

## **The Influence of Using the Learning Management System *Pacak Spensa* and ICT Skills on Student's Learning Motivation**

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**Abstract:** This research aimed to determine the influence of the *Spensa Pacak* Learning Management System application and the ICT skills of subject teachers on students' learning motivation. The study was conducted at SMP Negeri 1 Koba, Central Bangka Regency, using questionnaires. The results showed that the use of the Learning Management System application had no significant impact on students' learning motivation. However, the ICT skills of subject teachers had a significant influence on students' motivation. The use of the Learning Management System application and subject teachers' ICT skills simultaneously had a significant influence on students' motivation. The coefficient of determination for students showed a large influence of the Learning Management System application and subject teachers' ICT skills, with 82.3% influenced by other factors not mentioned in the research.

**Keywords:** ICT Skills, Learning Management System, Motivation to Learn

### **A. Introduction**

The digital era, spanning from Information Technology to Industry 4.0, is rapidly evolving. The Industrial Technology 5.0, marked by 5G internet networks, is also advancing. This has led to significant advancements in various sectors, including education. Schools must transition towards digitalization to stay competitive with developed countries and enhance efficiency, effectiveness, and productivity. Information technology, according to Lantip & Riyanto (2011) is a science that encompasses a variety of topics, including telecommunications systems, MAN (Metropolitan Area Network), WAN (Wide Area Network), hardware and software systems, and management information systems. Information technology, according to Hariningsih (2005) encompasses all activities associated with using it as a tool, managing, and modifying information. Information technology is defined as the design, development, implementation, study, support, or management of computer-based information systems, particularly the use of computer hardware and software

to modify, store, secure, process, transmit, and safely obtain information, according to the Information Technology Association of America.

The efficiency of educational activities, such as data processing, material creation, and instruction via electronic books, PCs, laptops, and LCD projectors, has been greatly increased by technology. The learning process has changed as a result of the transition from traditional media to technology. Due to issues brought on by the Covid 19 pandemic since March 2020, all face-to-face Teaching and Learning Activities processes now have to contend with the distance learning process, which necessitates the use of digital and communication technologies as well as a variety of applications to facilitate digital communication between subject teachers and students.

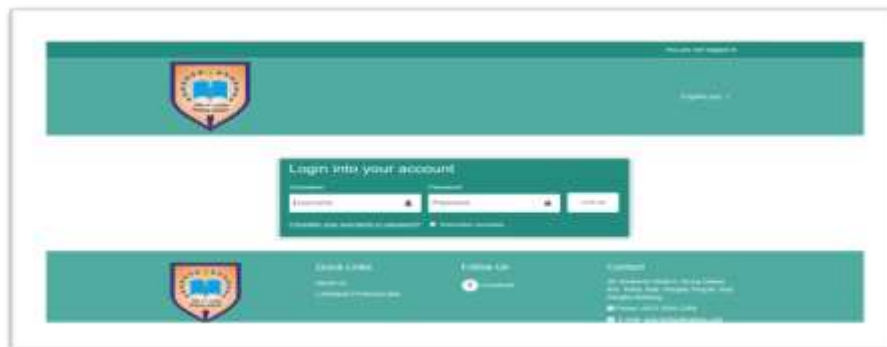
The field of education, in particular the use of technology in educational institutions, namely schools, must be able to adapt and keep up with the rapid advancement of industrial technology from 4.0 to 5.0. By starting early and preparing students well for junior high school and beyond, we can produce human resources who will be dependable and equipped for future technological advancements of ever greater magnitude. Schools that are digitally oriented will be the first to be prepared for future technology advancements. Schools will be able to compete with schools in large cities and even in nations where technology development is already advanced if they have a solid concept and make improvements from the beginning. SMP Negeri 1 Koba is working to implement this idea of a "digital school," to be one of the schools that develops toward a digital school in all activities and learning procedures.

The first of the aforementioned three conditions or issues is the COVID-19 pandemic, the end of which is still unknown and which has a significant impact on Teaching and Learning Activities. The other two are, of course, technological advancements that have entered Industrial Technology 4.0 and are currently moving towards Industrial Technology 5.0. It necessitates extensive planning, which must begin right away. Policymakers in education units, where the learning process is undergoing significant changes, should undoubtedly be concerned about this condition. Previously, learning was conducted entirely in-person in classrooms and schools; however, since the COVID-19 pandemic outbreak, schools are required to conduct learning from home. This can be a serious issue if it is not managed promptly and in a way that is commensurate with the student's abilities. Online learning, which is the virtual world that replaces the teaching and learning activity process that has been in the school environment, is the use of technological applications that will become a reference as a forum or location in the learning process. Online learning will certainly be less effective if it is not accompanied by good and correct ICT skills of students.

Beginning in November 2020, the online Teaching and Learning Activity procedure replaces in-person classroom instruction with the Learning Management System application. Put another way, the Spensa Pacak Application, which was developed and produced to meet the online learning requirements of SMP Negeri 1 Koba, was used to transfer or carry out teaching and learning activities at the school. This web-based learning management system application was created using the Moodle LMS application as a model. Students must undoubtedly possess good skills or mastery to use learning media in online teaching and learning activities through the Spensa Pacak Learning Management System application. This will further encourage students' passion for using IT technology in the learning process.

The open-source Moodle application served as the inspiration for the Learning Management System Spensa Pacak, a learning management system that can be customized to meet the demands of individual users or educational institutions. Spensa is an acronym for SMP Negeri 1 Koba, whereas Pacak is a Bangka Belitung regional language word meaning "able" or "capable." One of the reasons for online learning is that all residents of SMP Negeri 1 Koba can and are capable of attending a better, digital-based school with adequate and high ICT mastery. This is the rationale for the name of the Learning Management System Spensa Pacak application.

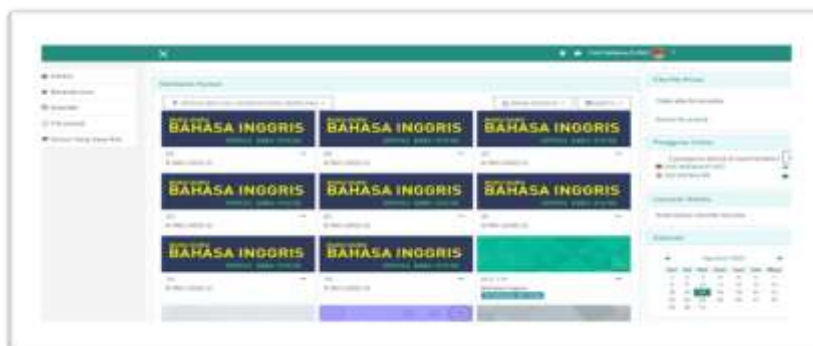
Learning management systems, according to Prawiradilaga & Salma (2012), are a kind of ICT-based learning platform that includes a variety of learning products with facilities that can be used in the learning process, such as gadgets for managing teaching and learning activities, presenting content, and facilitating communication. Ellis (2009) states that an online learning management system, also known as an LMS, is software used for administrative tasks, documentation, activity reports, online activities (linked to the internet), teaching and learning activities, e-learning, and training materials. The majority of e-learning activities revolve around learning management systems, which are widely used to create and administer online courses, distribute resources, and facilitate communication and teamwork between instructors and students. According to Epignosis (2014), a Learning Management System needs to have the following fundamental components: (1) an attractive interface; (2) customization to adjust the system according to user wishes; (3) virtual class; (4) connected to social media; (5) communication features such as forums and chat; (6) course or courses; (7) report or reporting.



**Figure 1. Spensa Pacak Learning Management System Home Page**  
Source: <http://spensapacak2021.smpn1koba.ac.id>

Because the Spensa Pacak Learning Management System application is used for online learning, it has undoubtedly generated a range of reactions and responses from users. For example, several teachers have stated that the Learning Management System application is excellent and facilitates the learning process, and several students and alumni have also expressed gratitude for the Learning Management System at SMP Negeri 1 Koba. Based on these answers, a specific scientific investigation is required to determine the scientific validity of the relationship between students' ICT proficiency their enthusiasm to learn, and the usage of the Spensa Pacak Learning Management System application.

As is well known, virtually all large-city schools have made use of this media to establish their virtual learning environment through the usage of the Learning Management System. In the present day, a teacher must be proficient in using technology to enhance the learning process. This includes knowing how to use information technology, or IT, especially when it comes to supporting the online learning process and creating effective learning, which gives students the chance to engage in real learning and also increases student interest and learning outcomes.



**Figure 1. Subject Teacher Dashboard Page**  
Source: <http://spensapacak2021.smpn1koba.ac.id>



**Figure 3. Lesson Material Page**

Source: <http://spensapacak2021.smpn1koba.ac.id>

This research aims to investigate the impact of the Spensa Pacak Learning Management System application and students' ICT skills on online learning motivation at SMP Negeri 1 Koba. The objectives include assessing the influence of the application, teachers' ICT skills, and the influence of these factors on motivation.

## **B. Methods**

This research was carried out on students as users of the Spensa Pacak LMS application at SMP Negeri 1 Koba, Koba District, Central Bangka Regency. In this research the author used quantitative research methods quoted from Sugiyono (2011) as follows: "Quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to research certain populations or samples, collecting data using research instruments, Data analysis is quantitative or statistical with the aim of testing predetermined hypotheses. The population in this study were students at SMP Negeri 1 Koba in grade 8 consisting of 4 classes/groups totaling 246 students. According to Arikunto (2017), states that the population is the entire research subject. Based on these calculations, the number of sample proportions spread out was 150 respondents from different 7th grades. According to Sugiyono (2011), "The sample is part of the number and characteristics possessed by the population".

Data collection carried out by researchers included distributing questionnaires, observation, and documentation. According to Bungin (2005), Questionnaires are often also referred to as questionnaires. This technique is a series or list of questions or statements that are arranged systematically and then sent to be filled in by the respondent. According to Arikunto (2013), documentation techniques are a way of collecting data that produces important notes related to the problem being studied.

### **C. Results and Discussion**

#### **The Effect of Using the Spensa Pacak Learning Management System Application on Student Motivation at SMP Negeri 1 Koba**

The Spensa Pacak Learning Management System application which has been built and used since 2020, especially during the Covid-19 pandemic, in the learning process, it turns out that the use of the Spensa Pacak LMS application after hypothesis testing where  $H_0$  was declared accepted, this can be seen in the significance value of 0.215, the calculated t value of 1.246 and The t table value is 1.97623, referring to the t-test criteria above, namely the sig value (0.215) > 0.05 (significance states  $t$ ; greater than 0.05) or  $t$  count <  $t$  table, namely  $1.246 < 1.97623$  ( $t$  count also states that smaller than  $t$  table) then it can be stated that  $H_0$ , which means that there is no influence of the variable using the Spensa Pacak LMS application on student learning motivation, in other words that the use of the Spensa Pacak Learning Management System application does not influence student learning motivation.

A learning management system is a software program made to produce, disseminate, and oversee the online distribution of educational materials. The Learning Management System Spensa Pacak system assists educators in organizing their lesson plans, overseeing course materials, supervising student learning tasks, assigning grades, recording absences from class, and presenting grade transcripts. This is consistent with studies published in research journals by Mahmudi et al. (2022), blended learning-based learning management following the adoption of Covid-19 as a curriculum by numerous Indonesian schools. Thus, learning management is required to facilitate the successful use of blended learning. Under the heading "Learning Management System Based on Moodle to increase student learning activities," Simanullang & Rajagukguk (2020), communicated the same message. He concluded that the Moodle-based Learning Management System can boost online student learning activities in his research article. Every student learning task can be effectively completed in this fashion, free from the limitations of a finite amount of in-person class time.

Similar to what was said by Ziraba et al (2020) under the heading "The Adoption and Use of Moodle Learning Management System in Higher Institutions of Learning: A Systematic Literature Review" in the American Journal of Online and Distance Learning, Vol. 2, Issue 1 No. 1, pp. 1 - 21, 2020. The purpose of this study is to investigate the factors that affect how instructors and students at ICT University use the Moodle platform to teach online courses. Additionally, the study will look at the theories that underpin the use and adoption of the Moodle platform. The findings published in this journal will also demonstrate how beneficial it is for students to use Moodle as an LMS application. Additionally supporting this is Rulianto (2009)

Moodle is an application of web-based information technology teaching and learning principles and procedures, also referred to as the e-learning concept. Web-based learning, as defined by Rusman (2012) is any educational activity that makes use of website content that is accessible over the Internet.

In this study, the Spensa Pacak Learning Management System application will be tested as a web-based information system application in the online learning process using End-User Computing Satisfaction (EUCS) as a reference. The effectiveness of the LMS information system and its ability to boost student learning motivation was assessed by measurements of the Spensa Pacak LMS application. Doll & Torkzadeh created the EUCS evaluation paradigm in 1998. This model evaluates the system's content, correctness, format, timeliness, and convenience of use to highlight end users' satisfaction with technological features. By contrasting the expectations and actual state of an information system, EUCS is a technique for gauging the degree of user satisfaction with an application system (Pratama, 2012).

The results of a study about the usage of the Spensa Pacak Learning Management System application at SMP Negeri 1 Koba, which indicates that its use at the moment does not affect students' willingness to learn, differ from the study mentioned above. The following causes could be the cause of this:

1. The use of LMS applications at the junior high school level is still not that common when compared to high school or tertiary level students who are used to Learning Management system-based online learning.
2. The use of the Spensa Pacak Learning Management System for grade 8 students at SMP Negeri 1 Koba was only carried out for two semesters or one academic year, namely when the students were in grade 7 so the level of interest in the Learning Management System application was not yet maximum.
3. At the junior high school level, understanding regarding the use of Android gadgets/cellphones still tends to be more about understanding playing.
4. And there may also be the influence of other factors that are not included in this research.

### **The Influence of Teachers' ICT Skills on Students' Learning Motivation at SMP Negeri 1 Koba**

Ability or skill is a skill/expertise that someone has to be able to influence or motivate other people, especially in this research, the skills or abilities possessed by teachers influence student motivation in the learning process.

In the research that has been carried out, good results have been obtained. This can be proven by referring to the significance value obtained in the research data analysis process, the significance value of ICT skills is 0.005 when compared with the

significance value of the confidence level  $\alpha$  of 5% (0.05), so the value of The significance of ICT skills is far below the significance level of confidence, this is also supported by the results of the analysis of the calculated t value with the t table value, where the calculated t value is 2.860 while the t table value is 1.98729 and if you compare these two values with the decision making criteria in the t-test, namely  $t_{count} > t_{table}$ , namely  $2.860 > 1.98729$ , this proves that there is a positive influence of the teacher's ICT skills on student learning motivation.

Fajrin (2013) also expressed a similar conclusion in his research journal, based on the above hypothesis. He concluded that, in the experimental class that used ICT-based learning media, there was a difference in students' motivation to learn before and after treatment. Second, there are variations in the learning motivation of students in the graphic media-using control class before and after therapy. Third, the experimental class, which used ICT-based learning materials, and the control class, which used graphic materials, did not vary in terms of raising students' motivation to study.

In their research journal article on the use of electronic module-based modules, (Zaharah & Susilowati, 2020) made a similar argument, stating that these modules are more portable, have lower production costs, have longer lifespans, and can incorporate audio, animation, and video into their presentations. In addition to being aesthetically pleasing, electronic modules can provide abstract educational content in a concrete form, which will inspire pupils to learn. Naturally, this is inextricably linked to the instructor's proficiency with ICT in the creation and analysis of electronic module-based materials.

Studies like this one are also validated by specialists (Ilomaki, 2008). Digital skills in a larger sense are known as ICT skills. When it comes to other critical abilities like reading, numeracy, and problem-solving, ICT skills are transferred, modified, and used as a tool to support learning transformation (MCEETYA, 2008). Thus, it can be concluded that a person's or teacher's ability to master ICT or skills in managing the ICT-based learning process has an impact on or influences student learning motivation. This conclusion is based on several research journal studies related to ICT skills or skills in using ICT devices or media, which are supported by expert theories and hypothesis analysis carried out.

### **The Influence of Using the Spensa Pacak LMS Application and Teacher ICT Skills on Students' Learning Motivation at SMP Negeri 1 Koba**

The research results show that there is a simultaneous influence of the use of the Spensa Pacak Learning Management System application and the teacher's ICT skills on the learning motivation of students at SMP Negeri 1 Koba, which is proven by the hypothesis results. The hypothesis with the F test method carried out simultaneously

shows a significance value of 0.021 when compared with the significance level of the confidence level  $\alpha$  of 5% (0.05), so the resulting significance value of this hypothesis is smaller than the significance value of the standard confidence level, namely ( $0.021 < 0.05$ ) and this is further confirmed by the F test Hajj value (calculated F) of 4.050 which is greater than the F table value of 3.10 ( $4.050 > 3.10$ ) so that from this two hypothesis results in it shows that the use of the Spensa Pacak Learning Management System application and ICT skills Teachers simultaneously have a positive influence on students' learning motivation in the learning process at SMP Negeri 1 Koba, especially at the 8th grade level.

A good percentage is shown by the significant impact of both the teacher's ICT abilities and the Spensa Pacak LMS application. This is demonstrated by the hypothesis testing coefficient of determination, which is 0.085, or 8.5%. According to the percentage coefficient of determination, the influence of instructors' ICT abilities and the Spensa Pacak LMS application combined is only 8.5%; the remaining 91.5% is due to factors not covered by the research's variables.

Euis (2020) research journal article, "Utilization of Information and Communication Technology in Increasing Students' Passion for Learning," is pertinent to what he said here. The study's findings and the subsequent discussion demonstrate that, despite its limitations as a medium, source, and tool for assessment, information and communication technology is used in the classroom at MTsN 4 Ciamis to keep students engaged and excited about learning. In this instance, the media can help students overcome their limited experience, allow for direct engagement between them and their surroundings, create consistency in their observations, and impart sound and pertinent fundamental notions.

The same point was made in a research paper titled "The Role of Teachers in Increasing Students' Learning Motivation for Social Sciences Subjects Class VIII SMPN 7 Kubung" (Rahmatika et al., 2022). This paper describes how teachers contribute to social studies education and how students become more motivated to learn. The study's findings demonstrate how effectively teachers have performed their roles as class leaders, educators, and mentors in terms of imparting knowledge or giving quality instruction. How students have approached assignments, overcome obstacles, and engage in self-directed learning has been excellent.

From the results of the research hypothesis and several opinions that have researched the problem, it is revealed that the role of the teacher and mastery of learning applications as well as the teacher's ability to design ICT/ICT-based learning has a good influence on student learning motivation.

## **D. Conclusion**

Based on the results of data analysis, the variables digital literacy and character education have both partial and simultaneous effects on improving the quality of learning can be explained as follows:

1. There is a significant influence of digital literacy on improving the quality of public junior high school learning in Pangkalan Baru District, Central Bangka Regency with t count  $8.502 > t$  table  $1.9908$  has a contribution effect of 48.7% on variable Y and the other 51.3% is influenced by other factors outside variable  $X_1$
2. There is a significant influence of character education on improving the quality of learning at State Middle Schools in Pangkalan Baru District, Central Bangka Regency with t count  $11.838 > t$  table  $1.9908$  has a contribution effect of 64.8% on variable Y and the other 35.2% is influenced by factors -other factors outside variable  $X_2$
3. There is a significant influence of digital literacy and character education on improving the quality of learning together at State Middle Schools in Pangkalan Baru District, Central Bangka Regency with f count  $11,838 > 78,847 > f$  table of 3.11. has a contribution effect of 67.8% on variable Y and the other 32.2% is influenced by other factors outside variable X

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