



## The Effect of Smart Management and School Efficiency on School Performance in the Digital Era

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### ABSTRACT

**Purpose:** This study's objective was to investigate the impact of smart management and school efficiency on school performance in an Indonesian context.

**Design/methodology/approach:** The recommended quantitative research approach for this study was a questionnaire survey. All internal school stakeholders and school partners compose the population of the study. The study employed stratified proportional random sampling, and the sample size was 125 individuals. The data were analyzed using SPSS as a statistical instrument.

**Findings:** The study's results indicate that smart management directly affects school performance in the digital age. Additionally, school efficiency has a large direct impact on school achievement. Smart control and efficiency greatly influence school success in the digital age. **Practical implications:** The study's findings are useful for strategy creation in the digital age. The study's findings can assist practitioners in improving school performance by demonstrating the favorable correlation between smart management and school effectiveness. **Originality/value:** This study evaluated the relationship between smart management and school efficiency and its effect on school performance, a topic that is rarely discussed in the academic literature. The novelty of the research is in the era employed, namely the digital era, in which every operation is based on achieving the organization's vision and goal, which was not included in earlier studies.

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## 1. Introduction

The performance of senior secondary schools in Indonesia must be enhanced (Yusof & Steinmueller, 2022). No more than 36.1% of high school graduates are accepted into postsecondary schools. In the meantime, 73.9% did not attend postsecondary institutions and lacked skills. Due to a lack of skills, the unemployment rate among students is rising, which casts doubt on the effectiveness of secondary schools. Even though they lack skills, they enter the workforce as unskilled employees.

Furthermore, the performance of senior high schools is still poor, as few students can enter the top 10 universities in Indonesia, such as the Bogor Agricultural Institute (IPB), Bandung Institute of Technology (ITB), University of Indonesia (UI), Airlangga University (UNAIR), Diponegoro University (UNDIP), Gadjah Mada University (UGM), and Surabaya Ten November Institute of Technology (ITBS). The number of students admitted to the college is shown in Table 1, which is rather small.

**Table 1**

*Number of students accepted at the best tertiary institutions in Indonesia*

University	Year		
	2020	2021	2022
UI	2	3	3
ITB	4	4	2
IPB	3	4	5
UGM	15	15	14
UNAIR	15	15	16
UNDIP	16	17	17
ITS	5	7	8
UB	10	11	11
UNPAD	12	11	13
Total	82	87	89

Source: State senior high school 1 Samarinda

It is evident from Table 1 that the number is, in fact, quite little; hence, the performance of SMA 1 Samarinda must be enhanced. In addition, school performance relating to the acquisition of medals at academic and non-academic competitions must be improved. Over the past three years, the number of students who have won both academic and non-academic competitions has been demonstrated. Table 2 describes student achievement.

**Table 2**

*Total academic and non-academic achievements over the last three years*

Year	Academic performance	Non-academic performance	Total
2019	23	54	77
2020	24	48	82
2021	36	56	92
2022	42	57	99
Total	125	215	340

Source: student achievement data at State senior high school 1 Samarinda

Table 2 demonstrates that the number of accomplishments over the past four years is not related to the number of pupils enrolled in school. Students' accomplishments are still

quite limited; therefore, they must be enhanced. Many schools' ineffective utilization of various resources remains a challenge to school efficiency. Teachers' efficacy is one of the most crucial components in schools (Muliati et al., 2022; Munavvarkhanova, 2022; Zhao et al., 2021), but it is inadequate in schools.

Therefore, studying the numerous causes of low school performance is vital. Thus, this study effectively introduced the notion of smart management (Hofman & Hofman, 2011) and the school. According to earlier research (Alexandru et al., 2019), school performance will improve when wise management is effective – aspects of intelligent administration impact school achievement. According to further researchers, the greater the degree of school efficiency, the greater the level of school performance. Efficient teachers can contribute to good school performance (Brett, 2019). School performance is unsatisfactory because schools and personnel do not implement several efficiencies (Fried, 2017).

Consequently, the goal of this study is to examine the impact of smart management and school efficiency on school performance in the setting of Indonesia. The use of smart management in schools is highly novel and has numerous positive effects on school performance. There have been several studies on school performance in Indonesia (Gultom & Fibriasari, 2021; Purwanto, 2020). However, the topic of smart management and efficiency has been addressed infrequently. Therefore, this study provides theoretical and practical insights that can enhance academic achievement.

## 2. Hypotheses Development

### 2.1 *The influence of smart management on school performance*

Principals who can effectively implement intelligent management (Hofman & Hofman, 2011) will be able to enhance management performance. Literature reveals that schools can achieve excellent performance when competent administration is executed with strict discipline (Serdyukov, 2017). A school administrator must possess diverse training, self-reliance, and discipline to improve the quality of smart management implementation. School administrators should always employ intelligent leadership to conduct intelligent management effectively.

Teachers, school administrators, supervisors, and government education service officials should all practice intelligent management to improve school quality (Shevchenko, 2013). Good school performance is not solely the principal's responsibility but also of teachers, supervisors, and all internal and external stakeholders (Hamilton, Tee, & Prince, 2016). Internal stakeholders must be separated from the contributions of other parties for school performance to improve truly.

In the past, there were no schools that utilized intelligent management; as a result, school performance enhancements were gradual. When school principals position themselves as the primary implementers of smart management, it is envisaged that school performance will advance more quickly (Heikka et al., 2019). The expert asserted unequivocally that school performance could not be enhanced unless intelligent management is used (Smith & Newschools Venture Fund, 2009).

Extremely fierce rivalry among school administrators will determine which institutions survive and which close (Kurland, Peretz, & Hertz-Lazarowitz, 2010). Everything hinges on whether or not the school implements intelligent management (Mifsud, 2017). Experts have

determined that the more intelligently a school is managed, the more likely it is to become a community-trusted institution (Moos, 2003). Community confidence depends on how much school performance is communicated to the community (Ndalamba, Caldwell, & Anderson, 2018). Communities whose trust is bolstered by the quality of smart management implemented in schools would be proud to send their children to these institutions. As a result of receiving valuable student input, school performance will improve (Wai, 2017).

Smart management will also affect teacher performance in the classroom (Oberer & Erkollar, 2018). Teachers who consistently get leadership with shrewd management will give teachers a great deal of inspiration for career development in applying the curriculum, implementing learning, evaluating learning, and following up on learning outcomes (Sheninger, 2019). Effective follow-up will result in improved school performance overall. Consequently, this investigation presented the following theory;

**Hypothesis 1:** *Smart management has a significant effect on school performance.*

## **2.2 School efficiency to school performance**

A school is efficient if it can effectively manage all of its resources (Kanmaz & Uyar, 2016). Well-managed school resources will result in school savings, further boosting academic achievement. Numerous experts have determined that when a school can make a variety of observations, it will receive various benefits that will improve school performance (Kirk & Jones, 2004).

Many schools are permanently shuttered due to a lack of resource-saving measures. The school's expenditures are not proportional to the revenue it generates (Luthans, 2011). Failure in multiple areas, including the negative accounting balance, will reduce school performance. If this continues for three years in a row, the school's performance will decline and be threatened with permanent closure (Lyle, 2018).

In essence, improved school efficiency will significantly enhance school quality and performance. All aspects of school performance can be improved by increasing efficiency. Efficiency must be implemented by all parties, including students, instructors, school administration, school principals, and any other parties present and operating within the school. If students can carry out efficiently, it will greatly impact school performance because kids are the most numerous group (Musungu & Nasongo, 2008). Teachers, as the party who has been in school the longest, contribute the most to enhancing school efficiency and performance, along with students (Doran, 2004).

According to efficiency theory, efficiency begins with planning, implementing, organizing, evaluating, and following up (Ontai-Machado, 2016). All efficiency-related policies must be communicated to all internal stakeholders before they can be implemented effectively. Effective outreach will expand stakeholder knowledge and promote an understanding of maximizing time, effort, and resources to achieve the organization's vision and objective.

**Hypothesis 2:** *There is a significant difference between school efficiency and school performance*

## **2.3 Effect of smart management and Efficiency on School Performance**

Previous research has shown that school performance improves when wise management and efficient resource use are adopted in schools (Tschannen-Moran & Hoy,

2001). In the current era of information technology, smart management necessitates that schools execute all areas of their services using advanced digital technology that aligns with the progression of science and technology. When all service components employ digital technology, efficiency is achieved, and labor, cost, and time expenditures can be minimized as effectively as feasible. The prevalence of efficiency in a school will have a profoundly favorable effect on academic achievement.

Recent research also shows that school performance can be improved by implementing smart management and efficiency strategies in all domains. By employing intelligent management, schools become more contemporary in policy formulation, policy dissemination, curriculum implementation, student services, education, learning, research, cooperation, evaluation, and follow-up. These are strictly implemented efficiency and integrated oversight, including supervision by officials and supervision by the system, including the use of automatic equipment that can record various inefficiencies and provide actionable solutions so that all activities can operate efficiently (Yusuf & Alabi, 2013).

According to a study by Hoffman and Holzhter (2012), despite the school and teachers' efforts to improve school performance, none of the conditions are optimal. After intelligent management is discovered and school efficiency variables are adopted, school performance dramatically improves. In both the short- and long-term, these two variables substantially impact academic achievement.

**Hypothesis 3:** *There is a significant simultaneous effect between smart management and efficiency on school performance*

### 3. Methodology

#### 3.1 Research design

This research falls under the area of quantitative analysis employing a correlational methodology. Given that this correlational research aims to evaluate assumptions derived from theory, it also falls under the scope of descriptive verification research (Cresswell, 2012). This study provided a descriptive account of field data, beginning with the mean, median, mode, standard deviation, variance, kurtosis, skewness, and range. Through verification, it attempts to test the research hypotheses given in the theoretical foundation.

#### 3.2 Time and place of research

This study was conducted in East Kalimantan (Samarinda) since this region is remote from the capital city of Jakarta yet is part of a province with abundant natural and human resources. Numerous students and teachers are inefficient in using various resources; therefore, it is important to investigate whether the efficiency factor causes improved school performance. This study will be done between January and July of 2022.

#### 3.3 Population and research sample

Samarinda's pupils, teachers, school administration, and high school principals make up the population of this study. The population is based on 1532 individuals. The sample was selected using a technique of proportionate random sampling (Cresswell, 2012). The study sample comprised 158 individuals, including 5 school principals, 33 teachers, 20 school administrators, and 100 pupils.

### 3.4 Research Instruments

This study employed a questionnaire created by researchers following the hypothesis (Crowe et al., 2011). Dimensions and indicators help researchers establish the authenticity of their content (Hoy, 2019). Involving qualified experts in smart management, school efficiency, and school performance determine the legitimacy of judgments (Hox & Boeije, 2005). Table 3 displays the indications for the variables.

**Table 3**

*Research Instruments Grid*

Research variable	Dimensions	Indicator	Item number
Smart management	planning	Program planning	1
		Activity planning	2
	Organizing	Organizing activities	3
		Personal organization	4
	Implementation	Implementation of routine activities	5
		Implementation of incidental activities	6
	Evaluation	Evaluation in the middle of the activity	7
		Evaluation at the end of the activity	8
	Follow-up	Follow up on evaluation results	9
		Follow-up analysis results	10
school efficiency	Water resources	Utilization of groundwater	11
		Utilization of rainwater	12
		Drinking water	13
	power supply	The amount of electric power used effectively	14
		The amount of electricity available	15
	Means resources	Libraries are managed efficiently	16
		Wi-fi is well utilized	17
	Infrastructure resources	The building is put to good use	18
		Streets, alleys, and alignments where a	19
	school performance	Quality of graduates	Accepted at top universities
Accepted in the world of work			21
Average student grades		The average value of Reports	22
		Average Diploma (for those who dusah ly	23
Non-academic achievements		In sports	24
		In art	25
Teacher performance		Physique	26
	Non-physical	27	

Source: the results of reading the theory

### 3.5 Instrument Reliability and Validity

The validity test aims to determine whether the instrument can be used appropriately to measure the target variable. Validity is tested by establishing a correlation between the item and total scores (see Table 4). The test of dependability is conducted by examining Cronbach's alpha coefficient. Table 4 demonstrates that the bulk of the instruments is valid, with only three incorrect numbers: 12, 16, and 25.

**Table 4***Validity test results*

<b>Instrument</b>	<b>R</b>	<b>p</b>	<b>Conclusion</b>
1	0.765	0.000	Valid
2	0.879	0.000	Valid
3	0.786	0.000	Valid
4	0.843	0.000	Valid
5	0.876	0.000	Valid
6	0.765	0.000	Valid
7	0.767	0.000	Valid
8	0.854	0.000	Valid
9	0.765	0.000	Valid
10	0.746	0.000	Valid
11	0.786	0.000	Valid
12	0.443	0.072	Not Valid
13	0.871	0.000	Valid
14	0.781	0.000	Valid
15	0,762	0.000	Valid
16	0.312	0.064	Not Valid
17	0.713	0.000	Valid
18	0.843	0.000	Valid
19	0.723	0.000	Valid
12	0.743	0.000	Valid
21	0.741	0.000	valid
22	0.713	0.000	Valid
23	0.341	0.000	Valid
24	0.781	0.000	Valid
25	0.335	0.074	Not Valid
26	0.872	0.000	Valid
27	0.743	0.000	Valid

Source: pre-survey data validity test

Table 5 shows the results of the reliability test. Because Cronbach's Alpha coefficient is more than 0.70 and the p-value is less than 0.05, Table 5 demonstrates that all variables are reliable.

**Table 5***Reliability test results*

<b>Variable</b>	<b>Chronbach's Alfa</b>	<b>p</b>	<b>Conclusion</b>
Smart management	0.823	0.000	Reliable
Efficiency	0.843	0.000	Reliable
school performance	0.947	0.000	Reliable

Source: Results of instrument calibration data analysis

#### 4. Data Analysis

Three stages of data analysis were performed: descriptive test, assumption test, and hypothesis test. All examinations were conducted using SPSS analysis. SPSS was used to conduct descriptive tests to determine the mean, median, mode, standard deviation, variance, kurtosis, skewness, and range. An assumption test examines normality, linearity, and homogeneity. Hypotheses were tested using simple and complex regression tests (Ghozali, 2016).

#### 4.1 Descriptive analysis

In this descriptive test, only valid instrument numbers were assessed, and there were 10 questions for clever management, 7 questions for efficiency, and 7 for school performance. The descriptive analysis results are displayed in Table 6 below.

**Table 6**

*Descriptive test*

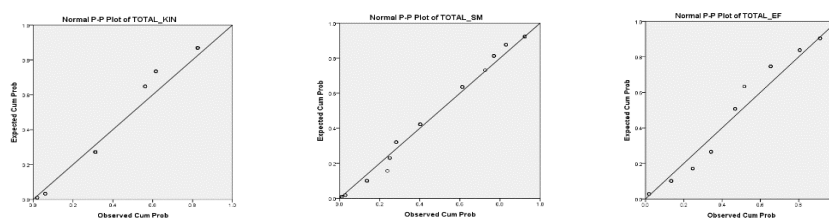
		TOTAL_SM	TOTAL_EF	TOTAL_KIN
N	Valid	250	250	250
	Missing	0	0	0
Mean		44.7200	35.9440	30.4600
Median		45.0000	36.0000	28.0000
Mode		46.00	38.00	28.00
Std. Deviation		3.68891	3.09762	4.04994
Variance		13.608	9.595	16.402
Skewness		-.280	-.218	-.358
Std. Error of Skewness		.154	.154	.154
Kurtosis		-.733	-1.334	-.696
Std. Error of Kurtosis		.307	.307	.307
Range		14.00	10.00	14.00
Minimum		36.00	30.00	21.00
Maximum		50.00	40.00	35.00

Source: Results of 2022 descriptive data analysis

The descriptive test in Table 6 shows that for the smart management variable, the mean is 44.7, the median is 45.0, the mode is 46.0, the standard deviation is 3.6, the variance is 13.6, the skewness is -0.2, the kurtosis is -0.733, and the range is 14. Meanwhile, for variables, efficiency obtained a mean of 35.9, a median of 36.0 modes 38, a Standard deviation of 3.09, a variance of 9.5, skewness -0.2, kurtosis -1.3, and a range 10. The school performance variable received a mean of 30.4, median of 28.0, mode of 28, standard deviation of 4.04, a variance of 16.4, skewness of 0.3, kurtosis -.696, and range of 14. Of the three data, the lowest (best) standard deviation, namely the efficiency variable, is only 3.09. All variables are included in the slope of the good distribution, namely between  $-0.5 > \text{skewness} < 0.5$ . The widest range is the smart management and school performance variables. A good range is the narrowest, namely the efficiency variable, which is only 10.

#### 4.2 Assumption Test

The first assumption test is the normality test. The test used is the normal P-P plot test. The result looks as follows.



**Figure 1.** Normal Scatter Plot of smart management, efficiency, and school performance variables



Figure 1 demonstrates that the data for all evaluated variables are perfectly normal since no points deviate significantly from the normal line. Table 7 depicts the homogeneity test used to determine the homogeneity of the data for each variable. The homogeneity test is crucial to evaluate the data homogeneity of each variable so that independent and dependent variables can be connected.

**Table 7**

*Homogeneity Test*

	Levene Statistic	Df <sub>1</sub>	df <sub>2</sub>	Sig.
	5.668	2	747	.056

Source:: Results of data analysis

According to Table 7, the results of the test of homogeneity of variances are known; the significant value (sig.) of the smart management, efficiency, and school performance variables is  $0.056 > 0.05$ ; therefore, as the basis for decision-making in the homogeneity test, it can be concluded that the variances of the third data variables are identical or homogeneous. Table 8 displays the linearity test for the smart management and school performance factors.

**Table 8**

*Smart management linearity test on school performance*

			Sum of Squares	df	Mean Square	F	Sig.
TOTAL_KIN *	Between	(Combined)	2940.846	11	267.350	55.656	.000
TOTAL_SM	Groups	Linearity	1628.716	1	1628.716	339.062	.000
		Deviation from Linearity	1312.130	10	131.213	27.316	.000
	Within Groups		1143.254	238	4.804		
	Total		4084.100	249			

Source: Smart management linearity test results on performance

The linearity F coefficient is 339,062 with a significance of 0.000, as shown in Table 8. Thus, intelligent management has a direct correlation with academic achievement. This suggests that the two variables can be subjected to additional testing or hypothesis testing. Table 9 displays the results of the school efficiency linearity test about school performance.

**Table 9**

*Efficiency linearity test on school performance*

			Sum of Squares	df	Mean Square	F	Sig.
TOTAL_KIN *	Between	(Combined)	2835.182	8	354.398	68.387	.000
TOTAL_EF	Groups	Linearity	702.391	1	702.391	135.538	.000
		Deviation from Linearity	2132.791	7	304.684	58.794	.000
	Within Groups		1248.918	241	5.182		
	Total		4084.100	249			

### 4.3 Hypotheses testing

Table 10 indicates that the coefficient of R smart management on school performance is 0.632, and the value of t count in Table 11 is 12.826 with a significance level of  $0.000 < 0.05$ , so the first hypothesis is accepted. There is a significant relationship between intelligent administration and academic achievement. The intelligent management contribution is 39.9%.

**Hypothesis 1.** *There is a significant influence between smart management on the performance of Public senior high school 1 Samarinda*

**Table 10**

*Smart management variable contribution to school performance*

Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	.632 <sup>a</sup>	.399	.396	3.14654

a. Predictors: (Constant), TOTAL\_SM

**Table 11**

*T-test of the effect of smart management on school performance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.545	2.426		-.225	.823
TOTAL_SM	.693	.054	.632	12.826	.000

a. Dependent Variable: TOTAL\_KIN

Table 12 demonstrates that the magnitude of the R coefficient is 0.415, with the T count (Table 13) obtaining a value of 7.177 with a sign. By 0.000, hence the hypothesis is accepted. There is a substantial relationship between school performance and efficiency. The efficiency contribution to school performance is 17.2%.

**Hypothesis 2.** *There is a significant influence between school efficiency on the performance of Public senior high school 1 Samarinda*

**Table 12**

*The results of the R coefficient*

Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	.415 <sup>a</sup>	.172	.169	3.69268

a. Predictors: (Constant), TOTAL\_EF

**Table 13**

*T-test of the effect of efficiency on school performance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	10.971	2.725		4.025	.000
TOTAL_EF	.542	.076	.415	7.177	.000

a. Dependent Variable: TOTAL\_KIN

Table 14 provides information that the magnitude of the coefficient R is 0.87 and R<sup>2</sup> is 0.757 with t count (Table 15). Table 15 shows that the results of the two-predictor regression

analysis obtained an F coefficient of 385,710 and sig.  $0.000 < 0.05$ ; thus, the hypothesis is accepted. There is a significant influence between smart management and efficiency on school performance. Table 16 examined the effect of smart management and efficiency on performance. Based on the results of hypothesis testing, the three research hypotheses were accepted significantly. It's just that the effect of  $R_{12y} = 0.870 > R_{1y} = 0.632$  and  $> R_{2y} = 0.415$ . Thus, the simultaneous impact is far more significant than the partial test.

**Hypothesis 3:** *There is a significant influence between smart management and school efficiency on the public senior high school performance in Samarinda.*

**Table 14**

*The coefficient R of the effect of smart management and efficiency on the performance*

Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	.870 <sup>a</sup>	.757	.756	2.00256

a. Predictors: (Constant), TOTAL\_EF, TOTAL\_SM

Source: 2022 regression analysis results

**Table 15**

*Coefficient F Multiple regression*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3093.573	2	1546.787	385.710	.000 <sup>b</sup>
Residual	990.527	247	4.010		
Total	4084.100	249			

a. Dependent Variable: TOTAL\_KIN

b. Predictors: (Constant), TOTAL\_EF, TOTAL\_SM

Source: 2022 data analysis results

**Table 16**

*T-test of the effect of smart management and efficiency on the performance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.068	1.544		.044	.965
1 TOTAL_SM	2.710	.111	2.468	24.419	.000
TOTAL_EF	-2.526	.132	-1.932	-19.112	.000

a. Dependent Variable: TOTAL\_KIN

Source: Results of data analysis to test the 3rd hypothesis

## 5. Discussion

### 5.1 The effect of smart management on school performance

The results of the hypothesis test analysis reveal that there is a substantial relationship between intelligent management and school achievement. This suggests that school performance will improve if the principal can use wise management strategies. This means that the performance of schools that do not adopt smart management effectively will decline. This study confirms prior research findings that a school will function well if it can use intelligent control in every element (Hermann, Pentek, & Otto, 2016).

The analysis results demonstrate that when schools can provide services to students through intelligent management, students will be happier in the classroom because all of their needs can be met online without having to interact directly with the administration, guidance teachers, or the head of school. Students can request a variety of student administration necessities online, and schools can respond online (Gibbons & Silva, 2011).

The learning assessment process can be conducted online, and as soon as students submit their final answer, they will receive the corresponding grade (Mykhaylyshyn, Lutsan, & Kondur, 2015). Here, the system will deliver remedial programs for students whose learning is incomplete and enrichment programs for those who have attained the expected competency values. Smart management will provide services to students without requiring interaction with teachers, students, administration (business with students, principals with students, guidance and counseling teachers with students), or administration (business with students, principals with students, guidance and counseling teachers with students) (Gansberghe, 2003).

When the conditions mentioned above can be established at the level of school practice, school performance will certainly improve greatly (Findikoğlu & İlhan, 2016). At the field level in high schools in Samarinda, a new smart management technique is currently being piloted. Principals give various online announcements through the school website, schools provide various outreach and education about different subjects using the school website, and students must routinely access the website to learn about various things they must know (Liffler & Tschiesner, 2013; Mykhailyshyn, Kondur, & Serman, 2018). Currently, high school registration is conducted online. In addition to receiving report cards online and offline, students register for extracurricular and extracurricular activities online.

### **5.2 Effect of efficiency on school performance**

The data indicates a significant relationship between efficiency and academic performance. Schools that can implement efficiency in every aspect will be able to achieve high performance. Still, schools that cannot apply efficiency principles will lose considerably less performance than the first type of school (Findikoğlu & İlhan, 2016). When a school principal wants to boost school performance, he encourages all internal stakeholders to do everything efficiently.

This study's findings corroborate prior research (Hermann et al., 2016), indicating that school performance can be enhanced by enhancing efficiency in all aspects, including exploiting limited resources. These limited school resources must be employed as effectively as feasible so as not to diminish the significance and quality of the ongoing educational process. With efficiency, the quality of the process of implementing learning and the evaluation of learning may be conducted successfully (Daft, 2010).

This study verifies the findings of prior studies (Campbell, 2001) that when schools apply efficiency, they can accomplish much with their given resources. Students can participate in more extracurricular and extracurricular activities the more efficiently they are. When all internal school stakeholders implement a variety of efficiencies in all areas, the school's vision and goal will be accomplished swiftly, even before the specified deadline (Campbell, 2001).

This study examines the significance of efficiency for the quality of student-provided processes and services. The quality of student services must be continuously enhanced in tandem with advances in science and technology and the passing of time (Brewer & Tierney, 2012). This is only possible if all components of the school can actively and responsibly sustainably implement efficiency without compromising the quality and quantity of student services.

### **5.3 The influence of smart management and efficiency on school performance**

The findings of the hypothesis test indicate that improved smart management and efficiency will have a substantial impact on academic performance. The results of this study suggest that if school stakeholders wish to improve school performance, they must support the implementation of smart management in schools. In addition, they must promote school-implemented efficiency projects.

Previous research (Findikoğlu & İlhan, 2016) found unequivocally that when schools can apply smart management on a practical level and implement various efficiency methods in the classroom learning process, it will have a favorable and significant effect on school performance. Excellent schools can be achieved through two strategic steps: enhancing the caliber of intelligent administration and boosting the effectiveness of all activities.

Other research (Jayawardena, 2001) was also validated by this study since it presents a realistic image of how to improve school performance by prioritizing the application of smart management and boosting the efficiency of all operations to meet the school's vision and purpose. School goals can be attained sooner when the school principal executes the POAC role with the right use of smart management (Jayawardena, 2001).

## **6. Conclusion**

The outcomes of the analysis and debate shed light on the study's conclusions. First, it is established that good management substantially impacts school performance. In other words, if school principals wish to increase school performance, they must be able to implement smart management effectively. Second, school efficiency affects the improvement of academic achievement. The higher the school's performance, the higher the efficiency level practiced. Therefore, if the new principal of a school wishes to improve school performance, school-level efficiency must be carried out correctly. Thirdly, both intelligent administration and school effectiveness have a substantial impact on school performance. The combined effect of the two variables exceeds the partial effect. Therefore, to increase school performance, principals should be able to improve the quality of both smart management and efficiency concurrently.

### **6.1 Implications of the Study**

Significant theoretical contributions have led to significant practical consequences from the current work. This study's originality lies in its elucidation that school performance can be ensured to grow through two primary endeavors: intelligent management and efficiency. This research was also able to demonstrate its originality through the approach employed, namely the verification method, by combining two factors, namely smart management and school performance improvement efficiency. Several prior studies have investigated school performance; however, the literature has not addressed school

performance with the aid of intelligent management. The current study's introduction of intelligent management significantly contributes to the body of knowledge. This is the first study to examine the relationship between smart management, school efficiency, and school performance. Consequently, it has significant ramifications for practitioners. The management of schools should consider intelligent management systems while formulating methods to improve school performance. Practitioners can enhance school performance by enhancing school efficiency through astute administration.

### 7. Study Limitations and Future Directions

There are numerous forms and aspects of intelligent management applied by various firms. However, this study addressed smart management, which is not particularly appropriate. Future research should explore multiple dimensions of intelligent management systems. Moreover, in the current era of industrialization, technology plays a crucial role in the education sector; consequently, management cannot be intelligent without using cutting-edge technology. Future research should explore the significant technological aspects pertinent to the education industry.

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