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## **Implementation of Internet-Based Learning System with Utilizing the *Web Enhanced Course Model* to Enhance Students' Learning Motivation**

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### **Abstract**

The progress of science and technology in recent times has advanced rapidly. Technology has become a necessity in human life, in line with the changing civilization of human existence itself. Various types of technology that we encounter in our daily lives, one of them is the phenomenal information and communication technology (ICT). Various types of information and communication technology devices such as computers, laptops, Android smartphones, notebooks, multimedia tools, and so on. ICT tools can be utilized to assist human work in several fields, including serving as aids in the learning process in schools and other educational institutions. This study aims to implement an internet-based learning system using the web augmented course model in order to boost students' learning motivation. The research method employed is applied research (action research). The subjects of this study are third-semester students of the Islamic Religious Education (PAI) program at IAIN Curup. Based on the research findings, the internet-based learning system utilizing the web augmented course model can boost students' learning motivation. This can be observed through the results of data observation and questionnaires conducted at each stage of the cycle. The average results of the observation and questionnaire in the initial stage were 55.21 (low category), there was an increase after the first cycle to 64.54 (medium category), and further increased after the second cycle to 86.5 (high category).

**Keywords:** *Internet, Web Enhanced Course, Learning Motivation*

### **Introduction**

Learning can be defined as the cognitive process of modifying behavior through the acquisition and application of knowledge and skills gained from experience. Multiple ideas elucidate the mechanisms underlying behavioral changes in humans. However, each of those hypotheses fundamentally originates from a distinct human concept. John Locke thinks that humans are passive beings, and the occurrence of behavioral changes is contingent upon the environment. The behavioristic learning stream emerged from this paradigm, encompassing the theories of classical conditioning and operant conditioning. The learning theory inherent in the behavioral stream posits those changes in human behavior primarily result from the interaction between external stimuli and internal responses. Human behaviors are mechanical and are not independent of the stimulus-response link. The reference

is from a study conducted by Ishak and Darmawan in 2013.

Leibniz regarded humans as dynamic entities with inherent capacity. Human conduct is shaped not only by external factors but also by factors such as individual potential, awareness, and ownership. The notion of a human being then leads to a comprehensive cognitive learning process. The gestalt theory is a cognitive learning theory that explains the flow of information. According to this learning theory, behavioral change is attributed not just to external influences but also to an internal drive, sometimes referred to as consciousness. The gestalt theory views consciousness as an integrated whole rather than as distinct elements. Hence, gestalt theory posits that the entirety holds greater significance than its individual components. This perspective subsequently led to the emergence of constructivism, as formulated by Jean Piaget in the late twentieth century. Constructivism theory posits that knowledge is constructed via the interaction between the subject and the object. While it is indeed accurate that knowledge is acquired through observing objects, the significance of an item is incomplete without the presence of a subject that assigns meaning to it. Hence, gestalt theory posits that the entirety holds greater significance than its individual components (Ishak & Darmawan, 2013). Education is a deliberate and organized effort, conducted by those who are tasked with the task of shaping students' character and behavior in line with educational principles. (Munib, 2004). Consequently, the educators want to provide precise guidance in order to enable the students to develop maturity and independence. Education is a crucial component of human development. It plays a significant role in advancing science and technology. Additionally, education must utilize the progress made in these fields to effectively and efficiently achieve its goals. The usage of teaching materials in schools and educational institutions has been impacted by advancements in science and technology. Education in schools is undergoing a transformation as it incorporates the advancements of information technology, leading to a shift in the traditional approach to adult learning (Sanaky, 2009). It signifies that the incorporation of information technology in classroom instruction has become an essential requirement and expectation in the current global society. The Internet is one of the advancements in information and communication technologies. The Internet is a globally interconnected computer network that utilizes the standard transmission control protocol/internet protocol suite (TCP/IP) to facilitate the exchange of data packets. It serves billions of users worldwide. Miarso (2005) defines the learning system as a system approach with a specific purpose of enhancing the teaching and learning process. This goal is achieved by providing facilities to students. Furthermore, the system approach employs a distinct methodology for the construction of learning systems. The technique comprises systematically defined procedures for planning, designing, executing, and assessing the overall teaching and learning process. In Andriani's (2015) study, H. Davis defines a learning system as a structured entity that integrates individuals, resources, infrastructure, tools, and processes to collectively accomplish a certain objective. The materials include books, whiteboards, projectors, markers, and other related items. The facilities available include of study rooms, visual audio media equipment, PCs, and laptops. The steps involved are time, content sequencing, learning process, assessment, and evaluation.

There are three characteristics that signify the effectiveness of an educator's instructional system: attractiveness, efficiency, and success. Hence, the learning system necessitates a meticulously crafted procedure to facilitate engaging, impactful, and streamlined interaction between educators and learners. The integration of these three elements will facilitate educational engagement by utilizing media as a pedagogical resource. In the educational system, both students and lecturers must actively engage with one other in order to create a more conducive learning environment. The Internet is a globally interconnected network of computers that enables interaction, communication, and the exchange of information and data between computers. The Internet can be described as a global network that interconnects various sites on Earth, forming a web-like structure reminiscent of a spider web. A node. The Internet has become ubiquitous and has evolved into a fundamental aspect of daily life for several individuals. The term "Internet" is familiar to nearly everyone. Periodically, the level of consumer demand worldwide, and specifically in Indonesia, continues to rise. Evidently, the Internet's growth in Indonesia is currently progressing at a quick pace. Thanks to the Internet, individuals have the ability to engage with individuals from any location around the globe at any given time. The geographical borders of the nation and its territories no longer impede communication between individuals (Mangkulo, 2010). Based on the aforementioned beliefs, it is evident that the internet is

highly advantageous for learning due to its provision of economical, unrestricted, and ubiquitous access. The Internet plays a highly advantageous function in education due to its capacity to effectively handle and retain vast quantities of data. The Internet technology has evolved into the most extensive global computer network, which can be fully utilized with the aid of equipment such as computers and a reliable network infrastructure. Utilizing the full range of Internet features facilitates users' access to diverse educational content. The Internet enables teachers and learners to engage in various activities, including 1) conducting extensive searches for library resources, 2) providing access to virtual classrooms or universities, and 3) facilitating continuous interaction between educators and students, regardless of their location, as long as they have Internet connectivity. 4) Gaining entry to and retrieving e-books in an unrestricted quantity. 5) visiting numerous educational venues both at home and abroad. 6) Students have the flexibility to study at any location and at any time, without the need to wait for official educational opportunities. In Rusman, et al., (2013), Haughey proposed three potential pathways for the advancement of Internet-based learning systems: web course, web centric course, and web enhanced course. Web-based education, often known as online learning, utilizes the Internet as a platform for educational activities. This approach allows students and lecturers to engage in learning without the need for physical interaction. The entirety of the educational resources, conversations, advisory sessions, practical training, exercises, assessments, and other educational endeavors are exclusively conducted via the Internet. Put simply, this model employs a remote system. Web Centric Course refers to the utilization of the Internet to combine remote learning and in-person learning. (conventional). A portion of the material was transmitted via the Internet, while another portion was supplied through direct personal interaction. Their functions are mutually complementary. In this technique, a partial lecturer provides directives to the student to engage with the lesson content using the web platform that they have developed. Additionally, students were directed to explore alternative information from pertinent websites. During in-person interactions, students and lecturers engage in more extensive discussions about the acquired knowledge from online sources. Web Enhanced Course refers to the utilization of the Internet to enhance the quality of classroom-based learning. The primary purpose of the Internet is to facilitate the exchange of information and communication among students, faculty members, peers, group members, and other sources. Hence, the lecturer in this scenario is required to possess expertise in internet information retrieval strategies, assisting students in locating and exploring captivating websites, providing assistance and communication via the internet, and possessing other essential competencies.

The utilization of the Internet-based learning system, namely the web-enhanced course model, becomes highly advantageous in facilitating the learning process. The Internet provides a diverse range of learning resources, including e-books, e-journals, photos, videos, and multimedia. Utilizing the Internet for learning allows students to go beyond relying solely on the lecturer's delivery of information, since they may independently seek out additional material relevant to the subject matter. For effective implementation of web-enhanced courses, reliable internet connectivity and appropriate internet access technologies are essential. Both students and lecturers are required to possess a laptop or Android mobile phone, which will be utilized for Internet connectivity throughout the learning process. In addition, it is imperative for the lecturer to provide rigorous oversight as there may be students who access websites unrelated to the curriculum content. The term "motivation" originates from the term "motif", which refers to the underlying reason or driving force that compels an individual to take action. (Darmadi, 2017). Motivation is a crucial determinant of an individual's success in the process of learning. According to McDonald, motivation is a shift in one's internal energy that is marked by strong emotions and is preceded by having a specific goal or objective (Sardiman, 2001). As stated by P. Sondang (2004), motivation is a driving force that leads individuals to willingly dedicate their skills, effort, and time towards accomplishing a defined objective. Hence, motivation is the driving force that compels us to take action, sustains our efforts, and determines our aspirations. Motivation can be defined as the force exerted by an individual's needs and desires, which determines the amount of intensity and direction towards a specific goal (H. Darmadi, 2017). McDonald, as cited by Hamalik (2002), defines motivation as a transformation of energy inside an individual's character that involves an emotional emergence and response to a goal, as well as a self-driven impetus that acts as a driving force. Thus, motivation, being an internal psychological process, is greatly impacted by external elements such as the environment, as well as internal factors including personal traits, educational background, past experiences, and aspirations for the future. Based on the aforementioned

comprehension, it can be inferred that motivation is a transformative process of internal energy that empowers a human to exhibit behavior (with a fervor for acquiring knowledge) in order to accomplish their noble objective.

Learning is a fundamental process in human life that leads to individual qualitative changes and the evolution of behavior. The entirety of human life's actions and achievements are only the outcomes of acquiring knowledge, as individuals live and operate based on what they have learned. Learning is not merely an encounter; it is a systematic progression, not an outcome. Thus, the process of learning involves active engagement and the integration of different actions in order to achieve the desired outcomes (Darmadi, 2017). Learning is a cognitive process that occurs through active engagement with the environment, leading to the acquisition of new knowledge, comprehension, abilities, and attitudes. Those modifications exhibit a high degree of consistency. Learning motivation refers to the inclination to stimulate, mobilize, guide, and steer human attitudes and actions towards the acquisition of knowledge (Winkel, 1996). As per Sardiman (1990), motivation refers to the alteration of energy within an individual, marked by the formation of emotions and preceded by the existence of a goal. Motivation encompasses three essential components: (a) the initiation of energy transformations in each individual; (b) the alteration of energy within the neurophysiological system of the human organism through the development of motivation; and (c) the manifestation of a sense of belonging or affection in an individual. In this scenario, motivation is linked to psychological issues, sentiments, and feelings that might influence human conduct, and (c) motivation will be triggered by the presence of a specific objective. Sardiman (1990) identifies that the markers of learning motivation are observable inside the student, as outlined below: 1) Perseverance refers to the ability of a student to work diligently and persistently on projects without giving up until they are fully done. This is seen in the student who consistently completes tasks punctually, actively seeks additional resources, and maintains a resilient attitude. 2) Despite encountering several challenges, it is the student's responsibility to achieve success in learning by diligently engaging in and adhering to the learning activities. 3) Demonstrating curiosity towards diverse challenges, exhibiting courage in confronting them, seeking solutions to overcome them, and maintaining resilience in the face of adversity 4) Demonstrates a preference for autonomous work, indicating a willingness to fulfill his responsibilities without requiring explicit instructions from an educator. 5) I become easily bored with routine jobs or mechanical activities that are repetitive, resulting in reduced creativity. 6) Capable of endorsing concepts, notions, and viewpoints; 7) Embracing and executing actions with unwavering conviction or strong belief. Furthermore, according to Uno (2008), there are six factors that affect learning motivation: a sincere desire to learn, a strong motivation and necessity to learn, ambitious goals and aspirations for the future, a sincere appreciation for the study process, an enthusiastic eagerness for learning, and a supportive learning environment. Despite having a substantial internet capacity of 100 Mbps at the Curup State Islamic Religious Institute (IAIN Curup), the institution has not completely utilized the internet as a learning tool in all classrooms. Students mostly utilize the Internet resources for activities such as engaging in social media, streaming movies, downloading tunes, and seeking entertainment. It is regrettable that the Internet is not being fully utilized, despite its potential to greatly enhance the learning process. It is imperative to recognize that, in the current era of information technology, the influence of the Internet extends beyond the boundaries of human existence. Access to the Internet is no longer limited to computers or laptops, as it can now be achieved through modern Android smartphones. Based on our observations, about 95% of students enrolled in the IAIN curriculum already own an Android smartphone. However, the full potential of the technology they possess has not been fully utilized to enhance the learning experience.

One of the hurdles to learning in the classroom is the lack of sufficient learning resources or references available to students, which leads to a subpar quality of education that falls short of expectations. Utilizing advanced technology, such as Android smartphones, along with reliable internet access, can help address the issue of limited learning materials. Using accessible technology, students have the ability to access a wide range of reference sources, including e-books, scientific journals, and other scholarly works, which can be utilized to enhance the learning process.

In addition, the issue identified was that several lecturers did not allow students to use the internet during class and even went as far as warning them against using their mobile devices. It is concerning those students do not focus on following the learning process while opening the Internet,

because students open the Internet not looking for learning materials but rather social media or performing undesirable activities. Nevertheless, this notion should be disregarded due to the dearth of educational materials, which can lead to a tedious learning experience when students merely passively receive information from the lecturer without engaging in classroom activities or fostering creativity. This will have a detrimental impact on students' motivation to learn. The question remains as to how a lecturer may effectively create, manage, supervise, and guide classroom instruction in order to ensure that the Internet is utilized for educational purposes.

The availability of Internet information technology is anticipated to enhance the quality of education. Educators must possess innovative creativity in the learning process, which includes developing media and utilizing information technology in learning systems. The employment of technology and the production of learning media aim to facilitate the learning process between lecturers and students, thereby enhancing learning outcomes.

### Research Methodology

The research employed an applied research methodology, specifically utilizing action research. The research employed the class action research model (PTK) as its research framework. (Arikunto & Supardi, 2015).

The gathered data pertains to the learning implementation and motivation of the study subject both prior to and during the investigation (Initial condition, cycle I, and cycle II). The questionnaire consists of a series of inquiries pertaining to the student's learning motivation, which they are required to answer.

### Findings and Discussions

The research process is carried out in two cycles, cycle I and cycle II, each of which consists of planning, implementation, observation, and reflection. The research was conducted by the researcher himself as a lecturer assisted by two peers as an observer.

Based on the results of the studies that have been carried out on the implementation of learning from the initial conditions, cycle I, and cycle II, then this study results in detail as shown in table 1.

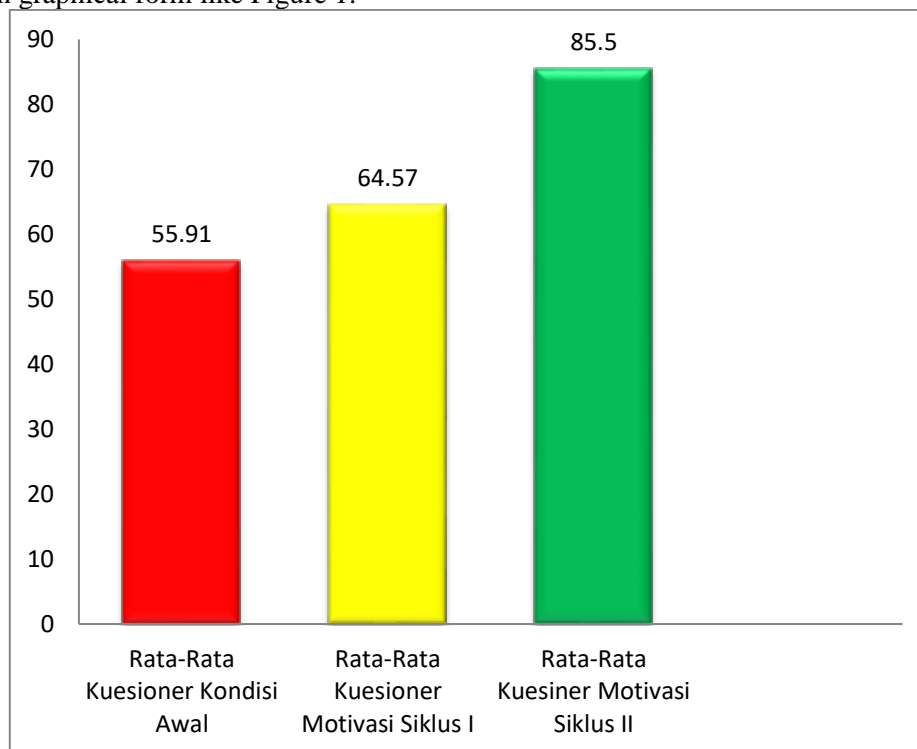
**Tabel 1. Learning Motivation Data**

No	Students' Name	First Condition		Cycle I		Cycle II	
		Score	Cat.	Score	Cat.	Score	Cat.
1	Ana P	71	H	64	A	84	H
2	Anggun F	50	L	75	H	86	H
3	Anisa Nur A	55	L	60	A	86	H
4	Apri D Y	51	L	60	A	87	H
5	Erdianto	57	A	62	A	78	H
6	Euis W	69	H	67	H	84	H
7	Eva F	63	A	62	A	81	H
8	Fahmi R	67	H	75	H	85	H
9	Fami W	68	H	67	H	87	H
10	Fanny F	65	A	70	H	86	H
11	Febi S	55	L	64	A	84	H
12	Feni DW	55	L	54	L	86	H
13	Fiter	60	A	68	H	83	H
14	Fitri YK	61	A	61	A	82	H
15	Fuji A	68	H	66	H	84	H
16	Inderiani	65	A	64	A	77	H
17	Intan L	64	A	68	H	83	H
18	Jenika I	54	L	68	H	81	H

19	Jeszy R	54	L	65	A	85	H
20	Julia L	51	L	66	H	82	H
21	Lukman H	58	A	60	A	80	H
22	Nita SP	57	A	61	A	82	H
23	Nova NA	57	A	60	A	79	H
24	Novia S	53	L	71	H	84	H
25	Nur H	56	A	61	A	82	H
26	Sonia R	56	A	62	A	85	H
27	Suci A	59	A	64	A	82	H

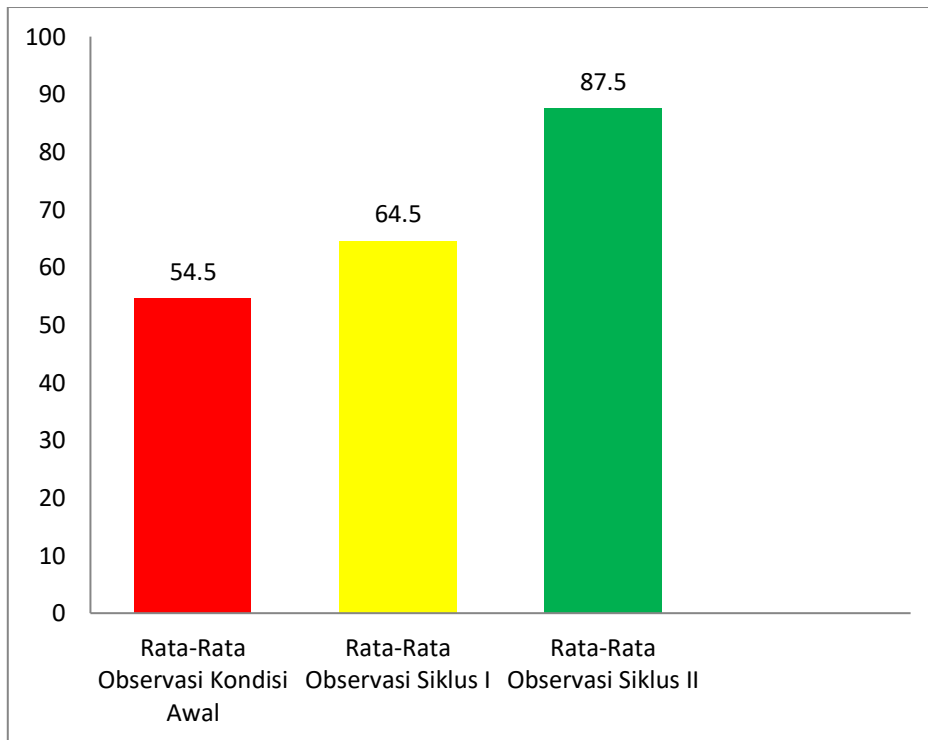
Description: Cat. = Category, H = High Category, A = Average Category, L = Low Category.

The results of learning motivation data obtained from observations and questionnaires are displayed in graphical form like Figure 1.



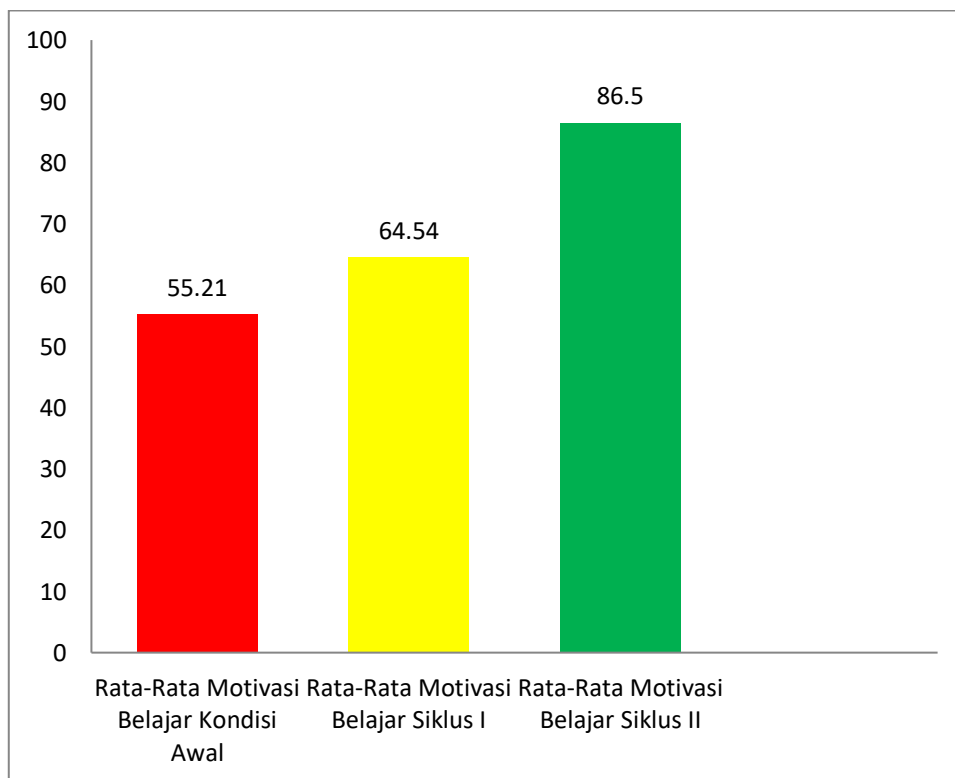
**Figure 1. Motivation questionnaire graph**

Presented in Figure 2 is a graphical representation of the average observation findings, depicting the progression from the initial conditions to cycle I and cycle II.



**Picture 2. Learning Motivation Observation Average Graph**

The mean values of the observations and questionnaire responses for the initial conditions, cycles I, and cycles II are displayed in Figure 3.



**Figure 3. Average overall learning motivation chart**

## Discussions

The research is conducted utilizing the action research methodology, specifically the class action research (CAR) approach. The research is conducted in two distinct cycles, namely cycle I and cycle II. Every cycle consists of two meetings. The effectiveness of this research was compromised due to the lack of enthusiasm for learning among students and professors, resulting in the prohibition of Internet usage in classrooms despite the availability of ample Internet facilities at IAIN Curup. The researchers attempted to resolve the issue of students' lack of motivation to learn at IAIN Curup by creating an internet-based learning system featuring an improved web course model. The objective of this study is to enhance student learning motivation by utilizing the Internet as a unique learning medium and resource for students in the third semester of the PAI IAIN Curup program. The chosen subject for this study is a course on media and learning technology that focuses on developing ICT-based learning materials.

Upon analyzing the study results, it was found that there was a notable enhancement in student learning motivation across the entire process, including the initial condition, cycle I, and cycle II. The heightened motivation exhibited by students indicates that the integration of research in cycles I and II has effectively accomplished the intended objective and yielded favorable outcomes. The enhanced motivation of students is derived from the data collected through observations of students' average motivation scores and questionnaire responses. There are two study tools used to assess student motivation: an observation sheet completed by an observer and a questionnaire sheet filled out by students after each cycle. The observation tools and questionnaires are designed according to the learning motivation indicators derived from this research. The observation sheet and questionnaire sheet contain a total of 25 items, comprising 15 positive statements and 10 unfavorable comments. Each statement offers four different solutions.

The enhancement in learning motivation can be observed through the mean score of student motivation in learning, as measured in the initial condition data, cycle I data, and cycle II data. The mean motivation score of students in the beginning was 55.21, categorizing it as low. In cycle 1, the average motivation study score increased to 64.54, placing it in the intermediate group. By cycle 2, the average learning motivation score rose significantly to 86.15, indicating a high level of motivation. Therefore, it can be inferred that the study is deemed effective when there is an enhancement from the original state to cycle I and from cycle I to cycle II. According to the findings of this study, it is suggested that implementing an internet-based web-enhanced course learning system can promote student motivation and be utilized in the learning process.

## Conclusions

According to the research findings, the utilization of an Internet-based learning system that incorporates the web-augmented course model has the potential to promote students' motivation to learn. This can be inferred from the data observations and questionnaires conducted at each stage of the cycle. Regarding the average observation and questionnaire findings during the first stage, they were recorded at 55.21 (falling within the low category). Following the completion of cycle I, there was an increase to 64.54 (falling within the medium category). Furthermore, after the implementation of cycle II, there was a further increase to 86.5 (falling within the high category).

## Suggestions

Based on the various stages of the conducted research, there are several suggestions that may be utilized as input and should be taken into consideration regarding the issue of this research. These proposals are as follows: (1) In order to implement the Internet-based learning system, institutions must possess a robust Internet infrastructure to ensure the proper and seamless utilization of the Internet, (2) It is necessary for every classroom to be equipped with Internet connectivity, as certain parts of the university building currently lack reliable Internet access, (3) Additional investigation is required to thoroughly explore the extent to which Internet-based learning can enhance the overall quality of education.

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