started to continue education via distance education. As a result of the pandemic rules in Turkey, the data collection process, which would have been initially conducted through face-to-face interviews, was abandoned. Instead, the "Transport-Related Bussing Problems Scale", which had been prepared before through the "Google Form" application, was created and made ready. As a first step, the measurement tool, created via Google Form, was delivered to the school administrators with the help of the branch managers responsible for the transport in the Provincial and District National Education Directorates. In the second stage, the contact numbers of the school administrators of the institutions offering to buss were obtained from the branch managers responsible for the transport, and the school administrators were contacted by phone and given preliminary information about the scale. Finally, the online link was shared and the data were collected.

Data Analysis

Among the independent variables of the study are the managerial position, the years of service in the management, the level, of school, the number of transport vehicles, the settlement, and the years of experience of the administrators in bussing. The collected data were analyzed via the SPSS 22 program. Percentages and frequencies were calculated to determine information about the participants. To achieve the first sub-goal of the research, descriptive analyzes were made for each item in the measurement tool. Percentages, frequency values, arithmetic mean, and standard deviation scores were evaluated. In the second stage, an examination was made into whether there was a significant difference in the level of transport-related problems based on the independent variables using the t-Test and ANOVA difference tests. To find out whether the parametric assumptions were met in the application of the difference tests, the normality and homogeneity of the distribution were taken as the basis. It was observed that the distribution was homogeneous, but two different situations related to its normality emerged. Considering the skewness and kurtosis values, the majority of the items ranged between +1 and -1. Items 3, 5, and 19 ranged between +2 and +2. In total, skewness and kurtosis values were found to be in the tolerance range. According to Tabachnick and Fidell (2013), a normal distribution is the case if skewness and kurtosis values range between -1.5 +1.5 while George and Mallery (2010) believe that they should range between +2.0 and -2.0 and Groeneveld and Meeden (1984) believe that they should range between +3.0 and -3.0. The Kolmogorov-Smirnov Test revealed that there was no normal distribution. In addition, the result did not change much when both parametric and nonparametric tests were applied. In this case, taking into account the central limit theorem and based on the fact that the skewness and kurtosis value

is in the normal distribution range, parametric tests were used. According to the central limit theorem, regardless of the distribution of the actual masses, the distribution will resemble normal in a randomly selected sampling, and therefore the characteristics of the normal distribution can be accepted (Ghasemi and Zahediasl, 2012; Pallant, 2007; Ho and Behrens, 1995; Weisstein, 2014). In this case, the findings were interpreted with the independent t-test and one-way analysis of variance (ANOVA). LSD test, one of the Post Hoc tests, was used to reveal the significant difference in the ANOVA test. The significance of the obtained data was searched according to the $p<.05$ value (Altunışık, Coşkun, Yıldırım, & Bayraktaroğlu, 2001).

Findings

This section includes the findings obtained as a result of the ' Transport-Related Bussing Problems Scale' applied to the administrators of the schools carrying out education activities within the scope of bussing in the province of Siirt in the 2019-2020 academic year and relevant interpretations. Each sub-goal is given in tables.

Opinions of School Administrators on Problems Related to Transport

The arithmetic means and standard deviation values of the responses given by the administrators to the items to determine transport-related problems in bussing are presented in Table 4. In this section, the item score averages are given as they are, and the reverse items are arranged in the comparisons made over the total score.

Table 4.
Arithmetic Mean and Standard Deviation Values of School Administrators for Transport-Related Problems

Items	N	$\bar{X}$	SD
Transport drivers have knowledge about first aid responses in possible accidents.	317	2.25	1.04
Transport drivers make sure that children wear seat belts during transport.	317	2.16	1.24
Transport drivers pick up passengers other than students on transport vehicles.	317	3.32	1.46
Transport drivers have the maturity to transport children.	317	2.98	1.27
Parking spaces for transport vehicles are convenient.	317	3.08	1.45
The safety measures of the transport vehicles are sufficient.	317	2.52	1.19
Transport drivers are kind to students.	317	2.98	1.14
Transport drivers are sensitive to the timetable.	317	3.21	1.19
Transport drivers consider the developmental stages of students.	317	2.53	1.13
Transport drivers are aware of the service they provide.	317	2.68	1.18
Persons other than the drivers determined by the national education also use the transport vehicle.	317	3.34	1.36
The control of the transport drivers works well.	317	2.61	1.25
During the journey, students transported remain standing.	317	3.95	1.11
Transport drivers pay attention to the cleanliness of transport vehicles.	317	2.83	1.17
Transport drivers take into account seasonal conditions in the vehicle.	317	2.96	1.11
Transport vehicles have sufficient comfort for bussing	317	2.64	1.13
Transport drivers use proper language around students.	317	2.55	1.24
School administrators appreciate transport drivers in their work.	317	3.04	1.16
Transport drivers have problems with on-duty teachers.	317	3.15	1.13
Transport drivers communicate well with parents.	317	2.80	1.13
General	317	2.87	.85

Table 4 highlights that the highest problem perception average of the school administrators working in the schools offering to buss occurred in the item stating that "During the journey, students transported remain standing" ($\bar{x}$ = 3.95) followed by the item stating that "Persons other than the drivers determined by the national education also use the transport vehicle" ($\bar{x}$ = 3.34) and "Transport drivers pick up passengers other than students on transport vehicles" ($\bar{x}$ = 3.32). The lowest perception average was available in the item stating that "Transport drivers make sure that children wear seat belts during transport" ($\bar{x}$ = 2.16) followed by the item stating that "Transport drivers have knowledge about first aid responses in possible accidents" ($\bar{x}$ = 2.25) and "The safety measures of the transport vehicles are

sufficient" ($\overline{x}$ = 2.52). The overall problem perception average of school administrators of transport-related bussing problems is at a moderate level with ($\overline{x}$ = 2.87).

Comparison of Bussing Problems Regarding the Managerial Position Variable

The t-test was applied to determine whether there was a statistical difference in the scores of the school administrators based on the managerial position variable regarding transport-related problems in bussing. The results are presented in Table 5.

Table 5.
Findings Regarding Whether Transport-Related Problems Differentiate Based on the Managerial Position Variable

Dimensions	Managerial Position	N	$\overline{X}$	SD	sd	t	p
General	School Administrator	157	2.74	.78	310	-2.64	.009
	Deputy Principal	160	2.99	.89			

Table 5 highlights that a statistically significant difference was found in the opinions of school administrators regarding transport-related problems in bussing ($t_{(2.64)}$= p<.05) based on the managerial position variable. The average opinion of the deputy principals ($\overline{x}$ = 2.99) regarding transport-related problems was higher than the average of the school administrators ($\overline{x}$ = 2.74). Therefore, deputy principals had a higher level of perception of transport-related problems in bussing.

Comparison of Bussing Problems Regarding the Variable of Years of Service in Management

One-way analysis of variance (One-Way ANOVA) was conducted to determine whether the perceptions of the school administrators regarding transport-related problems in bussing differed based on the variable of years of service in management (between one and three years, between four and six years, and over seven years). The results are presented in Table 6.

Table 6.
Findings Regarding Whether Transport-related Problems Differ Based on the Variable of Years of Service in Management

Dimension	Years of Service in Management	N	$\overline{X}$	SD	Source of variance	Sum of Squares	Sd	Sum of Squares	F	p	Difference
General	A 1-3 years	163	2.99	.83	Intergroup	5.485	2	2.742	3.847	.02	A-B A-C
	B 4-6 years	73	2.71	.90	In-group	223.841	314	0.713			B-A
	C 7 years and over	81	2.76	.81	Total	229.326	316				C-A
	Total	317	2.87	.85							

Table 6 reveals that a statistically significant difference was found in the opinions of school administrators regarding transport-related problems in bussing (F(3.85)=, p<.05) based on the variable of years of service in management. The LSD test from Post Hoc tests revealed that the difference was significant between the managers with one to three years of service and the managers with four to six years and seven years and more of service. The managers with one to three years of experience perceive bussing problems higher than the managers with four to six and more than seven years of service.

Comparison of Bussing Problems Regarding the Total Experience Variable

One-way analysis of variance (One-Way ANOVA) was conducted to determine whether the perceptions of the school administrators regarding transport-related problems in bussing differed based on the total experience in management variable (between one and three years, between four and six years, and over seven years). The results are presented in Table 7.

Table 7.
Findings Related to Whether Transport-related Problems Differentiate Based on the Total Experience in Management Variable

Dimension	Total Experience in Bussing	N	$\bar{X}$	SD	Source of variance	Sum of Squares	Sd	Sum of Squares	F	p	Difference
General	A 1-3 years	140	3.02	.83	Intergroup	5.812	2	2.906	4.08	.018	A-B A-C
	B 4-6 years	102	2.77	.85	In-group	223.51	314	.712			B-A
	C 7 years and over	75	2.71	.83	Total	229.33	316				C-A
	Total	317	2.87	.85							

Table 7 reveals that a statistically significant difference was found in the opinions of school administrators regarding transport-related problems in bussing ($F_{(4.08)}$=, p<.05) based on the total experience variable. The LSD test from Post Hoc tests revealed that the difference was significant between the managers with a total experience of one to three years and those with a total experience of four to six years and seven years or more. A significant difference was found between the managers with an experience of four to six years and those with an experience of one to three years. A significant difference was found between the managers with an experience of seven years or more and those with an experience of one to three years. In addition, managers with an experience of one to three years ($\bar{x}$ = 3.02), managers with an experience of four to six years ($\bar{x}$ = 2.77), and managers with an experience of more than seven years ($\bar{x}$ = 2.71) had higher levels of perception of transport-related problems in bussing.

Comparison of Bussing Problems Regarding the Variable of Level of the School

A t-test was conducted to determine whether the perceptions of the school administrators regarding transport-related problems in bussing differed based on the level of the school variable. The results are presented in Table 8.

Table 8.
Findings on Whether Transportation-related Problems Differentiate based on the Level of the School Variable

Dimensions	Level of the school	N	$\bar{X}$	SD	sd	t	p
General	Primary School	201	2.91	.85	315	1.299	.195
	Secondary School	116	2.79	.83			

Table 8 reveals that no statistically significant difference was found in the opinions of school administrators regarding transport problems in bussing ($t_{(1.3)}$=, p>.05) based on the level of the school variable.

Comparison of Bussing Problems Regarding the Variable of Number of Transport Vehicles

One-way analysis of variance (One-Way ANOVA) was conducted to determine whether the perceptions of the school administrators regarding transport-related problems in bussing differed based on the variable of the number of transport vehicles (between one and five, between six and ten, and eleven and more). The results are presented in Table 9.

Table 9.
Findings on Whether Transport-related Problems Differentiate based on the Variable of the Number of Transport Vehicles

Dimension	Number of Transport Vehicles in Schools	N	$\bar{X}$	SD	Source of variance	Sum of squares	Sd	Sum of Squares	F	p
General	A 1-5	149	2.93	.85	Intergroup	1.445	2	.722	.995	.371
	B 6-10	65	2.86	.74	In-group	227.881	314	.726		
	C 11 and over	103	2.78	.90	Total	229.326	316			
	Total	317	2.87	.85						

Table 9 reveals that no statistically significant difference was found in the opinions of school administrators regarding transport-related problems in bussing ($F_{(1)}$=, p>.05) based on the variable of the number of transport vehicles.

Comparison of Bussing Problems Regarding the Settlement Variable

One-way analysis of variance (One-Way ANOVA) was conducted to determine whether the perceptions of the school administrators regarding transport-related problems in bussing differed based on the settlement variable (Village center, District center, and City center). The results are presented in Table 10.

Table 10.
Findings on Whether Transport-related Problems Differentiate based on the Variable of Settlement

Dimension	Settlement of Schools	N	$\bar{X}$	SD	Source of Variance	Sum of Squares	Sd	Sum of Squares	F	p	Difference
General	A Village	159	3.03	.89	Intergroup	13.950	2	6.975	10.169	.000	A-B
	B District	102	2.57	.71	In-group	215.376	314	.686			B-A
	C City	56	2.96	.79	Total	229.326	316				C-B
	Total	317	2.87	.85							

Table 10 reveals that no statistically significant difference was found in the opinions of school administrators regarding transport-related problems in bussing ($F_{(10.17)}$=, p<.05) based on the variable of settlement. The LSD test from Post Hoc tests revealed that the difference was significant between the school administrators working in villages and district centers. A significant difference was found between the opinions of the administrators working in the city center and those working in the district center. In addition, the level of perception of problems arising from transport in bussing was higher among the administrators working in the city center ($\bar{x}$ = 2.96) and those working in the district center ($\bar{x}$ = 2.57).

Discussion and Conclusion

Conducted to examine transport-related problems in bussing in the context of the opinions of school administrators, the present study is quantitative and patterned with a descriptive survey model. The 'Transport-Related Bussing Problems Scale' developed by the researchers was applied to the school administrators participating in the research. Expert opinions were taken to ensure the validity of the measurement tool and the validity of the measurement tool was strengthened by performing an EFA (Exploratory Factor Analysis). The CFA (Confirmatory Factor Analysis) was not required because the results were within the desired value range and all participants in the population covering the study were reached. In addition, a CFA (Confirmatory Factor Analysis) is recommended for the measurement tool used in the research. If a relationship between the scale items is unknown and the scale is newly

developed, an EFA is recommended if while a CFA is recommended if there is a tested relationship and determined factors and items collected under them are identified (Guvendir & Özkan, 2015; Orçan, 2018).

Transport-related problems in bussing showed a significant difference based on the managerial position of the administrators in the school. It was observed that the arithmetic mean of the opinions of the deputy principals was higher than the arithmetic mean of the school administrators. This result suggests that deputy principals have a higher level of perception of transport-related problems. It is believed that the relevant result occurs as deputy principals working as deputy principals on duty are the first responders in a problem that occurs and follow the operation of the actions.

Studies in the literature contradict the relevant findings. For example, in a study focusing on the general situation of bussing in primary schools, no significant difference was found among the administrators based on the title variable (Ülker, 2009). Along the same lines, in a study on the problems faced by teachers and administrators working in primary schools within the scope of the bussing system, no significant difference was found based on the variable of duty at school (Küçük, 2010). Besides, Memek (2014) conducted a study on the difficulties faced by teachers and administrators working in schools where students are transported, concluding that a significant difference was found based on the variable of service scores and duty at school.

A significant difference was observed in the opinions of the administrators in terms of their years of service in the management of transport-related problems in bussing. It was observed that the level of problem perception of the administrators with one to three years of service in management was higher than the administrators with four to six years and more than seven years of service in management. It was also observed that the groups with fewer years of service in management had higher levels of perception of transport-related problems. This is possible because a new manager behaves sensitively with more idealistic behaviors in their job. And those with more experience in managerial positions act more sensitively in their job as they are aware of the risks of the job and therefore, the level of problem perception is likely to decrease.

The general situation of bussing in primary schools was discussed and evaluated in a study and no significant difference was found between the opinions of the administrators based on the year of seniority variable. All of the administrators in the seniority groups reported that the transport was partially sufficient (Ülker, 2009). Besides, in a study focusing on the problems of primary school students in bussing, it was found that as the years of service in the profession increased, the opinions of teachers and school administrators against bussing turned out to be unfavorable. It was reported that the reason for this is that a manager with a higher number of years of service in management knows the previous situation of bussing and realizes the recent changes in bussing and thus his/her thoughts towards bussing are likely to change (Şan, 2012).

A significant difference was found in the opinions of the administrators regarding transport-related problems in bussing based on their total experience in schools where students are transported as part of the bussing system. It was observed that administrators with 1-3 years of experience in such schools had a higher level of perception of transport-related problems than managers with 4-6 years and more than 7 years of experience. The administrators with 4-6 years of experience had a higher level of perception of transport-related problems than the administrators with more than 7 years of experience. The level of perception of transport-related problems decreases as the experience of the administrators increases. This is possible because administrators become more practical in solving problems and specialize in problem-solving with more experience. In a study focusing on the problems of primary school students who are transported, teachers and school administrators are observed to have a positive attitude towards bussing as the working time in schools serving as transport centers increase (Şan, 2012).

No significant difference was found in the opinions of the administrators based on the variable of the level of the school in terms of transport-related problems. The results revealed that transport-related problems do not differ depending on the thoughts of the administrators working at different school levels.

No significant difference was found in the opinions of the administrators based on the variable of the number of vehicles in terms of transport-related problems. The results revealed that transport-related problems do not differ depending on the thoughts of the administrators based on the number of vehicles.

A significant difference was observed in the opinions of the administrators regarding transport-related problems in bussing based on the variable of the settlement where the school is located. It was observed that the administrators working in the village had a higher perception level of transport-related problems than the administrators working in the districts and cities. Accordingly, the managers working in the city center had a higher perception level of transport-related problems than the managers working in the district. It is believed that since the village is small, everyone knows each other, and thus school administrators are in a guiding position in all business and transactions, which in return helps create a sincere environment between school administrators and stakeholders. As stakeholders gradually have more personal wishes as part of the sincere environment, their perception level of problems increases. Unlike the villages, in the city centers stakeholders have a higher level of perception as they attempt to follow the liabilities specified in regulations and articles of the law. However, some other studies show that no significant difference occurs between settlements and transport problems. For example, in a study focusing on the general situation of bussing in primary schools, no significant difference was found based on the settlement variable (Ülker, 2009). In another study on the problems faced by the teachers and administrators working in primary schools as part of bussing, the problems arising from the settlement showed a significant difference and the order is given as follows: village, district center, town, and city center (Küçük, 2010). In a study dealing with the difficulties faced by teachers and administrators working in schools to which students are transported, the average service score did not show a significant difference based on the settlement (Memek, 2014).

Based on the data obtained, in-service training seminars are recommended to be organized by the Ministry or the National Education Directorates on the functioning of bussing for the administrators that are assigned to take charge in the management of education institutions covering bussing for the first time. This study took into account the opinions of school administrators and deputy principals. Futures studies are recommended to include teachers, students, parents, and transport drivers or the opinions of the administrators working in schools in the bussing system in different provinces. Most of the studies in this sense are based on quantitative methods and thus qualitative studies are also recommended. Transport-related problems can be examined in terms of dimensions. Since a single-factor structure emerged in this study, the study was limited to a single factor. However, security, finance, management, comfort, and communication dimensions can be studied under separate headings.

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Ethic statement: In this study, we declare that the rules stated in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" are complied with and that we do not take any of the actions based on "Actions Against Scientific Research and Publication Ethics".

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