Implementation of Learning Management In The Face of The Industrial Revolution 4.0 in STAI Bahriyatul Ulum Pandan

Putra Mahendra Gunawan Nasution,[1] M. Rifai Harahap,[2]
M. Syahdan Lubis,[3] Mesiono[4]
Universitas Islam Negeri Sumatera Utara, Medan
masgunword@gmail.com

ABSTRACT

This study aims to analyze the planning, implementation, and supervision of learning in the era of the industrial revolution 4.0 at STAI Bahriyatul Ulum Pandan. The research method used is a qualitative approach with descriptive research. The research was conducted at STAI Bahriyatul Ulum Pandan using data collection techniques through interviews and observations. The results of the study suggest that starting from the dominant competencies in the era of the industrial revolution 4.0, many inventions and successes of lecturers have been produced to improve the quality of learning in the form of curriculum development, and the use of technology, communication, and information in the application of various approaches and learning strategies. All innovative processes and successful learning are supported by the ability of lecturers to apply the principles of good learning management. The creeping industrial revolution 4.0 brings several challenges such as the loss of many jobs and the creation of new jobs, so skilled human resources are needed. As a religious institution, STAI Bahriyatul Ulum Pandan is expected to produce creative, imaginative, competent, and innovative graduates which can only be achieved by creating conducive learning conditions supported by learning management.
Keywords: Implementation, Management, Learning, Industrial Revolution 4.0, Stai Bu Pandan

ABSTRAK

Penelitian ini bertujuan untuk menganalisis perencanaan, pelaksanaan, dan supervisi pembelajaran di era revolusi industri 4.0 di STAI Bahriyatul Ulum Pandan. Metode penelitian yang digunakan adalah pendekatan kualitatif dengan penelitian deskriptif. Penelitian dilakukan di STAI Bahriyatul Ulum Pandan dengan menggunakan teknik pengumpulan data melalui wawancara dan observasi. Hasil penelitian menunjukkan bahwa mulai dari kompetensi dominan di era revolusi industri 4.0, telah banyak penemuan dan keberhasilan dosen yang dihasilkan untuk meningkatkan kualitas pembelajaran dalam bentuk pengembangan kurikulum, dan pemanfaatan teknologi, komunikasi, dan informasi dalam penerapan berbagai pendekatan dan strategi pembelajaran. Semua proses inovatif dan pembelajaran yang sukses didukung oleh kemampuan dosen untuk menerapkan prinsip-prinsip manajemen pembelajaran yang baik. Revolusi industri 4.0 yang merayap membawa beberapa tantangan seperti hilangnya banyak lapangan kerja dan penciptaan lapangan kerja baru, sehingga dibutuhkan sumber daya manusia yang terampil. Sebagai lembaga keagamaan, STAI Bahriyatul Ulum Pandan diharapkan dapat menghasilkan lulusan yang kreatif, imajinatif, kompeten, dan inovatif yang hanya dapat dicapai dengan menciptakan kondisi pembelajaran yang kondusif didukung oleh manajemen pembelajaran.
Kata kunci: Implementasi, Manajemen, Pembelajaran, Revolusi Indistri 4.0, Stai Bu Pandan

A. INTRODUCTION

The industrial revolution is a rapid transformation that almost affects all fields, especially the economic field, into an industrial economy that transforms the way humans work from the use of hands to the use of machines in turning something not ready to be finished into something that can be used and has fundamental changes in mindset, lifestyle, customs, and work methods (Ningsih, 2018). This concept shows that with the development of technology, the 4.0 era is transforming the way humans work as well as the perspective of their views. Between the current state of the industrial world and the expected industrial conditions, there are differences in the use of technology (Jian Qin, Ying Liu, 2016), this is due to the reluctance of companies to implement Industry 4.0 due to concerns about uncertain industry benefits (Prasetyo & Sutopo, 2018).

Industrial era 1.0 is known since the 17th century with the invention of steam-powered machines that encouraged humans to switch from using muscle power and switch to steam-powered automatic production machines (Prasetyo & Sutopo, 2018). Industry era 2.0 is known around the 18th century, that century it occurred when the industry had switched to using electric power with the creation of a running wheelwork system (Syamsuar & Reflianto, 2018). Industrial era 3.0 is known around the 19th century and began by using digital media to support automation systems in industrial production (Ningsih, 2018). Meanwhile, the industrial era 4.0 took place in the 2000s with the emergence of cyberspace which entered industrial production in the form of connections that united machines, data, and humans (Lancang Kuning, 2018).

Era 4.0 offers potential functions such as increased speed, improved service quality, product mobility, and increased sales (Prasetyo & Sutopo, 2018), there was a shift in the development of the industrial revolution 4.0 when digital industries such as Google, Alibaba, Grab, Gojek, Facebook, and others began to dominate the ecosystem and the world economy. The industrial era 4.0 brings several threats such as information security problems, reduced employment, and increased unemployment when replaced by automation systems (Hamdan, 2018), and lack of human qualities (Prasetyo & Sutopo, 2018). The field of technology is very important in influencing people's lives in the 4.0 era.

The 4.0 era has given rise to the competitive needs of companies in all fields, especially in the field of education which can produce innovation and creativity as needed. Learning innovations are implemented using digital information media in the 4.0 era (Syamsuar & Reflianto, 2018), and with student-centered learning methods

namely *Student-Centered Learning*/SCL (Ramadhani, 2017). Innovation in learning can be implemented effectively, efficiently, and maximally with the support of management in learning (Widyanto et al., 2018), because learning cannot run optimally without learning management (Rukayah, 2016).

College graduates who excel, are productive, skilled, and bring about change can be achieved by creating an effective learning atmosphere (Wachyudi et al., 2014). Meanwhile, learning becomes optimal and maximum when supported by learning management (Rukayah, 2016). Teachers who implement management in their classrooms can achieve a learning atmosphere that is superior to without implementing management in learning (Nirwana, 2014), educators using classroom learning management improve student learning outcomes (Gunawan, 2017). Implementation of management in classroom learning does not have a significant impact on student learning outcomes, but learning management principles are different in learning conditions such as planning, implementation, and supervision have not been maximally implemented in learning (Suwito et al., 2017).

Sekolah Tinggi Agama Islam Bahriyatul Ulum Pandan is an Islamic religious college located on Jl. Dangol Lumban Tobing No. 101 Aek Sitio-Tio Village, Pandan District, Tapanuli Tengah Regency, North Sumatra Province. STAI Bahriyatul Ulum Pandan was founded in 1999 and is currently led by Muhammad Rifai Harahap, M.Pd.I. The Islamic Religious Education study program is one of the study programs at STAI Bahriyatul Ulum Pandan whose task is to produce graduates in the field of Islamic religious education who are ready to become excellent Islamic teachers. To produce qualified teachers, the Islamic Religious Education STAI Bahriyatul Ulum Pandan also observed the competition that occurred in the 4.0 era where graduates can be competitive, behave well, be innovative, and be productive in fulfilling services to the community and the world of work, especially in the field of Islamic religious education.

STAI Bahriyatul Ulum Pandan has been using the KKNI curriculum since the 2018/2019 academic year. Encouraging the implementation of the curriculum, STAI Bahriyatul Ulum Pandan developed technology, information, and communication tools to support the teaching and learning process including online learning-based campus web applications for teachers. In the learning planning process, lecturers download RPS, syllabus, and lecture materials that facilitate student access. In the implementation process, lecturers manage student attendance online, if the lecturer is unable to do so, learning can take place to live, doing assignments and assignments can be sent on the campus web

page. The supervision stage is the evaluation of learning outcomes in the form of assignments or exams that can be collected and the scores are given can be seen on the campus web search page lecturers can also hold exams online whose results can be known after the exam ends.

The application of campus web applications in the teaching and learning process encourages STAI Bahriyatul Ulum Pandan to be able to face the challenges of the 4.0 era to create quality human resources. These topics aroused the interest of researchers to examine how the application of learning management applied by STAI Bahriyatul Ulum Pandan in the Islamic Religious Education study program in facing the threat of the 4.0 era. This research topic has not been discussed much, because this research plays a very important role in creating quality graduates by the vision and mission of STAI Bahriyatul Ulum Pandan as an Islamic religious university. This study aims, among others: (1) to analyze learning planning for the industrial revolution era 4.0 in STAI Bahriyatul Ulum Pandan; (2) to analyze the implementation of learning in the era of the industrial revolution 4.0 in STAI Bahriyatul Ulum Pandan; dan (3) Analyzing the supervision of learning in the era of the industrial revolution 4.0 in STAI Bahriyatul Ulum Pandan.

B. RESEARCH METHODS

This research uses a literature method approach with a qualitative descriptive approach. The study was conducted at STAI Bahriyatul Ulum Pandan. The data collected by researchers comes from lecturers who carry out the teaching and learning process by management principles in learning.

The first source of research data was obtained from informants, namely lecturers in charge of teaching in the Islamic Religious Education STAI Bahriyatul Ulum Pandan study program to get information about the implementation of management in learning. The second source of research data was obtained from students in obtaining information about learning activities in the classroom. The third source of research data is observation activities about the implementation of learning in each class to get exposure to the implementation of learning and interaction between lecturers and students.

The data collection technique carried out in this study used unstructured interviews with lecturers who carried out the teaching and learning process with students involved in the process. The sampling technique carried out is sampling aimed at lecturers and snowball sampling for students. Other research data collection methods by making

observations to get exposure to the implementation of the teaching and learning process and interaction between lecturers and students.

Researchers use source triangulation techniques to test the validity of data in the form of interviews and observations. To test the validity of the instrument in the form of interview and observation instruments, the researcher first determines which theory or concept will be used as a reference in the interview and observation. Meanwhile, the reliability test of the interview instrument emphasizes the stability of the answer results submitted by respondents. Data analysis techniques from data source interviews using Miles and Huberman's interactive analysis model. Meanwhile, observation data analysis is carried out using the checklist method.

C. RESULTS AND DISCUSSION

1. Learning The Era Of The Industrial Revolution 4.0 In Sekolah Tinggi Agama Islam Bahriyatul Ulum Pandan

The skills of lecturers to implement the curriculum are very important, with quality skills, the implementation of the KKNI curriculum with an emphasis on the teaching and learning process that focuses on students can be carried out optimally. The skills of lecturers in the KKNI curriculum must implement a realistic and meaningful teaching and learning process in increasing creativity so that students' abilities can develop by the expectations of educators (Apri Damai Sagita Krissandi, 2015). Based on the results of an interview with Indri Harmaili the Head of the Islamic Religious Education Study Program, he stated that "the expertise of the lecturers in implementing the KKNI curriculum in the Islamic Religious Education study program is fundamentally based on Permenristekdikti No 44 Tahun 2015 Tentang Standar Nasional Pendidikan Tinggi antara lain profesional, pedagogik, sosial, dan kepribadian" (Indri Harmaili, Head of study program Islamic Religious Education, 10 October 2022).

Related teaching and learning process activities have now shifted from traditionally delivered material using a lecture approach to delivering learning materials that emphasize student activity and the use of technology and information to support the teaching and learning process (Andriani, 2015). The use of technology and information to support the teaching and learning process in the industrial era 4.0, namely: (1) *blended learning* is a combination of online and direct learning by utilizing online learning media in the teaching and learning process (Deklara Nanindya Wardani, Ansemus J.E Toenlioe, 2018); (2) Online is a teaching and learning process that uses and is supported by the use of

technology and information such as the internet network (Hanum, 2013); (3) *hybrid learning* is a teaching and learning process that combines face-to-face teaching and learning methods with online learning (Heny Hendrayati, 2013); (4) *distance learning* is a remote teaching and learning process that uses technology and information as the main supporting media such as the internet network (Ni'mah, 2016); (5) *resource sharing* is an informal or formal arrangement that leads to the activity of several lecturers to share information that will be communicated in the room to meet the needs of lecturers (Veronica, 2019).

The method of approach to the use of technology in learning Islamic religious education, namely:

a. Multimedia technology is an approach between educators and students can use visual technology in the teaching and learning process, such as showing spiritual animation videos about Islam.

b. Internet network technology can support learning by using an application that is often used today, namely the search engine (Google), where lecturers and students can access subject matter materials to develop knowledge in the field of Islamic Religious Education, they can also use other applications to support learning.

c. Using Ms. Power Point to explain interesting subject matter owned by lecturers so that Islamic learning has something interesting.

Students of the Islamic Religious Education study program have adopted several learning methods with the help of online learning. The application of online learning has been used in the Islamic Religious Education study program since the beginning of the implementation of the KKNI curriculum. Based on an interview conducted with Sri Hayati as a lecturer of Islamic Religious Education study program, it was stated that "i teach courses starting to use online learning applications. I use the zoom meeting application, where the lesson materials I provide using Google and reference books are downloaded and disseminated on the zoom meeting application" (Sri Hayati, lecturer of Islamic Religious Education study program, 12 October 2022). A different opinion was expressed by Ali Sutan as lecturer of Islamic Religious Education study program who stated that "i teach using an infocus and a laptop not with an online application" (Ali Sutan, lecturer of Islamic Religious Education study program, 12 October 2022). As a result of interviews and observations, some lecturers use online using applications such as Zoom meetings and campus web applications STAI Bahriyatul Ulum Pandan.

Online application is carried out by lecturers and students during discussions. The discussion activities carried out do not have to meet in class, but are carried out in an online learning application. Another advantage obtained through online implementation is that students can express their abilities freely through technology and information media using the internet network on campus STAI Bahriyatul Ulum Pandan.

Indirectly, the application of online learning technology in the Islamic Religious Education learning program can develop students' potential in the fields of the Internet of Things, operational technology, and mastery of information technology that can create graduates and graduate alumni who are professional and competitive in seeking information and are able to explore learning resources (Syamsuar & Reflianto, 2018). The use of digital media and the innovations implemented by the PAI study unit are learning methods and strategies that improve student skills to be able to face the 4.0 era. Student-Centered Learning/SCL learning methods or student-centered learning (Anwar et al., 2013) is the right way to learn in the 4.0 era (Febriyanti, 2013). Based on interviews conducted with Indri Harmaili the head of the Islamic Religious Education study program, he stated that "the SCL method implemented in the Islamic Religious Education study program uses learning related to problems that emphasize problems related to lecture material" (Indri Harmaili, the head of the Islamic Religious Education study program, 10 October 2022).

The SCL learning method empowers students to learn actively, personally and in groups, looking for various information to solve problems that occur during the teaching and learning process, analyze, construct, and present information using meaningful learning references (Rasiban, 2013), in other respects, SCL focuses on the responsibility of students in learning activities to analyze and find various data to find solutions to problems contained in learning material (Moerista, 2015). These demands equip students with the ability to think critically in solving social problems, work skills, and good attitudes and behavior.

Based on an interview with Syahdan Lubis who serves as a lecturer in the Islamic Religious Education study program, it is stated that "The steps of the process approach to conveying a problem in the form of a video, such as the religious nature of the video, after that the lecturer divides several groups and students carry out the observation stage to find out the problems contained in the video that is the learning material. The lecturer is just a guide to explain the content of the video, after the show is watched then the student asks questions about the problem that arises then the student collects various facts and sources

to answer the problem. Students decide on the answers they find and each group presents their opinion or the answer they find in front of the class. The lecturer acts as a facilitator during the discussion process and the final results of the students then provide problem-solving according to the course studied" (Syahdan Lubis, lecturer of Islamic Religious Education study program, 13 October 2022).

Problem-shaped learning is a teaching and learning process that uses factual problems that are being discussed in public but are relevant to the learning material, then ask students to dig up information to find solutions to the problem (Sutrisno, 2016). Problem-shaped learning can develop student skills through creative thinking, active role learning, problem-solving skills, communication skills, and collaboration compared to other learning strategies (Rusman, 2017).

In addition to problem-shaped learning, project learning strategies are used as systematic learning strategies that stretch from the phases of finding planned questions, tasks, and products (Illah Sailah, 2014). Learning that uses projects focuses on student activity in project implementation at the beginning of learning, problem solving activities and assigning assignments provide opportunities for active learning which ends with the production of products that have value and are realistic (Munawaroh et al., 2013). The project is implemented innovatively and collaboratively and focuses on solving problems that students personally work on (Jagantara et al., 2014). Based on an interview conducted with Indri Harmaili the head of the Islamic Religious Education study program, it was stated that "The teaching and learning process implemented in the Islamic Religious Education study program is not only in the form of problems but also in the form of projects, where students are involved in making products based on the courses completed. It can be exemplified in the Fiqih course, where lecturers can provide problems related to fardhu kifayah. Fiqh is one of the materials on human understanding of the practice of worship" (Indri Harmaili, head of Islamic Religious Education study program, 10 October 2022).

In the stages of project learning in the Islamic Religious Education study program, lecturers are responsible for problems related to the material, for example, giving assignments to students to make fardhu kifayah facilities. Then students make fardhu kifayah media in the form of products with the results presented later describing the practical steps of fardhu kifayah. This learning can make students practice fardhu kifayah as early as possible in their lives, to stimulate and sharpen students' abilities in the field of the Islamic religion.

The implementation of the teaching and learning process using technology and information has various problems faced by lecturers and students. Based on an interview conducted with Syahdan Lubis a lecturer of the Islamic Religious Education study program, he explained that "problem-shaped and project-shaped learning requires a good plan system such as assignments introduced in the classroom based on lecture material. Making questions in the form of videos and interactive texts requires special experts so that the questions given by lecturers are understandable and easy for students to do" (Syahdan Lubis, lecturer of Islamic Religious Education study program, 13 Oktober 2022).

In addition to the preparation of tasks used as observation material, another problem that arises is the reluctance of lecturers to be able to use the campus web application in all their learning activities. Based on an interview conducted with Irwandi Sihombing a lecturer in the Islamic Religious Education study program, it was stated that "learning with the campus web application requires careful preparation, such as providing material through the application before starting lectures and learning using Zoom meetings which require time and motivation from lecturers" (Irwandi Sihombing, lecturer of Islamic Religious Education study program, 13 Oktober 2022).

The application of technology and information-based learning cannot be separated from obstacles for students. Based on interviews with students of the Islamic Religious Education study program, Rizki explained that "the teaching and learning process on campus web pages and Zoom meetings is unfamiliar to most students because the campus lives in an area that is not accessed by online networks, it takes some time for students to learn how to use the application from the beginning of its use" (Rizki, students of the Islamic Religious Education study program, 13 Oktober 2022).

2. **Learning Management In STAI Bahriyatul Ulum Pandan In the Era of the Industrial Revolution 4.0**

Management plays an urgent role as a determinant of the success of an organization to be able to achieve predetermined goals. Management is the process of organizational actions to achieve goals by fulfilling the functions of planning, implementing, as well as supervising activities. Likewise in learning training, where the process can be carried out effectively, efficiently, and optimally when supported by efficient management (Manullang, 2014). The function of planning, implementing, and supervising is a management function applied by teaching and learning staff in organizing the teaching and learning process (Davies, 2007).

Based on an interview conducted with Ali Sutan a lecturer in the Islamic Religious Education study program, it was stated that "Our management process starts from the stages of planning, implementing, and supervising the teaching and learning process (Ali Sutan, lecturer of Islamic Religious Education study program, 12 October 2022). The same thing was stated by Intan a student of the Islamic Religious Education study program who stated that "the learning and teaching process carried out by lecturers starts from the planning stages (presentation, provision of RPS and lecture contracts), implementation (teaching and learning process activities) and monitoring (assessment of learning outcomes) (Intan, students of the Islamic Religious Education study program, 14 October 2022). Based on interviews conducted with lecturers, students, and the results of observations in the classroom in the Islamic Religious Education study program, the teaching and learning process carried out is planning, implementing, and supervising.

a. Learning Planning

Planning for learning is a decision made by teaching staff about various options to achieve predetermined goals (Suryapermana, 2017). Online learning plans contain learning plans and activities using technology and information (Hanum, 2013).

Based on an interview conducted with Sri Haryati as a lecturer in the Islamic Religious Education study program, it was explained that "In the planning process, lecturers carry out various things by creating RPS, writing RPS, planning campus websites, and providing devices used during the learning process than sending them to WhatsApp groups (Sri Hayati, lecturer of Islamic Religious Education study program, 12 October 2022). In compiling the RPS, some things must be prioritized, especially in achieving the achievement of learning objectives. Learning outcomes developed in the teaching and learning process are required to be able to convey learning experiences to students (Sutrisno, 2016), who are active in physical and mental activities in communicating between lecturers and students, the environment, and reference sources to achieve learning outcomes in the form of attitudes, knowledge, and skills (Rusman, 2017).

Planning in learning requires learning strategies to be able to achieve planning goals as expected. Using strategies on learning outcomes is an obstacle to achieving goals so lecturers' understanding of the choice of learning strategies determines the achievement of learning so careful preparation of which strategies to apply (Samiudin, 2016). Learning strategies applied in making curricula using digital media. Assembling and producing teaching and learning process devices using technology and information is a strategy that needs to be applied by teaching and learning staff because the teaching and learning

process will run efficiently if supported by the curriculum, teaching staff, approaches, technology, and information media, as well as students (Ladjid, 2005).

Islamic Religious Education study program, it was stated that "The tools in the teaching and learning process provided are technology and information-based learning guidebooks. Guidelines can provide appropriate direction and guidance in the implementation of learning that functions in helping lecturers with students. After making learning, then providing a learning environment in the form of technology and information in supporting the application of learning methods and strategies in the form of internet networks, television, infocus, laptops, and applications used in learning. The use of technological devices, information, and communication in learning is not optimal if lecturers cannot implement the RPS that have been compiled and do not have good classroom management skills. Learning through technology including videos from YouTube results in a better understanding of students based on the material provided because the learning has a meaningful and interesting impression so that students do not experience boredom" (Syahdan Lubis, lecturer of Islamic Religious Education study program, 12 October 2022).

b. Implementation of Learning

The implementation of learning is the implementation of previous RPS by lecturers (Rusman, 2017), both learning methods and strategies, the use of learning process tools and their evaluation. The implementation of the teaching and learning process means creating conditions where students can actively explore themselves which requires the competence of lecturers in leading meaningful memorable classes (Rahayu, 2015). Students are required to be able to actively participate in the delivery of learning to be successful and provide a useful learning experience later in facing world competition (Rahman Sidek & Md.Yunus, 2012).

Based on an interview conducted with Sri Hayati a lecturer in the Islamic Religious Education study program, he explained that "in my class, the process of implementing teaching and learning, campus web applications and zoom meeting applications are used to send learning materials, classes are not online, and other activities. WhatsApp application is also used to discuss outside the classroom" (Sri Hayati, lecturer of Islamic Religious Education study program, 12 October 2022). Era 4.0 requires stages of the teaching and learning process using the application of learning using technology and information or known as digital education, namely:

1) *Learning Management System*

Software that is applied in learning activities, documentation, online learning activities, and lecture materials.

2) *Learning Content Management System*

This is a computer program that creates content that can be used as learning material that can be received via the internet network.

3) *Social Learning Network*

Social media is used in the teaching and learning process with a higher scope than in study groups. Such social networks can influence their users with changes in attitudes and behavior (Yakin, 2019).

Types and forms of technology and information-based teaching activities are forms of online learning where the activities do not have to be carried out in direct learning, but the learning system can be implemented anywhere and anytime with the involvement of students to talk with lecturers.

Based on an interview conducted with Indri Harmaili the head of the Islamic Religious Education study program, it is clear that "student participation in the process of implementing teaching and learning activities implemented in the PAI study program is problem-based learning and project-based learning" (Indri Harmaili, head of the Islamic Religious Education study program, 12 Oktober 2022). In the implementation of this learning, the focus is on students so that they are given opportunities and opportunities to improve their knowledge independently by observing, collecting, analyzing, and exposing the knowledge they know in improving the quality of their knowledge (Ardian & Munadi, 2015).

In addition, in the implementation of learning by Islamic Religious Education lecturers, a learning system is also implemented where students can use digital media in exploring reference sources to solve problems given by lecturers. Based on an interview conducted with Indri Harmaili the head of the Islamic Religious Education study program, it was stated that "the technology contained in the Islamic Religious Education study program is very useful for increasing creativity and innovation for lecturers and students in the learning process" (Indri Harmaili, head of Islamic Religious Education study program, 12 October 2022).

c. Learning Supervision

Supervision on learning is an effort to find various sources of information and improve the teaching and learning process so that the learning plan that is compiled is carried out properly (Didin Kurniadin, 2012), through activities of controlling, supervising,

assessing, reporting, and evaluating learning outcomes (Maisyarah S, Nasir Usman, 2017), carried out within institutions as well as in educational institutions (Ikhwan, 2016). Inside the institution there is learning led by lecturers and outside the institution there is the work of lecturers based on educational value and quality assurance.

Based on an interview with Indri Harmaili as the head of the Islamic Religious Education study program, it was stated that "the implementation carried out in supervision is an evaluation of the learning planning process" (Indri Harmaili, head of Islamic Religious Education study program, 12 Oktober 2022). Evaluation has an important role because there is an examination of the tasks given and whether they have run according to the plan (Sagala, 2011).

Assessment of learning is an educator's assessment of learning outcomes. In the evaluation of learning outcomes, emphasis is placed on matters related to the achievement of student learning outcomes in achieving learning objectives, while learning assessment is a systematic process related to learning efficiency in helping students achieve maximum learning outcomes. The results of monitoring, directing, and evaluating learning are summarized in a report to monitor the continuous professional development of lecturers who empower and reward lecturers who meet and achieve standards (Rusman, 2017). The results of the assessment serve as improvement material used to ensure that the teaching and learning process runs as planned (Riduwan, 2012).

Based on an interview conducted with Samrul Bahri as vice chairman II, he stated that "in fulfilling several supervisory roles with internal leaders, they see the results of lecturers' evaluations of student learning. These results are in the form of grades received by students from lecturers as information on the value of learning outcomes through the STAI Bahriyatul Ulum Pandan Academic Portal application. The assessment carried out in the BKD (Lecturer Workload) serves as an external guideline by observing the RPS provided by the lecturer. The assessment is carried out by looking at the workload of lecturers based on the Tridharma of Higher Education which includes education and teaching, research, and service, using these three guidelines as a basis for improvement. Some of these criteria can determine the effectiveness and success of lecturers in carrying out learning in the Islamic Religious Education study program. The learning management carried out is very important to support the development of learning, especially the Islamic Religious Education learning program STAI Bahriyatul Ulum Pandan, so that the achievement of the goals set in the Semester Learning Design can be achieved by looking

at the achievements of student graduates in the Islamic Religious Education learning program (Samrul Bahri, Vice Chairman II, 12 October 2022).

D. CONCLUSION

In accordance with the development of the industrial revolution 4.0, human resources with specific skills are needed, such as high understanding, critical thinking, collaboration and communication skills, innovation skills, problem solving, information technology skills, media, life, and career skills.

Based on the potential needed in the 4.0 era, many strategies and innovations are needed to improve the quality of the teaching and learning process, namely curriculum development and improvement, lecturer qualifications and student potential, the use of good learning methods and strategies, and the use of technology and information media. All innovations and learning strategies cannot run effectively unless supported by the skills and potential of lecturers in applying management functions and principles to learning optimally.

Islamic Religious Education Study Program STAI Bahriyatul Ulum Pandanapplying a multiple learning approach by using information technology as a means or learning resource in Islamic religious education so that learning becomes more interesting. The development of the learning process carried out by the Islamic Religious Education learning program has influenced the learning process which can be seen from the achievement of learning outcomes based on the established curriculum, so that it can be carried out effectively if learning management can also be implemented optimally.

REFERENCES

Andriani, T. (2015). Sistem Pembelajaran Berbasis Teknologi Informasi Dan Komunikasi. *Jurnal Sosial Budaya: Media Komunikasi Ilmu-Ilmu Sosial Dan Budaya*, *12*(1). https://www.ptonline.com/articles/how-to-get-better-mfi-results

Anwar, A. I., Prabandari, Y. S., & Emilia, O. (2013). Motivasi dan Strategi Belajar Siswa dalam Pendidikan Pembelajaran Berbasis Masalah dan Collaborative Learning di Fakultas Kedokteran Gigi Universitas Hasanuddin. *Jurnal Pendidikan Kedokteran Indonesia: The Indonesian Journal of Medical Education*, *2*(3). https://doi.org/10.22146/jpki.25189

Apri Damai Sagita Krissandi, R. (2015). Kendala Guru Sekolah Dasar Dalam Implementasi Kurikulum 2013. *Jurnal Cakrawala Pendidikan*, *34*(3).

Ardian, A., & Munadi, S. (2015). Pengaruh Strategi Pembelajaran Student-Centered Learning dan Kemampuan Spasial terhadap Kreativitas Mahasiswa. *Jurnal Pendidikan Teknologi Dan Kejuruan*, *22*(4). https://doi.org/10.21831/jptk.v22i4.7843

Davies, E. (2007). The Training Manager's Desktop Guide. In *Journal of Experimental Psychology: General* (Vol. 136). London: Thorogood Publishing Ltd.

Deklara Nanindya Wardani, Ansemus J.E Toenlioe, A. W. (2018). Daya Tarik Pembelajaran Di Era 21 Dengan Blended Learning. *Jurnal Kajian Teknologi Pendidikan*, *1*(1). https://doi.org/10.24260/at-turats.v9i2.318

Didin Kurniadin, I. M. (2012). *Manajemen Pendidikan Konsep & Prinsip Pengelolaan Pendidikan*. Ar-Ruzz Media.

Febriyanti. (2013). Kurikulum Pendidikan Tinggi Di Era Globalisasi (Pergeseran Dari Kurikulum Inti Dan Institusional Ke Kurikulum Berbasis Kompetensi). *Jurnal Ta'dib*, *XVIII*(2).

Gunawan, I. (2017). Instructional Management in Indonesia: a Case Study. *Researchers World : Journal of Arts, Science and Commerce*, *VIII*(1). https://doi.org/10.18843/rwjasc/v8i1/12

Hamdan. (2018). Industri 4.0: Pengaruh Revolusi Industri Pada Kewirausahaan Demi Kemandirian Ekonomi. *Jurnal Nusantara Aplikasi Manajemen Bisnis*, *3*(2). https://doi.org/10.29407/nusamba.v3i2.12142

Hanum, N. S. (2013). Keefektifan E-Learning Sebagai Media Pembelajaran (Studi Evaluasi Model Pembelajaran E-Learning SMK Telkom Sandhy Putra Purwokerto). *Jurnal Pendidikan Vokasi*, *3*(1). https://doi.org/10.21831/jpv.v3i1.1584

Heny Hendrayati, B. P. (2013). Implementasi Model Hybrid Learning Pada Proses Pembelajaran Mata Kuliah Statistika II Di Prodi Manajemen FPEB UPI. *Jurnal Penelitian Pendidikan*, *13*(2). https://doi.org/10.17509/jpp.v13i2.3430

Ikhwan, A. (2016). Manajemen Perencanaan Pendidikan Islam. *Jurnal Edukasi*, *4*(1). https://www.ptonline.com/articles/how-to-get-better-mfi-results

Illah Sailah. (2014). *Buku Kurikulum Pendidikan Tinggi Direktorat Pembelajaran dan Kemahasiswaan*. Direktorat Jenderal Pendidikan Tinggi.

Jagantara, I. W. M., Adnyana, P. B., & Widiyanti, N. P. (2014). Pengaruh Model Pembelajaran Berbasis Proyek (Project Based Learning) Terhadap Hasil Belajar Biologi Ditinjau Dari Gaya Belajar Siswa SMA. *E-Journal Program Pascasarjana Universitas Pendidikan Ganesha Program Studi IPA*, *4*.

Jian Qin, Ying Liu, R. G. (2016). A Categorical Framework of Manufacturing for Industry 4.0 and beyond. *Procedia CIRP*, *52*. https://doi.org/10.1016/j.procir.2016.08.005

Ladjid. (2005). *Pengembangan Kurikulum Menuju Kurikulum Berbasis Kompetensi*. Quantum Teaching.

Lancang Kuning, U. (2018). UNILAK MAGAZINE. In *Universitas Lancang Kuning* (Vol. 4). Retrieved from https://www.neliti.com/id/publications/216722/penggunaan-metode-kerja-kelompok-untuk-meningkatkan-hasil-belajar-ipa-siswa-kela

Maisyarah S, Nasir Usman, N. (2017). Evektifitas Pelaksanaan Tugas Pengawas dalam Meningkatkan Mutu Pendidikan pada Sekolah Dasar Lingkungan UPTD Suku I Disdikpora Kota Banda Aceh. *Prosiding Seminar Nasional Pascasarjana (SNP) Unsyiah*. http://jurnal.unsyiah.ac.id/SNP-Unsyiah/article/download/6941/5684

Manullang, M. (2014). Manajemen Pembelajaran Matematika. *Jurnal Pendidikan Dan Pembelajaran*, *21*(2).

Moerista, J. V. (2015). Pengaruh Penerapan Metode Student-Centered Learning, Cooperative Learning, Case-Based Learning Terkait Pemahaman Mahasiswapada Pembelajaran AkuntansiKeperilakuan. *Udinus Repository*. https: //doi.org/10.1089/bsp.2006.4.397

Munawaroh, A., Christijanti, W., & Supriyanto. (2013). Penerapan Model Pembelajaran Berbasis Proyek Untuk Meningkatkan Hasil Belajar Sistem Pencernaan SMP. *Journal of Biology Education*, *2*(1).

Ni'mah, F. I. (2016). Manajemen Pembelajaran Jarak Jauh (Distance Learning) Pada Homeschooling"Sekolah Dolan." *Manajemen Pendidikan*, *25*(1).

Ningsih, M. (2018). Pengaruh Perkembangan Revolusi Industri 4.0 Dalam Dunia Teknologi Di Indonesia. *Jurnal Fakultas Komputer*.

Nirwana. (2014). PENGARUH MANAJEMEN PEMBELAJARAN BERBASIS LINGKUNGAN DAN GAYA KOGNITIF TERHADAP HASIL BELAJAR IPA-FISIKA DI SMPN KOTA BENGKULU (Studi eksperimen pada Siswa Kelas VII Semester I SMPN 11 Kota Bengkulu) 2012. *Prosiding Seminar Nasional Fisika (E-Journal) Snf2014*, *3*.

Prasetyo, H., & Sutopo, W. (2018). Industri 4.0: Telaah Klasifikasi Aspek Dan Arah Perkembangan Riset. *J@ti Undip: Jurnal Teknik Industri*, *13*(1).

Rahayu, E. F. (2015). Manajemen Pembelajaran Dalam Rangka Pengembangan Kecerdasan Majemuk Peserta Didik. *Jurnal Manajemen Pendidikan*, *24*(5).

Rahman Sidek, E. A., & Md.Yunus, M. (2012). Students' Experiences on using Blog as Learning Journals. *Procedia - Social and Behavioral Sciences*, *67*. https://doi.org/10.1016/j.sbspro.2012.11.314

Ramadhani, H. S. (2017). Efektivitas Metode Pembelajaran SCL (Student Centered Learning) Dan TCL (Teacher Centered Learning) Pada Motivasi Instrinsik & Ekstrinsik Mahasiswa Pesikologi Untag Surabaya Angkatan Tahun 2014-2015. *Persona: Jurnal Psikologi Indonesia*, *6*(2).

Rasiban, L. M. (2013). Penerapan Student Centered Learning (SCL) Melalui Metode Mnemonik Dengan Teknik Asosiasi Pada Mata Kuliah Kanji Dasar. *Jurnal Pendidikan Bahasa Dan Sastra*, *13*(2). https://media.neliti.com/media/publications/117661-ID-penerapan-student-centered-learning-scl.pdf

Riduwan. (2012). *Manajemen Pendidikan*. Alfabeta.

Rukayah, B. I. (2016). Evaluasi Manajemen Berbasis Sekolah Di Sekolah Dasar Negeri Kabupaten Semarang. *Jurnal Manajemen Pendidikan*, *3*(2).

Rusman. (2017). *Belajar & Pembelajaran Berorientasi Standar Proses Pendidikan*. Kencana.

Sagala, S. (2011). *Manajemen Strategik Dalam Peningkatan Mutu Pendidikan*. Alfabeta.

Samiudin. (2016). Peran metode untuk mencapaitujuan pembelajaran. *Jurnal Studi Islam*,*11*(2). Retrieved from https: // jurnal.yudharta.ac.id/v2/index.php/pai/ article/view/407

Suryapermana, N. (2017). Manajemen Perencanaan Pembelajaran. *Jurnal Tarbawi*, *3*(2). https://doi.org/10.32678/tarbawi.v3i02.1788

Sutrisno, S. (2016). *Desain Kurikulum Perguruan Tinggi, Mengacu KKNI*. PT Remaja Rosdakarya.

Suwito, Harun, C. Z., & Ibrahim, S. (2017). Manajemen Pembelajaran Bahasa Inggris Dalam Meningkatkan Prestasi Belajar Siswa Pada Smp Negeri 1 Tapaktuan Aceh. *Jurnal Magister Administrasi Pendidikan Pascasarjana Universitas Syiah Kuala*, *5*(3).

Syamsuar, & Reflianto. (2018). Pendidikan dan Tantangan Pembelajaran Berbasis Teknologi Informasi di Era Revolusi Industri 4.0. *Jurnal Ilmiah Teknologi Pendidikan*, *6*(2).

Veronica, A. (2019). Silang Layan: Perspektif Perpustakaan Universitas Esa Unggul. *Khizanah Al-Hikmah : Jurnal Ilmu Perpustakaan, Informasi, Dan Kearsipan*, *7*(1). https://doi.org/10.24252/kah.v7i1a7

Wachyudi, K., Srisudarso, M., & Miftakh, F. (2014). Analisis Pengelolaan dan Interaksi Kelas Dalam Pengajaran Bahasa Inggris. *Jurnal Ilmiah Solusi*, *1*(4).

Widyanto, I. P., Slamet, A., Haryono, M., & Prihatin, T. (2018). The Utilization of Whatsapp Application on Scientific-Based Learning Management in Higher Education Institutions. *Advances in Social, Education and Humanities Research (ASSEHR)*, *247*(Iset). https://doi.org/10.2991/iset-18.2018.51

Yakin, A. Al. (2019). Manajemen Kelas di Era Industri 4.0. *Journal Peqguruang: Conference Series*, *1*(1). http://journal.lppm-unasman.ac.id/index.php/peqguruang/article/view/328