

An Analysis of Strength, Weakness, Opportunity, and Threat (SWOT) Implementation of E-Learning During Pandemic Covid-19

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ABSTRACT

This study aims to determine and describe the SWOT Analysis (Strength, Weakness, Opportunity, and Threat) Implementation of E-Learning during the Pandemic Covid-19 at State Vocational High Schools. Data collection was carried out by questionnaire and documentation. Data were analyzed by using SWOT analysis. From the results of the study, it can be concluded that the results of the SWOT analysis of the main strength factors possessed by State Vocational Schools in Ogan Komering Ulu Regency are basic abilities, high student interest, and motivation, supported by teacher education qualifications of diplomas so that student achievement at the implementation of e-learning is quite satisfying. Meanwhile, the weakness is that the students' ability to understand e-learning questions is still not optimal. The opportunity for the e-learning implementation is that the local government fully supports the implementation of e-learning. While the threat is that the curriculum made by the government often changes in the curriculum.

Keywords: SWOT analysis, E-Learning, Pandemic Covid-19

1. INTRODUCTION

Education is a factor that plays a major role in the formation of personality and human resource development. For this reason, government support is very serious in providing quality and quality education. With a quality education system, it is expected to be able to produce students as the future generation of the nation who are qualified and able to carry out their development tasks optimally in a more effective direction [1].

In the execution of their duties and functions, the teacher as a profession bears certain conditions as stipulated in the Act of Republic of Indonesia Number 20 of 2003 on the system Education national Program, Article 39 (1) and (2) states that: Educators are professionals who are tasked with planning and implementing the learning process, assessing learning outcomes, conducting guidance and training, and conducting research and community service, especially for educators at tertiary institutions [2].

To be able to carry out the duties and responsibilities above, a teacher is required to have certain abilities and skills. These abilities and skills are part of the professional competence of teachers. Competence is an ability that is owned by teachers so that their duties as educators can be carried out properly.

The development of science and technology makes conventional things start to be abandoned. This shows that the operationalization of education must also be based on the development of science and technology so that education does not lag behind the rapid progress of science and technology. The rapid advancement of technology today has spawned breakthroughs in the national education system in our country. One of them that has become the subject of much debate is e-learning. E-learning is composed of two parts, namely 'e' which stands for 'electronica', and 'learning' which means 'learning'. So e-learning means learning by using electronic device assistance services. So in practice, e-learning uses audio, video, or computer services or a combination of the three [3].

Each school manager/school institution has their management in developing their schools so that they can meet quality standards according to the times. Quality standards can be said to be successful if the quality components can be met. The components contained in the education quality standard include input, process, and output. The task of management is required to be able to come up with ideas that can make the school develop more advanced than the previous one so that this part of management can change the components of the process by using management strategies, and the strategy used is to use the SWOT analysis strategy [4].

This research was conducted to evaluate the SWOT implementation of e-learning at SMK Negeri 3 Ogan Komering Ulu. SWOT analysis is a tool for evaluating two factors, namely internal factors, and external factors. SWOT itself is an abbreviation of S = strength (power), W = weakness, O = opportunity, and T = threat (threat).

SWOT analysis is often used to achieve goals. SWOT is considered capable of being a practical analysis method that is useful for improving performance according to the expected targets. SWOT is used to assess the strengths and weaknesses of the resources owned by educational institutions and external opportunities and challenges faced [5]. The process in a SWOT analysis will involve determining the specific objectives of the speculation business or project. To support the analysis, it is also carried out by identifying internal and external factors that support and do not achieve the goals of a business organization [6].

SWOT analysis is also considered a powerful instrument that can be utilized in conducting strategy analysis. SWOT can help to determine a strategy so that it can get a clear picture and the right strategy to maximize the role of the power factor. Not only that, but SWOT can also help see opportunities so that these opportunities can be used as a tool to minimize weaknesses in the organization's body.

Electronic-based learning (e-learning) is a learning activity that utilizes networks (internet, LAN, WAN) as a method of delivery, interaction, and facilitation and is supported by various other forms of learning services.

According to Siahaan, there are at least three functions of e-learning for learning activities in the classroom, namely as follows [7]:

1. As an optional learning supplement
E-Learning functions as a supplement (addition), if students have the freedom to choose, whether students will take advantage of electronic learning materials or use conventional learning models. So, in this case, there is no obligation/obligation for students to access electronic learning materials. Despite the operational nature, students who take advantage of it will certainly have additional knowledge or insight.
2. As a complement learning
E-learning functions as a complement to learning if the electronic learning material is programmed to complement the learning material that students receive in conventional classrooms. As a complement, it means that electronic learning material is programmed to become reinforcement or remedial material for students in following conventional learning activities.
3. As a substitute for learning
E-learning is a substitute (substitution) if electronic learning is fully used in the learning process. In this condition, students only learn through electronic learning, without using other learning models.

2. METHODS

This type of research is qualitative research. Qualitative research is research that is used to examine the conditions of natural objects, (as opposed to experiments) where the researcher is the key instrument, the data collection technique is done by triangulation (combined), the data analysis is inductive/qualitative. This method is used because to find deep understanding. The research subjects were the teachers at SMKN 3 OKU.

Subjects are people who can provide additional information related to the research conducted [8]. The data collection stages as follows:

- 1) Questionnaire
To obtain empirical data about the observed variables, this study uses an instrument in the form of a questionnaire. The questionnaire that will be used to collect data regarding the SWOT analysis refers to a Likert scale reader. The Likert scale is a scale that has four levels and is an ordinal type scale, with an estimated value of the answer to each question with the following levels [9].
4 = Strongly Agree (SA)
3 = Agree (A)
2 = Disagree (DA)
1 = Strongly Disagree (SD)
- 2) Documentation is the way the authors use to collect data by looking for or retrieving data in the form of documents that are in school. The data in question is the number of students, the condition of the facilities and infrastructure, and the number of teachers [10].

3. RESULTS AND DISCUSSION

Input components based on Lewis and Smith's open systems approach include computer facilities, government regulations, integration with central systems and *servers*, human resources, and procedures for implementing *e-learning* (online) *learning* [11]. The results of the analysis of the strengths and weaknesses of the *input* aspects until the *Internal Factors Analysis Summary* (IFAS) *Matrix* is obtained can be seen in Table 1 below:

Table 1 Input Aspect IFS Matrix

Nu.	SWOT Element Strength	Weight	Rating	Score
1	The existence of adequate computer and internet network facilities	0.33	4	1.30
2	The existence of government regulations to implement e-learning at designated schools and capable of both human resources and facilities in	0.26	4	1.04

	implementing e-learning			
3	The computer used has been integrated with the central system and server	0.17	4	0.70
4	Human resources are relatively young and have good educational qualifications, expertise, and good experience	0.13	4	0.52
5	The e-learning procedure is easy to understand.	0.11	3	0.33
Total Score		1		3.89
No.	WEAKNESS			
1	Computers are not sufficient	0.29	2	0.59
2	Learning e-learning (online) are not effective if only one server, one room, and no server backup	0.22	2	0.43
3	Lack of understanding of school regulations related to e-learning (online)	0.20	2	0.39
4	Do not have a work program for e-learning (online) learning	0.16	2	0.33
5	Students are required to understand how e-learning (online) learning works	0.13	2	0.26
Total Score		1		2
Total final score (Strengths - Weaknesses)				1.89

For the aspect of strength input (Strength), the most influential strength seen from item number 1 is the existence of adequate computer and internet network facilities with a weight of 0.33 rank 4, and a score of 1.30, so it can be said that there are computer facilities and internet networks. adequate fall into the very important category.

In the aspect of strength input (Strength), item number 2, namely the existence of government regulations for implementing e-learning (online) learning at designated schools and capable of both human resources and facilities in implementing e-learning learning with a weight of 0.26 rank 4, and a score of 1.04, so it can be said that there is a government regulation for implementing e-learning at designated schools and capable of both human resources and facilities in implementing e-learning are included in the very important category.

In the aspect of strength input, item number 3, namely the computer used has been integrated with the central

system and server with a weight of 0.17, rank 4, and a score of 0.70, so it can be said that the computer used has been integrated with the central system and server. fall into the very important category.

In the aspect of strength input (Strength), item number 4 is that human resources are relatively young and have good educational qualifications, expertise, and good experience with a weight of 0.13 rank 4, and a score of 0.52, so it can be said that human resources relatively young and have good educational qualifications are in the very important category.

In the aspect of strength input (Strength), item number 5, namely the e-learning (online) learning procedure is easy to understand with a weight of 0.11 rank 3, and a score of 0.33, so it can be said that the e-learning procedure is easy to be understood falls into an important category.

With this strength, schools have the opportunity to prepare themselves for the implementation of e-learning, especially on input. So that the total weight multiplied by the score for the strength factor is 3.89.

Whereas in the input aspect of weakness that need to be overcome as in item number 1, namely the computer has not met the needs with a weight of 0.29 rank 2 and a score of 0.59, so it can be said that the computer has not met the needs, including in the very important category to get attention from the school.

In the input aspect of weakness in item number 2, namely, e-learning is not effective if it only has one server, one room, and no backup server with a weight of 0.22, rank 2, and a score of 0.43, so it can be said that learning e-learning is not effective if only one server, one room, and no server backup are included in the category of very important the attention of the school authorities.

In the input aspect of weakness in item number 3, namely the lack of understanding of school regulations related to e-learning with a weight of 0.20 rank 2 and a score of 0.39, so it can be said that the lack of understanding of school rules related to e-learning, it is included in the very important category to get the attention of the school.

In the input aspect of weakness in item number 4, namely not having an e-learning learning work program (online) with a weight of 0.16, rank 2, and a score of 0.33, so it can be said that it does not have an e-learning learning work program (online) is included in the very important category to get the attention of the school.

In the aspect of input weakness at item number 5 which students are required to understand how learning e-learning with 0.13 weight rating of 2 and a score of 0.26, so it can be said that the students are required to understand how learning e-learning is included in the very important category to get the attention of the school.

The total weight multiplied by the rating for the weakness factor is 2, the final total rating of strength minus weakness for the *input* aspect is 1.89, meaning that the strength factor is more dominant than the weakness. This means that schools can use their strengths to overcome weaknesses that arise.

The results of the analysis of the opportunity and threat factors in the *input* aspects can be seen in table 4.2. then given weights and ratings, and the final score is calculated, and the *External Factors Analysis Summary (EFAS) Matrix* is obtained as follows:

Table 2 Input Aspect EFAS Matrix

Nu.	SWOT element OPPORTUNITIES	Weight	Rating	Score
1	Adequate school accreditation, namely A and B	0.30	4	1.22
2	Human resources are relatively young and have good educational qualifications, expertise, and good experience	0.23	4	0.91
3	The number of alumni are getting bigger and the alumni level,	0.20	4	0.78
4	Employees do not experience difficulties in <i>e-learning</i>	0.17	4	0.70
5	Master Degree and Bachelor Degree teaching staff and increased professional training	0.10	3	0.29
Total Score		1		3,9
THREAT				
1	Internet and local networks connected to servers often experience problems	0.30	3	0.91
2	The <i>expensive bandwidth</i>	0.25	2	0.50
3	E-learning must be in accordance with the schedule	0.20	2	0.39
4	E-learning has been adapted to the Provincial Department of Education and local municipalities	0.15	2	0.30
5	Unstable electrical power	0.10	2	0.20
Total Score		1		2,3
Total final score (Opportunity - Threat)				1.6

In the aspect of *input* opportunities, item number 1 is adequate school accreditation, namely A and B with a weight of 0.30, rank 4, and a score of 1.22, so it can be said that adequate school accreditation, namely A and B, is in the very category. urgent.

In the aspect of *input* opportunities item number 2, namely human resources are relatively young and has good educational qualifications, expertise, and good experience with a weight of 0.23, rank 4, and a score of 0.91, so it can be said that Humans are relatively young and have good educational qualifications, expertise, and good experience are included in the very important category.

In the aspect of *input* opportunities item number 3 is the number of alumni that are getting bigger and the level of alumni with a weight of 0.20, rank 4, and a score of 0.78, so it can be said that the number of alumni is getting

bigger and the level of alumni is in the very category. urgent.

In the aspect of *input* opportunities item number 4 is that employees do not experience difficulties in *e-learning* (online) with a weight of 0.17, rank 4, and a score of 0.70, so it can be said that employees do not experience difficulties in *e-learning* falls into the very important category.

In the aspect of input opportunities item number 5, namely the Stara-2 and Stara-1 teaching staff as well as professional training increased with a weight of 0.10, rank 3, and a score of 0.29, so it can be said that the teaching staff of Master Degree and Bachelor Degree and increasing professional training is included in the important category.

The final total weight times the score for the odds factor is 3.9. All the things that have been mentioned are good opportunities for schools, but schools have also encountered several threats on the *input* aspects described below.

In the threat *input* aspect threats item number 1, namely the internet and local networks connected to servers often experience interference with a weight of 0.30, rank 3, and a score of 0.91, so it can be said that the internet and local networks connected to servers often experience interference included in the very important category for the attention of the school.

In the aspect of threat input threats, item number 2 is the expensive bandwidth with a weight of 0.25, rank 2, and a score of 0.50, so it can be said that the high bandwidth is included in the very important category for school.

In the threat input, item number 3, namely e-learning must be in accordance with the schedule with a weight of 0.20, rank 2, and a score of 0.39, so it can be said that e-learning must match with the schedule included in the very important category for the school's attention.

In the aspect of threat input threats item number 4, namely, e-learning has been adjusted to the National Education Office and local city provinces with a weight of 0.15, rank 2, and a score of 0.30, so it can be said that e-learning has been adjusted to the National Education Office and the local provincial city is in the very important category for the attention of the school.

In the aspect of threat input threats, item number 5, namely unstable electric power with a weight of 0.10, rank 2, and a score of 0.20, so it can be said that unstable electrical power is included in the very important category for the attention of the school.

The result of the final score of the opportunity factor minus the threat factor for the input aspect is 1.6, which means that the opportunity factor is more dominant than the threat factor. So that schools can take advantage of existing opportunities to minimize the threats that come.

Based on the results of the calculation of the analysis of the internal environmental factors and the external environmental factors of the input aspect, the final score of the input aspect of the internal environment (strengths - weaknesses) is 1.89. This figure shows that the strength factor is more dominant than the weakness factor so that

with the strength of students, the implementation of good e-learning can overcome their weaknesses in mastering e-learning for students is not optimal. Besides, the strength of schools in the form of adequate facilities and operational costs can be used to empower school principals, teachers, and staff with quality training. Meanwhile, the final score for the external environment for the input aspect (opportunities - threats) is 1.6. This shows that the opportunity factor is still more dominant than the threat factor so that schools can take advantage of existing opportunities to reduce emerging threats.

The results of IFAS and EFAS calculations show that the position is at point (1.89; 1.6) which means that it is in the SO (Strength - Opportunities) quadrant. This is a very favorable situation because schools have more dominant strengths and opportunities, so it is necessary to implement an aggressive strategy that supports an aggressive growth policy by using the existing strengths in schools to take advantage of outside opportunities.

In conducting a SWOT analysis, we can incorporate internal and external factors into the sections on Strength, Weakness, Opportunity, and Threat descriptions. But to make this SWOT description look easier to do and more systematic, we can put it in a matrix known as the SWOT matrix. Using SWOT in a straight column can indeed be done, it's just that the SWOT matrix is considered easier to do because various factors will be presented in a clear matrix.

The SWOT matrix itself is a tool used to formulate strategic factors. With the SWOT matrix, we can get a clear picture of how external opportunities and threats are faced by educational institutions, according to their strengths and weaknesses. From this matrix, four sets of possible alternative strategies will also be generated that can be applied to achieve its vision and mission.

4. CONCLUSION

Based on the results of the analysis and discussion, the conclusions that can be drawn are:

- 1) The main strengths possessed by State Vocational High Schools in Ogan Komering Ulu Regency are basic abilities, high student interest, and motivation, supported by teacher education qualifications in accordance with subject teacher diplomas, so that student achievement in the implementation of e-learning quite satisfying.
- 2) The weakness is that students' ability to understand e-learning questions is still not optimal.
- 3) The opportunity that is owned by the implementation of e-learning (online) is that the local government fully supports the implementation of e-learning.
- 4) The threat is that the curriculum made by the government often changes in the curriculum.
- 5) The results of the SWOT analysis from the input, to improve the implementation of e-learning that supports aggressive strategies to support school growth, a strategic plan is made that uses the strengths of the internal school environment.

The suggestions given by researchers in this study, especially for State Vocational High Schools in Ogan Komering Ulu Regency are as follows:

- 1) For the principal, should be able to issue a policy for computer extracurricular activities as an extracurricular activity that every student must follow to facilitate the e-learning process.
- 2) For teachers, should make e-learning alternative learning that can be applied in the distance teaching and learning process.

For students, to be always training myself and autodidact learning through the application of e-learning given by the teacher, both at school and home.

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