

THE LEARNING MANAGEMENT SYSTEM APPLICATION CONTRIBUTION ON TECHNOLOGY CYBER USAGE TOWARDS COMPLEXITY OF EDUCATION WITHIN MANAGEMENT CLASS ACTION IN 21st CENTURY

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Abstract: This study investigates a number of theories about the sophistication of cyber technology-based classroom management through the application of a learning management system, especially the results of previous research through literature review as well as the thoughts and experiences of educational practitioners, technologists, academics, and theorists both related to education. with regard to education. The purpose of this research is to photograph the problems of a number of higher and secondary education institutions in Indonesia regarding the urgency of cyber technology to support the effectiveness and efficiency of learning models in the 21st Century. By identifying the obvious problems, a model for implementing classroom action management is sought, especially the stages or prerequisites. that must be met for the implementation of 21st Century Education. Educational institutions are constantly developing curricula according to the paradigm shifts of the global community both in terms of science and technology to operational matters, namely educational processes and management supported by Information and Communication Technology. The research method using descriptive-qualitative begins with a literature study, in-depth interviews with the respondents involved using the snowball sampling technique. The results of the literature study and interviews are used as an inviting paper to be discussed in a focus group discussion (FGD) forum to conduct needs assessments and equalize perceptions (intersubjectivity) for academics, theorists, students, scientists, and education staff. Thus, comprehensive conclusions and recommendations for optimizing the implementation of Education in 21st Century.

Keywords: : *LMS; technology cyber; management class*

INTRODUCTION

This research is preceded by presenting information about the complexity of classroom action management and the urgency of learning management systems in the 21st Century Education era as a platform for continuous learning. The five characteristics of the classroom are busy spaces, common spaces, simultaneous activities, and unpredictable events (Watkins and Wagner, 2000). The complexity of this classroom attracts attention in the context of learning management, especially in relation to a number of approaches to learning and its managerial components. Complexity will increase again, for example, a mathematics or language teacher must present a learning approach according to the character of the scientific method as well as its scientific methodology. Cognitivism approach about factual, conceptual, procedural, and metacognitive knowledge which is derived into a taxonomy of learning. Constructivism in learning is derived into a scientific approach to learning, namely discovery learning, problem-based learning, and

project-based learning. Behaviorism approach in learning about Stimulus and Response. All of these are needed in the implementation of learning in the contemporary era of the 21st century.

The learning process can be carried out according to the planning stages, controlled according to the learning syntax, and easily evaluated according to its achievements, of course it requires social readiness and technological infrastructure. From the achievements to the financial burden of education management, it is referred to by the National education standards and starts from classroom action management as a subsystem of the large system of National Education in the 21st Century education era with the results (learning output and outcome) being students who are skilled in critical thinking, complex, and creative at the higher level. tall. Classroom action management is crucial in the continuity of a visionary educational mission, where the space becomes a small institution to carry out education.

The development of the learning model is carried out according to the development of the

realm (environment) or according to the needs of the community from time to time. The development of the community population triggers competition in the fulfillment of welfare as well as safety, and has an impact on the effectiveness and efficiency of energy, time, and finance. The world community needs appropriate technology that is able to fold space and time. With an understanding of factual conditions, the field of education becomes a milestone in the provision of the world's generation to be more prosperous in the future. It is undeniable that the development of cyber technology as a result of the movements of the world community contributes to the creation of conduciveness for the implementation of world education while being linked to the achievement of the vision as well as the implementation of the national education mission, starting with the application of cyber technology in classroom action management.

So, where should the current classroom action management start to be applied, while the Free Learning and Independent Campus policies which are referred to by the 21st Century Education shift and movement at a global level are enforced. The social condition of Indonesian education, whether we like it or not, like it or not, must accept the will of global developments and the policies of elites and national education practitioners so as not to be dragged into an uncivilized society.

METHOD

The research method is descriptive-qualitative with a grounded research method (participant observer). It begins with the formulation of orientation or description, continues with literature study, in-depth interview, focus group discussion (FGD), and ends with the formulation and conclusion. Orientation or description is an effort to formulate a problem using the grand tour question technique. This technique is used to obtain a number of information to build a problem formulation (needs assessment), including information about classroom action management problems with the application of a cyber technology-based learning

management system. A number of scientists, academics, theorists, politicians, practitioners, and technologists from higher education institutions in big cities of West Java (Bandung, Bekasi), and the Special Capital Region of Jakarta, parts of Banten and some in Central Java are ready to provide empirical information and their thoughts. to the role of cyber technology in classroom action management.

The literature review is directed at building a reduction or focus, namely within the framework of grand theory formulation. A number of expert thoughts on the results of their previous investigations were used as approaches in the phenomenon of shifting and paradigm movements of the world community's thinking and their impact on the emergence of global learning model events as well as the issue of Industry 4.0 and Society 5.0. The literature review is also directed at building a conceptual and analytical framework as a selection of theories or approaches from previous research, thus showing a reasoning framework related to the formulation of the problem. In this way, an analytical framework will be built on all information by using information confirmation techniques about the gap or distance between facts and theory.

The process of obtaining data or information at each stage (description, reduction, and selection) is carried out circularly and repeatedly from December 2020 to October 2021 as well as the implementation of the FGD in stages. Entering the object of research, methodological steps are taken to collect information on social and academic conditions, namely in-depth interviews, FGDs, and the formulation of conclusions and recommendations. With snowball sampling to the informants as mentioned above, the locus of the research is also the university as mentioned plus several students, students, lecturers and teachers from primary and secondary education. As a participant observer, in-depth interviews and FGDs were conducted several times, while repeatedly testing the classroom action management model with the application of a cyber technology-based learning management system to obtain owner estimates and self-perceptions of the model. This

technique is carried out in order to obtain consistency on the assumptions that have been built in the description, reduction, and selection stages. The conclusion formulation raises the potential hypothesis and it is recommended that further research be carried out by deductive quantification (using statistical estimates) or testing the data by theory after this theory has been tested at the selected educational institution for the research method.

RESULTS AND DISCUSSION

a. Teacher/Lecturer Centered Class

One of the problems of classroom action management is that there is very little time to pay attention to students one by one because it creates conditions for busy interaction of students with learning content, and teachers/lecturers are conditioned as sources of knowledge. Communication is predominantly one-sided or unidirectional from the teacher/lecturer to students classically and individual students are accustomed to being a small part of the class. Classroom is a place where students are involved in many interactions, but are preoccupied with knowledge information sourced from teachers/lecturers who are also preoccupied with having to meet lesson targets in order to fulfill learning administration.

When the learning process takes place, learning events occur simultaneously and students tend to have strategies to avoid teacher/lecturer monitoring. Verbal and nonverbal questions are submitted and must be answered according to the lesson text or the teacher/lecturer's mindset. The exercises are only centered on limited resources that are only available to the teacher/lecturer. Students have strategies to deal with uncertainty, such as being busy looking for answers according to the expectations of the teacher/lecturer, also hoping to only do predictable and familiar tasks. Each individual has different kinds of intentions, interests, and talents and influences each other's personal aspects that are conveyed both verbally and non-verbally. The

condition of the learning class is actually active, innovative, communicative, effective, fun, happy, and meaningful.

b. Gap

Competency-Based Curriculum in the Indonesian education system began in 2004 on the basis of Government policies on Broad-Based Education (BBE), School-Based Management (SBM), life skills education, in addition to the interests of government and community empowerment due to the current global job market. The phenomenon of global movements and new policies regarding the curriculum have an impact on education management in all educational institutions as education implementers. The implementation of the 2004 curriculum policy is constrained by the mental readiness of learning (ontogenic), the quanta of knowledge or epistemology of students, and the didactics-methods of educators. In 2011 with the birth of Industry 4.0 and the concept of Social 5.0 in 2016, it was very possible for students in their learning activities to coexist with robots (automation), designed to facilitate the role of educators with artificial intelligence (artificial intelligence). In fact, this automation facilitates classroom action management, because it utilizes the internet network in communication and information acquisition (IoT and IoP), administration and teaching aids as well as documented learning media based on multimedia, preventing rigidity and cutting bureaucracy, and can also work independently. In fact, the use of the internet becomes excessive, so the classroom environment is faced with conditions characterized by too fast changes in information and communication (volatility), vague and uncertain (uncertainty), very diverse (complexity) and ambiguous (ambiguity). Classes need strategies to adapt and improve learning abilities, so it is necessary to explore and build authentic classroom concepts as an alternative strategy for classes in anticipating rapid environmental changes. Authentic classes are like character education, namely honesty (truthfulness), toughness (resilience), friendliness to uncertainty (uncertainty friendly), and excellence (eminence).

c. Social and Technological Readiness

The complexity of this classroom attracts attention in the context of learning management, especially in relation to a number of approaches in the implementation of learning, such as the approach of cognitivism, constructivism, and behaviorism in learning, as well as other elements that must be present in the learning process. Social readiness, which is about the will and policies of elites and educational practitioners, institutional rules and operational standards, financial availability, and work culture are obstacles in the continuity of the 21st Century Learning process in addition to ontogenetic and epistemological learning and didactic-methodic. Another problem is the readiness of infrastructure as support for tools/means in the 21st Century Learning process, namely human resources in the field of technology, procurement of e-learning application software or learning management systems, internet network capabilities and availability of providers, procurement of hardware both on campus and off campus, housing, as well as the infrastructure maintenance system in question.

Previous Research

a. Classroom Character

Watkins and Wagner (2000, pp. 54–58) identified and formulated the problem. The classroom is a place where individual students and educators gather together as a learning group. The cultural differences of students make each class unique both in terms of patterns of interpersonal interaction and types of behavior or even attitudes. Watkins and Wagner found that teachers identify features of their classrooms as metaphors that tell and capture certain types of classroom experiences. For example, classes are like “marketplace,” where people are busy with their own business and talk loudly or “like a graveyard,” the most quiet or gloomy place with low light. Watkins and Wagner present five features of their identification on the characteristics of classrooms,

namely the class as a busy place, as a public place, activities in the classroom are carried out simultaneously, and student activities tend to be unpredictable.

Watkins and Wagner's conclusions about the complexity of the classroom that cannot be linked simply as a place of teaching and learning, with respect to each characteristic, certain forms of interaction, interpersonal relationships and class dynamics are demonstrated and some related managerial skills are also suggested. Teachers can mediate classroom learning and help students learn better by interacting with them. Teachers can also facilitate interaction between students by producing interactive tasks and activities and encouraging students to engage in group and pair work. In addition, it can create a stress-free interactive environment that motivates learning and encourages participation.

b. The Efficacy of Belief in Knowledge and Experience

Richardson (2001, p. 11) for his research, asserts that belief can be considered as an understanding, premise, or proposition that is held psychologically about the world that is felt to be true. Richardson explains that beliefs and attitudes are subsets of a group of constructs that name, define, and describe the structure and content that produce a person's actions. In the realm of education, teachers' beliefs will ultimately influence what they teach and how they teach. Three categories of experiences that influence the development of beliefs about teaching are learning experiences in schools of education and teaching. In addition, the teacher's personal experience includes aspects of life that go into the formation of a worldview-intellectual and moral dispositions, beliefs about self in relation to others, understanding the relationship of school to society, and other forms of personal, family, and cultural understanding.

Regarding the results of teacher education and experiences in the learning process, research shows that teachers when they first teach have confidence about their pedagogical learning experiences. When you

find the real world in teaching practice, you find difficult conditions to have an impact on the learning process. The experience of pedagogical learning outcomes and observations of learning models, coupled with an invitation to parental involvement, can contribute to the perception of the teacher's role in the classroom. The teacher gives students the opportunity to find formal knowledge from external reading and other media. When the learning process takes place, examples of formal knowledge are shown in knowledge of subject matter, and conceptions of the nature of subject matter and how students learn it.

Levin et al. (2005, p. 126) on the results of his research stated that beliefs greatly affect a person's behavior; however, experience and reflection on actions can lead to changes or amendments to beliefs. Beliefs work for both teachers and learners for the novelty of the paradigm. Beliefs help teachers become more effective educators, for example, in terms of the achievement of constructive learning in the classroom, beliefs in the importance of reflection on lesson success have many more positive effects on teaching strategies than beliefs that exclude the practice of reflection.

Teacher efficacy (efficacy) has been defined as “the degree to which a teacher believes he or she has the capacity to influence student performance” or as a “teacher” or belief that they can influence how well students learn, even those who may be difficult or unmotivated. The research of Guskey & Passaro (2004, p. 62) provides information about teacher efficacy generally evaluated based on two constructs, general efficacy and personal efficacy. General efficacy refers to teachers' expectations of outcomes about the teaching profession as a whole, whereas personal efficacy refers to teachers' beliefs about their personal abilities to carry out certain actions to bring about student achievement.

Teacher efficacy has a direct

influence on the classroom climate, because teachers with lower interaction usually focus on the inability of students who are believed to perform at high standards or the inability of teachers to educate students due to the home environment (students). Teacher efficacy not only affects the types of interactions a teacher will have with their peers but also affects interactions with their students. This variable controls teacher behavior in the classroom which places a burden on the teacher's ability to cover the curriculum and maintain student engagement (learning outcomes).

Teacher efficacy is influenced by locus of control theory. This theory is divided into two groups, namely general teacher efficacy – belief in the general ability of teachers to influence student learning outcomes; and personal teacher efficacy – teachers' beliefs in their ability to influence student outcomes (Hoy: 2001, pp. 343–356). The locus of control construct is formulated around social psychology research that shows important relationships between individuals' behavior and their perceptions of whether events are under their personal control or not. Locus of control affects a person's decision making. Those who make their own decisions are considered to have an internal locus while those who make decisions based on others have an external locus.

Self-efficacy is defined as a person's belief about his or her ability to perform certain behaviors. Self-efficacy affects a person's perception of skills and abilities, and whether these skills/capabilities result in effective and competent action. There are two components of efficacy theory; efficacy expectations and outcome expectations Bandura (2001, p. 17). Expected efficacy relates to a person's belief that he or she can successfully produce a behavior that will produce a certain outcome. Outcome expectations involve a person's belief that certain actions will produce certain outcomes.

A person's level of self-efficacy can affect the initiation and persistence of a particular task. The level of efficacy can

predict if a person tries to perform a particular task and how long a person will persist on that task if at first things do not go as expected. According to Bandura, at the initial level, perceived self-efficacy influences the choice of behavior regulation. All constructs of efficacy beliefs – learner, teacher, and collective – are future-oriented assessments of the ability to organize and carry out the actions (self-efficacy) required to produce a given achievement in a given situation in context (outcome expectations).

c. Teachers, Classes, and Pedagogical Complexity

The inability of teachers to manage classroom behavior often contributes to the low learning achievement of students. Vigdor's investigation (2006, p. 32) shows that the impact of disability is exacerbated by patterns of teacher distribution, such as the proportion of teacher assignments that do not match the character of the class. The physical presence and behavior of the teacher play a large role in the management of the classroom environment. There are several things that must be considered by teachers in the classroom that have a direct relationship with students, namely proximity, the accuracy of adapting behavior, teacher movements in class, awareness of assessing what students say and responding appropriately.

Since the discussion about class characteristics, didactic and methodical abilities constraints in pedagogy, to the mental readiness barriers of students that affect classroom action management, and it will be even more complex if it is known that 21st Century Education demands student learning outcomes to be skilled in critical, complex, creative thinking, high level. Pedagogic components, namely the approach of cognitivism, constructivism, and behaviorism in learning must grow with scientific components or knowledge that must be conveyed in learning. Each science or knowledge has its own peculiarity or methodological character that must be conveyed to students.

d. Breakthrough Thought Process

The complexity of classroom action management as described above seems to be a global issue. Not only in Indonesia, even developed countries though. Such incidents are the result of investigations in other countries. Previous studies on 21st Century Education, namely the existence of a breakthrough thinking process regarding the urgency of education to improve the welfare of the world community in the 21st Century, then the Blended Learning Model was born, the Flipped Learning Method was born. Immersion Method in literacy and numeracy habituation.

This model tries to mix constructivism, cognitivism, and behaviorism approaches in learning, as well as to mix a number of methodological peculiarities of each science and knowledge that students must acquire through a learning platform called the Learning Management System (LMS), in which the principles of management class actions are embedded in it.

Previous studies on this matter, starting with Maslow's hypothesis. The five levels of human need for change according to Abraham Maslow are physiological, security, belonging, esteem, and self-actualization. The five stages can be passed based on the development of the level of welfare and human culture. Maslow hypothesized that after the individual satisfies the needs at the lowest level, the individual will satisfy the needs at the next level. If at the highest level but basic needs are not satisfied, then the individual can return to the previous level of needs. According to Maslow, the satisfaction of these needs is driven by two forces, namely deficiency motivation and growth motivation. Lack of motivation aims to overcome the problem of human tension due to various deficiencies that exist. Meanwhile, growth motivation is based on the capacity of every human being to grow and develop. This capacity is a trait of every human being (Plotnik, 2018 and Haroen, 2008). Maslow's hypothesis can be approached with the Construction of Paradigm Theory from Thoman Kuhn and Teleology from Christian

Wohlf on Teleology as an approach to the phenomenon of shifting and paradigm movements of world society's thinking and their impact on the emergence of global learning model events and the issue of Industry 4.0 and Society 5.0.

Human efforts to be more prosperous than the previous life, are pursued in different ways according to their natural conditions. One way is found, then deemed effective, then conventionally it becomes the cause of the dynamic and systemic shift-moving phenomenon, as well as automatically becoming a new paradigm, from a global to a local scale or vice versa. The phenomenon of shifts is not the result of continuous, improvised, evolutionary, or cumulative efforts, but rather a paradigm shift and can be called a revolution (Thomas Kuhn: 1970). Dynamic movements on a certain scale constitute a large system in which consists of elements as subsystems. If there is a characteristic inherent in an element that causes the inability to keep up with the movement, an anomaly occurs. The dynamics of the system in the shifts become sluggish, even leaving or growing new problems.

The phenomenon of shifts such as the current global political-economic event (ecopolglob) in the 21st century has driven dynamic information technology movements both on a regional and global scale, even on a local scale. Natural factors such as the Covid-19 pandemic are also suspected to have triggered the acceleration of global eco-politics, information technology, and spread to the global education system. A number of events like this have also become a contributing factor to the current events in 21st Century Education, especially in education management and learning methodologies and models. 21st Century Education Management puts educators and education staff at risk to better adapt their ability to carry out learning, especially regarding classroom management as an initial effort to achieve excellence in knowledge and skill competencies towards

changing the welfare of the world community. Consideration of the peculiarities of each educational institution both at the local and national levels, as well as considerations of the character of the discipline of education and teacher training are variables in building a model that must be wise, adaptive, and flexible. That is the demand for creativity and innovation to a number of related expertise at the local, national, and international level.

The teleological approach from Christian Wolff (Duchesneau: 2018) and the construction of the Paradigm theory from Thomas S. Kuhn are tried to justify the current education management model, namely the current model shifts are a design phenomenon on the framework of the world view or perspective of practitioners or education experts. world to give birth to a management model that is more important, legitimate, and reasonable, also on the results of a detection (teleological target) of the experimental ability of world education people to accommodate resilience in competing theories (counterinstances), giving birth to a new superior management model (winnowing) from a discovery, supertitian (big find) or novelty that contains optimal and adaptive flexibility.

e. Learning Model in 21st Century of Classroom Action Management

1. 21st Century Learning Model

The critical thinking framework for a theory/principle of the Mixed Learning Model is not merely a mixed learning model or a hybrid learning model, but ontologically, epistemologically, and axiologically, it shows that this is a model that is in tune (jumbuh), attached or integrated. embedded), concurrently and simultaneously (samenvallen) between elements/elements/components in scientific disciplines related to learning objectives, while mixed and hybrid learning models do not have enough of these indicators in one Industry 4.0 technology platform. The anomaly of Industry 4.0 technology is the emergence of Volatility, Uncertainty, Complexity, and Ambiguity or known as VUCA (Budiharto, et al.: 2019), which then gave birth to the concept of Society

5.0, namely Truthfulness, Resilience, Uncertainty Friendly, and Eminence or called TRUE (Nastiti, et al. . : 2020) which two of these have been described in the findings of this study. The development of information technology is currently reaching all areas of people's lives, including the field of education. In the era of the Industrial revolution 4.0, three literacys are needed, namely data literacy, human literacy, and technological literacy. Learning in the Revolution 4.0 era can apply mixed learning and case-based learning (Case-based Learning). Even education in the Society 5.0 era, allows students in learning activities side by side with robots that have been designed to replace the role of educators.

It should also be noted that the technology in the Mixed Learning Model is positioned as tools, means, or devices which were originally labeled 'media' but have now shifted to become a platform to harmonize elements/elements/components in order to optimize and facilitate performance and not solely web-based in its implementation. Ontologically–axiologically, the benefits of the Mixed Learning Model are seen as useful for the 'face to face' communication mode or face to face (F2F) as co-present, because it adheres to the 1-0 communication (binary model) in the dyadic model and this technology is similar to the concept Brick and Mortar in the economic realm (Bryan: 2016).

Epistemologically, the Mixed Learning Model shows a bimodal element (face-to-face elements/elements are present together with digitalization elements/elements). This was born from an experiment with the dyad method, containing inter/multidisciplinary practices that produce binary harmony of two face-to-face elements present, not simultaneously, and can be in harmony with other elements, namely digital technology (see Derrida on Deconstruction and Gramsci on Hegemony). Starting from the nature of a model, it is a grand or universal theory which in its present day in 21st Century Education must be able to facilitate multi-methods and learning techniques, as well as other disciplinary

methods and techniques included in learning. This sophistication can be facilitated by an Industry 4.0 technology platform. The four practical principles of bimodal harmony in the Mixed Learning Model are the harmony of virtual excellence with face to face, harmony of superiority of synchronous with asynchronous time, harmony of high sensual wealth for all senses with low sensuality due to text only, and harmony of high humanity without machines and low humanity due to machines. tall. Graham's thinking about bimodal (Bryan: 2016) moves beyond modality in his typology to consider the scope and aims of pedagogical and axiologically aiming at scientific transformation.

The principle of grand (design) theory both epistemologically and axiologically for the Mixed Learning Model is the implication that it must be able to adapt, adopt, absorb, support/interrupt various learning methods and even be exclusive of other disciplinary methods required by the goals learning, although this model is not a guarantee of success if there are other factors that are slow to carry out novelty as intended, for example the factor of digital inequality, financial, cultural, talent, intelligence, and political will. Launer calls this model cheaper, Graham even mentions the power efficiency, but other challenges, such as a number of factors the gap must also be considered. Initially proposed the concept of brain ware, software, hardware considered qualified in the Mixed Learning Model but experience shows that technology is often stalled due to a number of factors of these gaps, then proposed the concepts of socio-cultural ware and eco-political ware which are placed before brain ware, software, hardware, so the implication: multidimensional planning comes first before what (ideal) technology is needed. The Mixed Learning Model should not be used as hype and not trapped by the establishment of the majority thinking about Industry 4.0 technology, because the malfunction of Industry 4.0 technology is a VUCA factor, the Society 5.0 concept is used as a foothold that shifts the establishment of the original paradigm, namely high order thinking skills must shift and move to the paradigm high order critical, complex, and creative thinking skills

and it would be appropriate if you want to embody the Mixed Learning Model in the 21st Century after VUCA was overcome by Society 5.0 and before other inequalities emerged in the same century.

In practice, similar thoughts about the Mixed Learning Model were expressed by experts, including Heinze A and Procter C (2010) stating that the Mixed Learning Model is a blended (jumbuh, embedded, samenvallen) various learning strategies and delivery methods that will optimize the learning experience for its users. Driscoll (2002) mentions four concepts of the Mixed Learning Model, namely: 1) a combination of various web-based technological ideas to achieve learning objectives; 2) blending various learning approaches (such as behaviorism, constructivism, cognitivism) for optimal learning objectives through on/offline technology; 3) a combination of a number of teaching aid technologies, such as video tapes, CD-ROMs, web-based training, and films; 4) technology blend for structured and independent assignment learning techniques. The Mixed Learning Model is able to condition the interaction between individuals or groups of students, as well as with their educators without the limitations of space and time in either synchronous or asynchronous learning types independently (Hendarita: 2018). Moore (in Albion, 2008) classifies four types of interactions that occur in online learning, including: 1) learner interactions with content refer to users who are bound in instructional information; 2) interaction of students with technology interfaces, namely the use of technology in learning or interaction of students with technological interfaces can be called types of online learning interactions; 3) interaction with educators or is a method or way of educators teaching, guiding, and supporting students; 4) interaction of students with students, which is a way of communicating between students in the learning process.

Mixed Learning Model, in one learning platform is able to contain variant methods to serve the various needs of different learners, for example the type of

direct learning interaction depending on time (live synchronous) with high-accuracy technology or high-fidelity (hi-fi) accompanying growing between face-to-face learning techniques in the teacher-directed environment method with person-to-person interaction techniques. In addition, with the same platform, the type of learning interaction does not depend on time (asynchronous) with low-accuracy technology or low-fidelity (low-fi) which is only text, capable of directing distance learning techniques in self-paced learning methods. Both live synchronous and asynchronous, basically there are three basic stages in the learning method with the ICT-based Mixed Learning Model (Ramsay, 2001), first: seeking of information from various online and offline library sources that are relevant, valid, and reliable. academically by students on the direction of educators as facilitators; second: information acquisition (acquisition of information), in which students individually and in groups collaboratively seek to identify the information they have found on the basis of the knowledge they have acquired, then interpret it, then communicate it; the third is the effort to synthesize knowledge of its findings (synthesizing of knowledge) by constructing or reconstructing knowledge through the process of assimilation and accommodation which departs from the results of analysis, discussion, and formulation of conclusions.

Everything is facilitated in one platform with the Mixed Learning Model. Carman (2005) describes five main keys in the learning process through the Mixed Learning Model by applying the learning theory of Keller, Gagné, Bloom, Merrill, Clark and Gery, namely: 1) live events, namely direct or face-to-face synchronous learning in the same time and place or the same time but different place; 2) self-paced learning, namely asynchronous self-paced learning that allows students to learn at any time; 3) collaboration, collaboration between educators and students as well as collaboration between students; 4) assessment, educators must be able to mix a combination of online and offline assessment types, both test and non-test (class projects); 5) performance support materials, the certainty of

teaching materials prepared in digital form that can be accessed by students both offline and online anytime and anywhere.

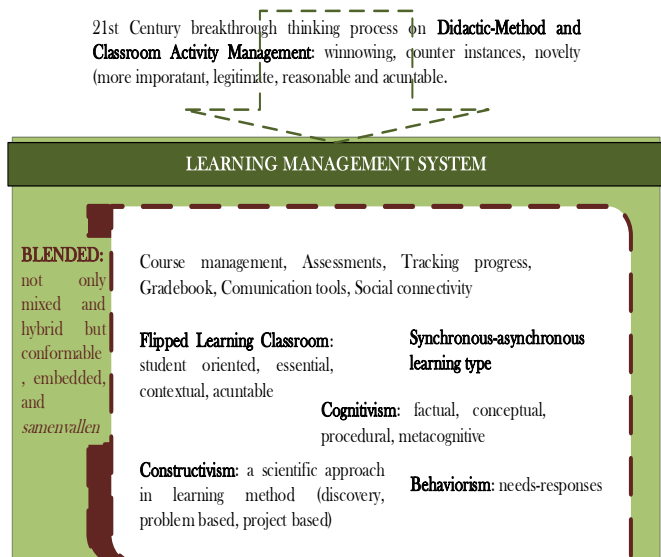
2) Classroom Action Management Model

A number of theories about the Baura Learning Model are built on the basis of previous research as described above, which immediately includes a classroom action management model that cannot be separated from a learning platform or called a learning platform in the form of an LMS. The system building in the LMS includes learning management features that function to deliver learning materials and time to students appropriately, in addition to other features, such as content management and control, class scheduling, and content auditing capabilities. The capacity for teachers/lecturers as well as students to contribute to enriching learning content in private spaces (pages) can also fall under this domain (Tatnall, A, 2019). The LMS includes a grade book feature to facilitate the distribution of assessment information to students. These functions include individual scoring scores, instructor feedback, and student attendance in class. In addition, this feature is able to generate aggregate reporting information such as class scores, item score analysis, and information on problematic students included in it. LMS more broadly facilitates synchronous or asynchronous types of learning. The asynchronous learning feature supports one-way communication such as email, discussion boards or Wikis. This learning feature is often preferred by learning operators (educational administration staff) because it can be initiated on an ad hoc basis. This feature of synchronous learning, is considered very valuable for learning that mandates class participation as a gradable component of the learning itself.

The attraction to formal learning for most learners in a classroom-based environment is not only the knowledge and skills to be acquired but also the social dimension of study provided by participation in higher learning. The LMS is often

criticized for not adequately accommodating this learner's innate needs. The inclusion of more synchronous communication tools such as live video conferencing and real-time social media applications is likely to strengthen the appeal of online learning as a social activity. LMS vendors are already leveraging existing social media applications like Facebook, Twitter, and WhatsApp along with video conferencing tools like Skype to provide a social framework for online learners.

As a result, a number of learning problems are closely related to classroom action management problems. If mapped, it will appear in the following image.



1. Readiness

The description is directed to efforts to create conducive learning classes by optimizing the application of cyber technology-based learning management systems which are also aimed at creating conducive educational institutions according to their vision and mission. Of course it must refer to the provisions of national higher education standards, Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 3 of 2020 concerning National Standards for Higher Education and the Indonesian National Qualifications Framework, level 6, namely regarding the development of the times or scientific The Association for Computing Machinery (ACM) Curricula, Merdeka

Learning Campus Merdeka (MBKM). The process of learning development must always be supported by the development of science and technology, especially through Information and Communication Technology. For this reason, primary and secondary education institutions to universities must at all times upgrade the curriculum in accordance with the times. The positive impact of the Covid-19 pandemic has triggered a remote learning process with an online network system.

In order to meet the demands as written earlier, cyber technology must be a platform for classroom action management, and must refer to the principles of Industry 4.0, namely 1) internet-based communication (IoT and IoP) that is able to fold space and time; 2) efficiency and effectiveness of materials, all physical forms are designed imaginatively, recorded and documented, visualized through information technology and multimedia computers; 3) light, easy, resist rigidity, be productive, expand activities, stimulate initiative, foster creativity, and encourage innovation, all of which are more operational and more grounded; and in terms of performance 4) independent work in accordance with the portion of authority and summarizing the bureaucracy. Social Principle 5.0 is applied in classroom action management to prevent internet technology malfunctions. First: strengthening the habituation of numeracy and literacy activities in the classroom in order to obtain high-order critical, complex, and creative thinking skills and critically identify or accept the truth of information. Second: the development of cyber technology begins with strengthening work culture (cultural ware), namely conditioning the work climate for class operators and administrators based on cyber technology to avoid idle technology (idol) and socio-academic preparedness (brain ware), through scientific coordinating dialogue between lecturers or teachers according to their focus, locus, and scope of interest through team teaching forums. Third: the rules are ensured to function for socio-academic preparation (brain ware), the development of software (software) and hardware (hardware)

technology, followed by technical guidance for teachers, lecturers and education staff regularly at the beginning of the learning year according to its objectives and functions, and also developed a monitoring and evaluation system.

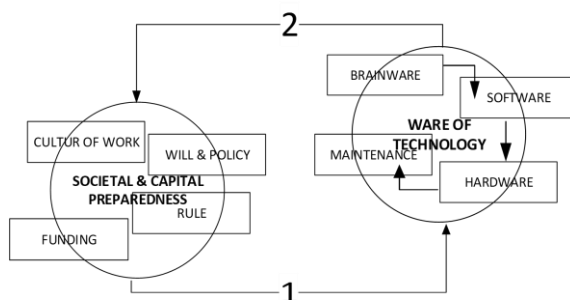
Strengthening work culture for administrators and lecturers or tutors to be able to maximize classroom action management using the Industry 4.0 technology platform which must comply with 4 (four) principles, namely 1) Internet of Things and Internet of People, namely synchronous and asynchronous lecture activities on schedule curriculum in class, response class, practicum, or course class activities from planning to assessment, as well as communication and administration using an internet network that is able to fold space and time; 2) computers (computer desks, laptops, gadgets) are part of the multimedia platform used for LMS facilitation for monitoring and evaluation in addition to recorded and documented learning activities, as well as visual demonstration facilities (audio-video visual aids teaching); 3) time discipline in running the program, obeying LMS procedures (planning, process, learning evaluation and administration) so that administrative activities, learning and teaching processes are always light, easy, resist rigidity, are productive, expand activities, stimulate initiative, foster creativity, and encourage innovation which is facilitated in synchronous learning activities; 4) understand the limits of authority given by the leadership and always report the progress of response activities to related parties, serve and communicate problems, both operational technical problems and the learning and teaching process.

The development of cyber technology in the form of procurement of technological devices, such as language laboratories, device readiness, and internet networks must be in optimal conditions. The need for laboratories in learning is in the context of technical guidance and consultation as well as learning, and acceleration and deepening of material. Lecture activities embedded in CPL are programmed integrally and cumulatively with online learning, even though they are individual, but require the readiness of gadgets for both students and lecturers. Healthy gadget

specifications must be a concern in addition to a qualified internet network, both internet network on campus or school as well as internet facilities for students or lecturers.

In order for the LMS to avoid the non-functioning of a learning process, 1) there must be political will of stakeholders in education and seek educational capital, as well as discipline and must attract interest in learning in the academic environment; 2) qualified and coordinated (not fragmental) experts in their performance in the field of education or academics (brain ware); 3) development of information and communication system applications (software) must be relevant and dynamic or consider policy dynamics, not rigid, and function proportionally; 4) hardware development must consider the availability of experts, maintenance costs, dynamics of application systems, and their functionality, and is upgradable. Multidimensional planning should take precedence before what (ideal) technology is needed.

Social readiness and educational capital come first before what technology is needed for support. Then technology development must always be adaptive to social needs and conditions of educational capital which tend to increase.



2. Selection of Learning Applications

Classroom learning activities must be formulated in advance, starting from learning achievement to assessment. A number of these formulations are referred to by the description of the level of qualifications and competencies of learners in accordance with state laws and regulations. The formulation must also be embedded in the LMS in a clear and

structured manner including the methods and teaching materials. The principle of "blended" in LMS, not only in its network and space, but also in learning methods and techniques. Elements in learning, such as scientific methods, taxonomies in learning (Anderson and Bloom), to the assessment are harmonious, embedded and together in one LMS platform. The characteristics of learning must be active, interactive, communicative, effective, fun, joyful, and meaningful in addition to being integrative, scientific, contextual, thematic, collaborative, and learner-centered (flipped learning). Learning technology devices are played to embrace a number of these characters. Models, methods, and techniques of learning activities must be embedded in advanced technology, friendly/familiar, and safe. LMS must embrace the immersion method (Immersion Method) and this method is a current method that is able to condition learners to interact with learning resources in a certain environment according to their needs and interests.

The process of skills training in learning activities must take place in a systematic and structured manner according to a measurable and effective teaching load and in accordance with its characteristics. The Immersion method in learning contains learning techniques in the form of simulations, case studies, collaborative, cooperative, project-based, and problem-based, all of which are blended in Technology 4.0 which is practically embedded in the LMS. Learning techniques with case studies must or must be carried out synchronously. Thus it can be used as a principle for the learning process. Learning application technology for each digital-based subject must also be able to present an assessment system or program that has the principles of being educative, authentic, objective, accountable, and transparent which is automatically presented immediately during the activity process. The assessment technique applied through the LMS includes observation, participation, performance, written tests, and oral tests. The assessment instrument used is a process assessment and outcome assessment in the form of a portfolio and the final result is cumulative in the form of

an integrated score between daily activities and cognitive tests. Assessment mechanisms and procedures have been structured electronically in the LMS.

Supporting teachers/lecturers should also act as administrators and facilitators who intensively motivate, direct, supervise so that learners are skilled in communicating the knowledge they are interested in. The ratio of teachers/lecturers as well as their workload and number of students is also relative or adheres to optimal flexibility by considering the variables of technological ability, time contract, and learning implementation costs. The operational costs of language learning activities adhere to the components and amount of investment costs, as well as operations that are arranged in order to fulfill learning outcomes. The investment costs are aimed at developing teachers/lecturers and their operational costs for carrying out learning activities, education staff costs, operational material costs, and indirect operational costs that need to be reviewed regarding the specifications of the allocation and its sources.

In an effort to achieve competencies as formulated and take into account the character of 21st Century Learning based on cyber technology, teachers/lecturers must have good multimedia-based learning applications and even web-based ones. Such learning applications should provide the learner with a set of skills to enhance employability and help him compete in the global job market. It is necessary to look for convergence, connectivity, rejuvenation, attachment, or equality between the formulation of learning outcomes and learning application models, namely digital learning applications must be in the form of a service application (providing) special content and instructional options to equip students with scientific learning that can be provided through this type of learning. synchronous or asynchronous, tailored to the unique needs of the school or campus or class.

The immersion learning application is a classroom action management solution

designed to improve students' learning of the science they are learning and easily embedded in the LMS, as well as providing expertise, expertise content, services, and resources to ensure the successful implementation of learning programs in an educational institution. Learning applications must enable learners to meet qualification levels according to the formulation of learning outcomes, mastery of knowledge, or allow them to be added independently to characterize graduates. Learning means supporting vocational, specialist, or academic needs.

CONCLUSION

Cyber technology is able to overcome the complexity of classroom action management, but it must start from:

- 1) Social readiness in the era of 21st Century Education, namely the political will of educational institution leaders, institutional strategic plans, academic rules, work culture, and education implementation capital, all of which must refer to existing models in the new paradigm and built on a commitment to implement it consistently;
- 2) Classroom action management is a derivative of that social readiness and technology must be built or implemented after that readiness exists in order to avoid stalling a learning program and its technology.

In its implementation or practically, LMS is able to contribute to classroom action management, if the following things are met.

1. Internet of Things and Internet of People (IoT-IoP) can fold space and time, if the internet network is capable; synchronous and asynchronous learning is consistently implemented according to the rules by teachers/lecturers, administrators, and students; and information and communication media are used proportionally and optimally by leaders, teachers, administrators, and students.

2. Class management must be based on electronic data to be safe, if the computer desk or laptop and gadgets are healthy both for servers and for individual teachers/lecturers, administrators, and students; administrative documents and electronic-based learning tools,

as well as ICT-based learning demonstrations.

3. Classroom action management can prevent rigidity, concise bureaucracy, easy and light, if the LMS/e-learning is qualified or complete for all learning components and classroom management of learning; teachers/lecturers, administrators, and students know about ICT, also understand the specifics and character of the device; and academic rules and SOPs based on cyber technology are clear (not vague) and are adhered to by the entire academic community.

4. Teachers/lecturers, administrators, and operators can work independently in carrying out classroom action management, if technological devices such as computers and devices are the responsibility of individuals, both leaders, teachers, administrators, even students, (e.g. one student, one tab device); sufficient capital for technology procurement and maintenance; reliable human resources in the field of cyber technology are available and trusted.

5. Teachers/lecturers must be able to adopt, absorb, adapt, and even borrow learning models with dynamic immersion methods, meaning that students are not stuffed with mere lecture videos, but students can immediately practice searching, identifying, presenting, and display/communicate as contained in the principles of flipped learning.

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