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THE INFLUENCE OF THE PRINCIPAL'S LEADERSHIP, TEACHER PROFESSIONALISM, WORK CULTURE, AND THE USE OF INFORMATION TECHNOLOGY ON THE CAPACITY OF VOCATIONAL SCHOOLS IN DKI JAKARTA

EVITHA SORAYA[1], UNIFAH ROSYIDI [2] and RUGAIYAH [3]

[1, 2, 3] Educational Management, State of Jakarta University, Indonesia.
Email: [1]evithasoraya@unj.ac.id, [2]unifahrosyidi@unj.ac.id, [3]rugaiyah@unj.ac.id

Abstract

This study aims to examine the influence of principal leadership, teacher professionalism, work culture, and the use of information technology on the capacity of vocational schools in DKI Jakarta. This research uses a quantitative approach with survey methods and SEM (Structural Equation Modeling) analysis techniques. The results showed that the principal's leadership had a positive and significant effect on four other variables, teacher professionalism had a positive and significant effect on the use of ICT, work culture had a positive and significant effect on school capacity, and the use of ICT had a positive and significant effect on school capacity. Recommendations that can be considered to improve school capacity are strengthening the principal's leadership, building a collaborative work culture, and encouraging the use of ICT for learning and administration.

Keywords: Principal's Leadership; Teacher Professionalism; Work Culture; ICT Utilization; School Capacity

INTRODUCTION

Vocational High School (SMK) is a type of education at the secondary education level that aims to prepare skilled personnel who are ready to work in various employment sectors. SMK has an important role in developing competent and competitive human resources in the era of globalization and the industrial revolution 4.0. The industrial revolution 4.0 is marked by the development of digital technology, the internet, and artificial intelligence that changes the way humans work and interact with machines (Schwab, 2016). The development of this industry has implications for changes in the characteristics of the workforce needed by the industrial world, namely workers who have 21st century skills such as analytical thinking, creativity, complex problem solving, and emotional intelligence (World Economic Forum, 2018).

In facing the challenges of the industrial revolution 4.0, SMK is required to respond to internal and external conditions adaptively and absorptifly. Internal conditions include the quality of the learning process, educator and education personnel resources, facilities and infrastructure, and school management. External conditions include labor market dynamics, the needs of the business world and the industrial world, as well as government regulations related to vocational education. The ability of the school to carry out its functions and achieve its goals is called school capacity (Lai et al., 2014). School capacity is a determining factor in improving the quality of education and learning outcomes of students (Fullan et al., 2006). Vocational schools that have good capacity will show quality learning processes, high student learning outcomes,

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and characteristics (knowledge, attitudes and skills) of graduates that are relevant to the needs of the world of work so that graduates can be fully absorbed by the labor market.

However, the fact is that there are still many vocational graduates who are not directly absorbed by the labor market. Based on data from the Central Statistics Agency (BPS) in 2019, it is known that the number of open unemployment in August 2019 amounted to 7.05 million people, the open unemployment rate (TPT) was dominated by vocational graduates of 10.42 percent (BPS, 2019). In 2021, BPS DKI Jakarta stated that the number of unemployed people in DKI Jakarta in 2020 reached 572,780 people. Of that number, as many as 197,112 people or around 34.41% of the total unemployment in Jakarta are SMK graduates (BPS DKI Jakarta, 2021). DKI Jakarta Province as the capital of the country and the center of the Indonesian economy has the highest number of vocational schools in Indonesia, which is 583 vocational schools both public and private (DKI Jakarta Education Office, 2020). Of these, only 509 vocational schools have completed the National Education Standard (SNP) quality report card and only 210 vocational schools have met the SNP retirement standards (DKI Jakarta Education Office, 2020). This shows that vocational schools in DKI Jakarta that meet education quality standards are still below 50%.

The high unemployment of SMK graduates is caused by over-supply in SMK in certain fields of expertise and many graduates do not meet the competencies needed by the world of work (Suryadarma et al., 2006). The large number of graduates who do not work shows that the quality of graduates is not in accordance with the needs of the world of work. The weakness of these graduates is an indication of the weak capacity of schools in creating quality learning services. Therefore, there is a need for a study to examine the factors that affect the capacity development of vocational schools in DKI Jakarta.

School capacity is an essential school ability and affects school performance. Capacity refers to the mental, emotional, or physical ability to complete a particular task. Capacity is an individual characteristic and property of the group, not limited to the teacher, but also the organization as a whole. In schools, capacity building means developing the ability of individuals or organizations to learn new ways of thinking and acting so that they can make the changes necessary to improve learning for all students. School capacity can be defined as the collective ability of a school to improve student teaching and learning across the organization.

School capacity consists of two categories, namely instructional capacity and organizational capacity. Learning capacity is the capacity of schools to increase learning effectiveness and ultimately increase student achievement. Organizational capacity is a social process that facilitates the creation of knowledge and professional learning. The dimension of learning capacity consists of five aspects, namely professional competence; professional community; coherent program; learning resources; and effective school leadership.

The principal has an important role for the progress of the school. The principal's leadership role in school capacity building is to find out how the principal's leadership contributes to school capacity building and improved student learning and achievement. Principal leadership is defined as a latent construct that includes five management processes: strategic direction,

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organization of teaching activities, evaluation and self-improvement of the school, development of professional resources, and management of networks and relationships with families. The four main functions of the principal's leadership are galvanizing school resources to realize the vision, mission, and goals of the school; managing learning programs; facilitate the professional development of teachers; and empowering teachers by promoting collaborative decision-making processes.

The leadership of the principal can be seen from various leadership theories that apply to general organizations. The principal's leadership consists of three main dimensions, namely defining the school's mission, managing learning programs, and developing the school's learning climate. Each of the three dimensions requires the principal to play a different role. Defining the school's mission requires the principal to play the role of "pilot", providing a clear direction for the school's development. Managing learning programs requires them to be "inspectors", monitoring school learning programs and student achievement. Developing the school's learning climate requires them to act as "coordinators", creating a community of professionals to share the vision among relevant stakeholders.

Meanwhile, according to data from the DKI Jakarta Education Office (2021), there are still 20.5% or 15 principals of public vocational schools in DKI Jakarta who have not participated in the principal strengthening training. This is a problem considering the important role of a school principal in developing school capacity. Previous research has shown that the leadership of the principal has an important role and influences the capacity of the school. Therefore, there are still 20.5% of school principals who have not attended the principal strengthening training can have an impact on the low capacity of vocational schools.

Professional competence and a collective and organized professional community are two dimensions of learning capacity. Schools have the capacity to improve the quality of learning when they have professionally competent and organized teachers in the form of professional communities. Professionally competent teachers have three characteristics, namely carrying out learning in accordance with the curriculum, conducting assessments in accordance with the curriculum, and having high expectations for student learning. A collective and organized professional community is characterized by sharing clear learning objectives; have collective responsibility and collaboration among teachers to achieve goals; teachers who conduct investigations into the practice challenges they face; have the opportunity to influence school policies and activities; shared values; focus on student learning; open practice; and reflective dialogue.

Thus, professional competence and a collective and organized professional community are closely related to the development of school capacity. These two dimensions are interrelated and influence each other in improving the quality of learning in schools. Professionally competent teachers will be more effective in carrying out learning if supported by a collective and organized professional community. Conversely, a collective and organized professional community will be more effective in achieving learning goals if it consists of professionally competent teachers.

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In DKI Jakarta, the capacity of vocational teachers still covers issues of professionalism. In 2019, the qualifications of teachers who passed D4/S1 were 95.1% (300,288) but only 36.1% of teachers were certified. DKI Jakarta also experienced a shortage of 518 public vocational teachers and a shortage of 8,379 private vocational teachers (Source: Regional Education Balance, Ministry of Education and Culture 2020). This can have an impact on the low capacity of schools because teacher professionalism and qualifications are important factors in improving the quality of learning in schools.

The realization of graduates with vocational competencies according to 21st century skills and 4.0-faced industry needs is formed in school culture. School culture is the values, norms, and attitudes adopted by all school members in carrying out the learning process and self-development. A good work culture can contribute to the development of school capacity. A good work culture is characterized by collaboration among teachers, unity of purpose, and collegial support. With collaboration among teachers, teachers can engage in constructive dialogue that advances the educational vision of the school. With unity of purpose, teachers can work in order to carry out the school's mission. With the support of colleagues, teachers can work effectively which is characterized by mutual trust among teachers, appreciation of other teachers' ideas and mutual help work among fellow teachers to achieve school goals. A good work culture can also improve teacher professionalism and principal leadership. With a good attitude towards work and good workplace behavior, teachers can improve their professional competence and principals can improve their leadership.

Capacity building will succeed optimally if the school has a productive work culture, namely a work culture that encourages performance, innovation, collaboration, and quality in every aspect of school activities. Conversely, various capacity building efforts will not have a significant impact if a productive work culture has not been formed. Therefore, the low capacity of SMK DKI schools can be caused by the lack of a productive work culture in these schools.

One aspect related to industry 4.0 is the use of Information and Communication Technology (ICT) as educational technology. Related to industry 4.0, educational technologies can be classified into three main groups: virtual labs and augmented reality for education; gamification for education; and learning analysis. With the dynamic development of information technology, school management is required to adjust it.

Good use of ICT can contribute to school capacity building. ICT can be used in learning as an information resource tool, authorship tool, knowledge creation tool, and knowledge strengthening tool. By using ICT as an information resource tool, students can have access to a larger and growing information base. By using ICT as an authorship tool, students can work with and present information in different and creative ways. By using ICT as a knowledge creation tool, students can explore knowledge and learn by building their own knowledge. By using ICT as a tool to strengthen knowledge, students can strengthen basic skills as well as learning factual information. Thus, good use of ICT can improve the quality of learning in schools and contribute to school capacity building.

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The leadership of the principal, teacher professionalism, work culture, and the use of information and communication technology (ICT) are factors that influence the capacity development of vocational schools. School capacity relates to the school's ability to achieve educational goals effectively and efficiently. In the era of the industrial revolution 4.0, the capacity of vocational schools is very important to improve the quality of graduates in accordance with the needs of the world of work. Therefore, it is necessary to conduct research to examine the relationship between these factors and the capacity of vocational schools.

Several previous studies have examined the relationship between each factor and school capacity, but there has been no study that examines the combined influence of these four factors on the capacity of vocational schools in DKI Jakarta, this study aims to fill the knowledge gap about the influence of principal leadership, teacher professionalism, work culture, and ICT utilization on the capacity of vocational schools in DKI Jakarta.

RESEARCH METHODS

This study uses a quantitative approach with survey methods to examine the influence of principal leadership, teacher professionalism, work culture, and the use of information technology on the capacity of vocational schools in DKI Jakarta. Data were collected using Likert scale-based questionnaires containing questions or statements about the variables studied (Nazir, 2003). The variables studied in this study are principal leadership (X1), teacher professionalism (X2), work culture (X3), information technology utilization (X4) and school capacity (Y). The population of this study is all state vocational schools in the DKI Jakarta area. The sample of this study is some state vocational schools in DKI Jakarta whose number is calculated using the Slovin formula, which is 61 vocational schools. The data is then analyzed using SEM (Structural Equation Modeling) analysis techniques that are able to analyze the pattern of relationships between latent constructs and indicators, latent constructs with one another, and measurement errors directly (Hair et al., 2006). This study formulated seven statistical hypotheses that link the variables studied.

RESEARCH RESULTS AND DISCUSSION

Data analysis using SmartPLS. The processing results are described in the PLS model scheme which includes model assessment (outer model) and model testing (inner model). Model measurement consists of two categories, namely reflexive and formative models. PLS analyzes measurement models between latent variables and manifest variables to evaluate validity, reliability, and classical assumptions (analysis requirements). The validity test consists of convergent validity that can be seen from the value of the loading factor. Indicators must meet the criteria of convergent validity. According to Gozali (Gozali, 2014), an indicator is said to be valid if it has a loading factor value between 0.5 to 0.6. This study set the loading factor value at 0.5. All reflexive indicators whose values < 0.5 are not analyzed.

The results of the validity test for the five research variables, namely the principal's leadership, teacher professionalism, work culture, ICT utilization, and school capacity showed that all manifest variables validly represented their respective latent variables. The leadership variable

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consists of 50 indicators with a loading factor value of > 0.5. The variable of teacher professionalism consists of 43 indicators with a loading factor value of > 0.5. The work culture variable consists of 40 indicators with a loading factor value of > 0.5. The ICT utilization variable consists of 41 indicators with a loading factor value of > 0.5. The variable school capacity consists of 61 indicators with a loading factor value of > 0.5.

Composite reliability tests are performed to determine whether the instrument is reliable or not. Two measures used to test a variable are said to be reliable or not, namely *Cronbach Alpha* and *Composite Reliability*. An instrument is said to be reliable if it has a *Cronbach Alpha* value and *composite reliability* > 0.70. Test results are presented Table 1.

Table 1: Alhpa Cronbach and Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability
Principal Leadership (X1)	0,985	0,986
Professionalism Guru (X2)	0,984	0,985
Work Culture (X3)	0,982	0,983
ICT Utilization (X4)	0,982	0,983
School Capacity (Y)	0,987	0,988

The table above shows that the value of Cronbach's Alpha coefficient on all variables > 0.7; as well as the *Composite Reliability* coefficient which shows a value of > 0.7 or higher than the value of Cronbach's Alpha, thus all variables of this study are declared reliable and eligible for analysis.

Testing with SmartPLS assumes that there are no symptoms of multicollinearity in the independent variable indicator. The symptom of multicollinearity occurs because there is a very strong relationship among indicators which consequently can affect the prediction coefficient between the independent variable and the dependent variable. The symptom of multicollinearity is seen from the value of Variance Inflation Factor (VIF). A VIF value of > 10 indicates that there are symptoms of multicollinearity. The test results to ensure that there are no symptoms of multicollinearity in the variables of principal leadership, teacher professionalism, work culture, ICT utilization, and school capacity show that all of these variables have a VIF value of < 10. So it can be assumed that there are no symptoms of multicollinearity in these variables.

To ensure the model is appropriate, it is necessary to test the model fit (goodness of fit) by looking at the value of the R Square (R2) of the independent variable. The test results in table 2 show the magnitude of influence among variables. The R2 value for teacher professionalism (X2) is 0.399 which means that the variable the influence of the principal's leadership on professionalism is included in the "moderate" category (R2 > 0.33). The R2 value for work culture (X3) is 0.711 which means that the influence of the principal's leadership on work culture is in the "good" category (R2 > 0.67). The R2 value for ICT utilization (X4) is 0.274 which means that the influence of the principal's leadership on ICT utilization is included in the "weak" category (R2 < 0.33). The R2 value for school capacity (Y) is 0.796 which means that the influence of the principal's leadership, teacher professionalism, work culture, and ICT

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utilization is included in the "good" category (R2 > 0.67).

Tabel 2: Uji *Goodnes of Fit*

Variable	R Square	Category
Work Culture (X3)	0,711	Good
School Capacity (Y)	0,796	Good
ICT Utilization (X4)	0,274	Weak
Professionalism Guru (X2)	0,399	Moderate

The results of learning leadership testing have a significant influence on teacher professionalism in vocational schools in DKI Jakarta in Table 3 shows that the influence of learning leadership on teacher professionalism is significant (Est=0.523, p=0.000 < 0.05). Teacher professionalism is positively influenced by 63.2% by learning leadership.

Table 3: *Path Coefficient* of Learning Leadership and Teacher Professionalism

Relationship	East.	HERSELF	t	p
Learning Leadership (X1) Teacher Professionalism (X2)→	0,632	0,031	20,692	0,000

The results of learning leadership testing have a significant influence on work culture in vocational schools in DKI Jakarta in Table 4 shows that the influence of learning leadership on work culture is significant (Est=0.843, p=0.000 < 0.05). Work culture is positively influenced by 48.3% of learning leadership.

Table 4: *Path Coefficient* of Learning Leadership and Work Culture

Relationship	East.	HERSELF	t	p
Learning Leadership (X1) Work Culture (X3)→	0.843	0.016	54.352	0.000

The results of learning leadership testing have a significant influence on the use of ICT in vocational schools in DKI Jakarta in Table 5 shows that the influence of learning leadership on the use of ICT is significant (Est=0.523, p=0.000 < 0.05). ICT utilization is positively influenced by 52.3% by learning leadership.

Table 5: *Path Coefficient* of Learning Leadership and ICT Utilization

Relationship	East.	HERSELF	t	p
Learning Leadership (X1) -> ICT Utilization (X4)	0,523	0,038	13,688	0,000

The results of learning leadership testing have a significant influence on the capacity of vocational schools in DKI Jakarta in Table 6 shows that the influence of learning leadership on school capacity is significant (Est = 0.083, p = 0.000 < 0.05). School capacity is positively affected by 8.3% by learning leadership.

Table 6: *Path Coefficient* of Learning Leadership and School Capacity

Relationship	East.	HERSELF	t	p
Principal's Leadership (X1) School Capacity (Y)→	0.083	0.056	4.267	0.000

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The results of teacher professionalism testing have a significant influence on the capacity of vocational schools in DKI Jakarta in Table 7 shows that the influence of teacher professionalism on school capacity is significant (Est = 0.445, p = 0.000 < 0.05). School capacity is positively influenced by 44.5% by teacher professionalism.

Table 7: *Path Coefficient* of Teacher Professionalism and School Capacity

Relationship	East.	HERSELF	t	p
Teacher Professionalism (X2) School Capacity (Y)→	0.445	0.063	7.067	0.000

The results of testing work culture have a significant influence on the capacity of vocational schools in DKI Jakarta in Table 8 shows that the influence of work culture on school capacity is significant (Est = 0.523, p = 0.000 < 0.05). School capacity is positively affected by 18.9% by work culture.

Table 8: *Path Coefficient* of Work Culture and School Capacity

Relationship	East.	HERSELF	t	p
Work Culture (X3) -> School Capacity (Y)	0,189	0,080	2,361	0,019

The results of ICT utilization testing have a significant influence on the capacity of vocational schools in DKI Jakarta in Table 9 shows that the effect of ICT utilization on school capacity is significant (Est=0.278, p=0.000 < 0.05). School capacity is positively affected by 27.8% by ICT utilization.

Table 9: *Path Coefficient* of ICT Utilization and School Capacity

Relationship	East.	HERSELF	t	p
ICT Utilization (X4) -> School Capacity (Y)	0,278	0,039	7,216	0,000

DISCUSSION

The test results showed that teacher professionalism was significantly positively influenced by 63.2% by the learning leadership of the principal. School principals play a key role in building school capacity through teacher professional development. School principals have the responsibility to organise and support the professional development of teachers. The principal can encourage the development of teachers' professional competencies by increasing professional knowledge, professional learning practices; and professional development.

First, the improvement of professional knowledge. School principals can influence teacher professionalism by encouraging teachers to improve professional knowledge which includes the ability to analyze the structure of learning objectives, develop effective lesson designs, and implement learning that encourages mastery of learning objectives. Second, professional learning. Principals can influence teacher professionalism by encouraging teachers to improve their ability to facilitate safe and comfortable learning activities, design learning activities, and conduct learning assessments. Third, professional development. Principals can influence teacher professionalism by encouraging teachers to practice self-reflection, commitment to

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professional ethics, siding with students, fostering comfortable work behavior, and participating in various activities to develop professional networks.

The test results showed that work culture was significantly and positively influenced by 84.3% by the principal's leadership. The principal's leadership plays a central role in building a work culture. Work culture is a pattern of behavior inherent in all individuals in a school that describes the beliefs, values, and norms that apply in the school (Supriyanto, 2006). A successful principal is a principal who is able to instill beliefs, values and shared norms in the school to the members of the school.

Principals can influence a superior school's work culture by demonstrating collaborative leadership, encouraging collaboration among teachers, supporting professional development, creating unity of purpose, collegial support, and learning partnerships. Collaborative leadership can be demonstrated by respecting teachers' ideas, seeking advice from teachers, involving teachers in decision-making, trusting teachers' professional decisions, supporting and rewarding innovative ideas to improve student achievement, and reinforcing the habit of sharing ideas between teachers. Encouraging collaboration among teachers can be done by encouraging school-wide guuru to plan together, observe and discuss teaching practices, evaluate programs, and develop awareness of other teachers' practices and programs.

The test results showed that the use of ICT was significantly and positively influenced by 52.3% by the principal's leadership. ICT integration in learning is a hallmark of innovative learning that leads to improving the quality of learning and learning outcomes. School principals have a critical role in encouraging teachers to utilize ICT in schools as a source of information, a directing tool, knowledge construction, knowledge reinforcement, information reinforcement, and learning media.

First, as a source of information. Advances in information technology allow computers to access greater information through search engines (Exp: Google, Chrome, Safari), social media (c.q Youtube) and software with artificial intelligence such as ChatGPT. Second, as a directing tool. Principals can influence the utilization of ICT by providing computers with software and access to the web, making it possible for teachers and students to search, process, and also present information in innovative and creative ways. Third, as a construction of knowledge. School principals can influence the use of ICT that allows the creation of independent learning. Fourth, as a tool for strengthening knowledge. School principals can encourage the use of ICT by providing computers for virtual and real practice. Fifth, as a learning medium. School principals can encourage the use of ICT by providing software that allows teachers to prepare material presentation and assessment.

The test results showed that school capacity was significantly and positively affected by 8.3% by the principal's learning leadership. The headmaster can influence the capacity of the school by setting the school's mission, managing learning programs and developing a positive school climate. Related to setting the school's mission with respect to school capacity building, the principal can engage teachers and staff to formulate clear, measurable school goals and focus on students' academic progress.

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School capacity can also be affected by the way the principal manages learning programs. As a leader in learning, principals can supervise and evaluate learning regularly, coordinate curriculum development, and assist student learning progress. This form of supervision can be realized in simple ways, such as ensuring teachers are not late for class. End-of-semester meetings related to learning that have been carried out can also be conducted to help the principal evaluate learning activities. Related to evaluating advocacy, Hallinger explains that principals need to ensure that school goals are translated into learning practices at the grade level (Hallinger et al., 2015, p. 32). It involves coordinating the teacher's classroom goals with school goals and evaluating classroom learning. The test results showed that school capacity was significantly and positively affected by 44.5% by ICT utilization. In order to realize the capacity of schools in responding to changes in the outside world, it is necessary to support the professionalism of teachers, either individually or in groups (Stosich, 2016b, p. 44).

Professional teachers always implement standard-compliant learning practices when they have outdoor opportunities to learn about standards and when they have the opportunity to practice them in the classroom. Collaboration among teachers can provide opportunities for teachers to learn effectively from colleagues (Kirabo, Jackson & Bruegmann, 2009), encourage teachers to pilot new learning approaches, increase their confidence in the ability to improve student performance, and ultimately improve student learning outcomes (Moolenaar et al., 2012). Involvement in quality collaboration with colleagues can grow the capacity of individual teachers and create an environment that enhances student learning in the classroom (Ronfeldt et al., 2015). The results of statistical testing show that school capacity is significantly and positively influenced by 18.9% by work culture. Work culture can affect school capacity. Work culture is seen as a feature that needs to be managed to support school capacity building (Seashore Louis &; Lee, 2016c, p. 1). Excellent schools have a superior work culture.

Gruenert & Whitaker (2015, pp. 72–74) identify a superior work culture in excellent schools, encompassing collaborative leadership, collaboration among teachers, professional development, unity of purpose, collegial support, and learning partnerships. Collaborative leadership can be demonstrated by respecting teachers' ideas, seeking input from teachers, involving teachers in decision-making, trusting teachers' professional decisions, supporting and valuing innovative ideas, and reinforcing the habit of sharing ideas between teachers. Encouraging collaboration among teachers can be done by encouraging school-wide guuru to plan together, observe and discuss teaching practices, evaluate programs, and develop awareness of other teachers' practices and programs. The test results showed that school capacity was significantly and positively affected by 27.8% by ICT utilization. ICT utilization is the use of technology such as computers, the internet and software used by students and teachers both for learning support tools and for organizational administrative work. The use of ICT can affect school capacity while school residents (teachers, students, and staff) can use ICT both for learning and administrative purposes.

The use of ICT for learning is manifested in various forms, including as a source of information, a directing tool, knowledge construction, knowledge strengthening and learning media. As a source of information, advances in information technology allow computers to access greater

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information through search engines (Exp: Google, Chrome, Safari), social media (c.q Youtube) and software with artificial intelligence such as ChatGPT. As a directing tool, principals can influence ICT utilization by providing computers with software and access to the web, making it possible for teachers and students to search, process, and also present information in innovative and creative ways.

CONCLUSION

This study aims to determine the causal relationship between learning leadership variables, professionalism, work culture, ICT utilization, and school capacity in vocational schools in DKI Jakarta. The results showed that: (1) The principal's leadership had a positive and significant effect on four other variables. School principals play a key role in building school capacity through teacher professional development, collaboration among teachers, unity of purpose, and the use of technology in learning. (2) Teacher professionalism has a positive and significant effect on the use of ICT. Professional teachers integrate technology into learning practices. (3) Work culture has a positive and significant effect on school capacity. Schools of excellence have a culture of excellence, which includes collaborative leadership, professional development, collegial support, and learning partnerships. (4) The use of ICT has a positive and significant effect on school capacity. The use of ICT can improve the quality of learning and school administration.

The recommendations that can be considered to improve school capacity by taking into account the causal relationship between the variables of learning leadership, professionalism, work culture, and ICT utilization are as follows: First, strengthening the leadership of principals who are committed to learning, teacher professional development, superior work culture, and ICT utilization. School principals have a key role in building school capacity through teacher professional development, encouraging collaboration among teachers, creating unity of purpose, and supporting the use of technology in learning. Second, build a collaborative work culture by involving teachers in decision-making, supporting innovation, and sharing knowledge. A superior work culture can encourage continuous teacher professional development through collaborative learning and professional skills improvement activities. Third, understand technology well and encourage the use of ICT for learning and administration. The use of ICT can improve the quality of learning and school administration.

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